

**EXECUTIVE COMMITTEE
MEETING SUMMARY**

**The Newport Harbor Hotel and Marina
Newport, RI
May 24-25, 2007**

THURSDAY, MAY 24, 2007

Welcome and Introductions

Dr. James Clark (Exxon Mobil Research & Engineering Co.), Chair of the Board of Scientific Counselors (BOSC), called the 35th face-to-face meeting of the Executive Committee to order at 8:30 a.m. He thanked Executive Committee members and U.S. Environmental Protection Agency (EPA) staff for traveling to Newport, Rhode Island for the meeting. He explained that the Ecological and Drinking Water Mid-Cycle Review meetings had occurred the previous day. He stated that Drs. George Daston (Proctor & Gamble), Henry Falk (Centers for Disease Control and Prevention), and John Giesy (University of Saskatchewan) would not be present at the meeting. Dr. Martin Philbert (University of Michigan) was expected to attend but he was not yet present. Drs. Daston and Giesy are expected to join the meeting via telephone later in the day. The lunch break is scheduled for 11:45 a.m., and this afternoon's agenda features a tour of EPA's Narragansett laboratory.

Review of January Meeting Minutes

Dr. Clark stated that he did not have any changes to the January 2007 meeting minutes and asked if the members had any comments. When no comments were offered, Dr. Clark called for a motion to approve the January minutes. Dr. Carol Weiss (Harvard University) moved to approve the meeting minutes, and Dr. Deborah Swackhamer (University of Minnesota) seconded the motion. The January meeting minutes were approved unanimously by the BOSC Executive Committee.

Overview of Agenda

Dr. Clark indicated that the meeting agenda covered a number of topics, including program and mid-cycle reviews. Several items scheduled for Friday deal with future planning, including future meetings and Executive Committee member replacements.

BOSC Designated Federal Officer (DFO) Remarks

Ms. Lorelei Kowalski, DFO for the BOSC Executive Committee, welcomed the members to the meeting. She mentioned that Drs. Falk, Daston, and Giesy were unable to attend this meeting, but Drs. Daston and Giesy will call in for the Safe Pesticides/Safe Products (SP2) and rating tool discussions.

Ms. Kowalski stated that the BOSC is chartered as a Federal Advisory Committee and subject to the rules and regulations of the Federal Advisory Committee Act (FACA). Therefore, this meeting was open to the public, and time was designated for public comment. A contractor, Beverly Campbell from SCG, was present to take notes that capture the presentations and discussions. She will prepare the meeting minutes,

which will be made available to the public on the BOSC Web Site after approval by the Executive Committee and certification by the BOSC Chair. The Chair must certify the minutes within 90 days following the meeting. Notice of this meeting was published in the *Federal Register*. Ms. Kowalski established an electronic public docket for the meeting on the Federal Docket Management System (FDMS), which can be accessed at <http://www.regulations.gov>. The number to search for this docket is EPA-HQ-ORD-2007-0363. The *Federal Register* notice and the agenda were available to the public on the docket as of May 1, 2007. Ms. Kowalski mentioned that she had not received any requests for public comment prior to the meeting, but there is time set aside at 10:15 a.m. tomorrow for public comment. As DFO, she worked with EPA's ethics officials to ensure that all appropriate ethics requirements were satisfied for the Executive Committee. Nevertheless, she asked the members to notify her during the meeting if they have any potential conflicts of interest. Because some members have grants with EPA, potential conflicts of interest arise from time to time.

Each BOSC member should have received a notebook of materials by mail prior to the meeting. The Science To Achieve Results (STAR)/Greater Research Opportunities (GRO) report was included in the materials, and the Executive Committee will hear the Office of Research and Development's (ORD) response to that report during the meeting as well as reports on the SP2 and Human Health mid-cycle reviews. Also included in the materials was a list of resources that ORD assembled for program and mid-cycle reviews. She asked that members provide feedback on the appropriateness of these materials. A CD of the *National Coastal Condition Report III* (NCCR III), which currently is under review, also was included with the meeting materials.

Ms. Kowalski stated that the members will visit the Narragansett laboratory this afternoon at 1:30 p.m. She asked the members to assemble in the lobby so that carpools could be arranged. She noted that a map was available for those members who would be driving to the laboratory.

Ms. Kowalski explained that some of the meeting materials had changed since the notebooks were sent, including the agenda and the SP2 presentation. The new versions are available for on the materials table in the room. Additionally, a handout on government travel rules was included to provide members a better understanding of the guidelines that the government must follow when arranging travel for BOSC members. Airfare is paid for by central accounting and taken care of in advance. Members are required to travel on government-approved carriers. Ms. Kowalski mentioned that there is a Web site that lists the government carriers and prices. If a BOSC member is traveling to a subsequent meeting before returning home from a BOSC meeting location, the government must compare the cost of traveling to the second location with the cost of traveling roundtrip from the member's home location to the BOSC meeting. If the cost of adding the second meeting location exceeds the cost of a roundtrip ticket from the member's home to the BOSC meeting, the member must pay the difference. She noted that the government usually makes arrangements for rental cars when they are needed; some BOSC members have made their own arrangements and some of the reimbursement requests for cars have been high.

Ms. Kowalski explained that the government can be flexible with airline tickets under certain circumstances. Members can purchase their own tickets, but they do so at risk. Government tickets are completely refundable, but tickets purchased by members are not. If a change must be made to a traveler-purchased ticket, the government can only reimburse the member \$27.50 because that is the cost of change for a government ticket. In addition, the government cannot reimburse a member for a ticket if the travel is cancelled. Ms. Kowalski commented that members can fly on carriers that are not government-approved but the members should be aware that there are financial risks involved. She pointed out that the individual who makes the travel arrangements for the BOSC members is a Senior Environmental Employee (SEE) contractor, not a government employee, and does the best he can in arranging travel for numerous people.

Dr. Gary Sayler (University of Tennessee) commented that these rules were very understandable. He noted, however, that it is the use of government-approved carriers and not the convenience of travelers that is the determining factor in arranging flights. He explained that on two occasions he had reservations but no ticket; he expressed his hope that this will be corrected in the future. Ms. Kowalski stated that she had investigated that problem, and it occurred as a result of the method by which reservations were tracked. That method has been changed as a result of Dr. Sayler's problems and she assured the BOSC members that it will not happen again. She reiterated that it is feedback such as this that is needed to improve travel arrangements.

Dr. Sayler mentioned that he has had to fly in the opposite direction to make a connection that will take him to a BOSC meeting location. This considerably increases his travel time. Would it be possible for the BOSC member to suggest an alternative or more direct route? Ms. Kowalski suggested that the BOSC members go to the Web site and evaluate the available options, identify the option best for them, and then include that information on the travel request form.

Dr. Swackhamer asked about situations in which there is a second meeting in the same city a day or so after the BOSC meeting; it does not make sense to fly home before the second meeting. Is this allowable? Ms. Kowalski explained that the return leg of the round-trip ticket could be delayed to allow the member to attend the second meeting; however, the government would not reimburse the hotel and car rental expenses for the time between the two meetings. Dr. Swackhamer asked if the cost of the roundtrip ticket should be split, with EPA paying for only half of the airline ticket. Ms. Kowalski and Dr. Kevin Teichman (EPA/ORD) stated that it would probably be easier to have EPA pay for the roundtrip ticket.

Dr. Anna Harding (Oregon State University) asked about the time lag between submission of the travel request and purchase of the airline ticket. It appeared to her that it was taking a long time to purchase the tickets. For those traveling longer distances it would be better if the reservations could be made earlier to accommodate better seat selection (an aisle seat rather than a middle seat) for long plane trips. Ms. Kowalski replied that sometimes there is a long delay because Bob Holland (in Ms. Kowalski's office) is busy making travel arrangements for several meetings at any given time. Sometimes there are issues with certain arrangements that can increase the time required to process the travel arrangements. Ms. Kowalski agreed to work with Bob to decrease the processing time.

Dr. Sayler stated that members who forget to attach their receipts to their expense reports, should send them via FedEx and not regular mail. Ms. Kowalski explained that FedEx is better because all incoming mail is sent through X-ray machines, which takes time and sometimes damages the mail. She noted that that it is preferable for members to submit their receipts directly to her before the end of the meeting. Original receipts are needed for any expense that exceeds \$75. Receipts also can be sent via fax and the originals sent via FedEx. The reimbursement process will begin when the fax is received, but a check will not be sent until the original receipts are received.

Ms. Kowalski explained that there are two different types of paperwork (FACA and human resources paperwork) required for BOSC members. The BOSC members now are invited by the EPA Deputy Administrator to serve for 3-year terms for BOSC program reviews. If the mid-cycle review for that program is conducted within 3 years of the program review, then only one nomination package and one set of human resources paperwork are necessary. This will significantly reduce the workload for the BOSC members and EPA staff in filling out and processing human resources paperwork. The FACA paperwork for BOSC members must still be updated annually and includes the confidential disclosure form and ethics training.

She informed the members that their homework sheets are in the back of their meeting binders and reminded them that it would be easier if they submitted the completed sheets to her before departing the

meeting. She also asked that any members who had not done so already, record their attendance at the meeting on the sign-in sheets at the registration desk.

Dr. Ken Demerjian (State University of New York) asked if the homework hours expended for the Mid-Cycle Subcommittee for PM/Ozone should be submitted to the DFO for that Subcommittee, and Ms. Kowalski confirmed that approach.

Dr. Clark asked if Executive Committee members who have completed ethics training and the financial disclosure form must repeat this if they are serving on a BOSC Subcommittee. Ms. Kowalski responded that the member should explain to the Subcommittee DFO that he/she has already completed this paperwork as a member of the Executive Committee. She noted that FACA committee DFOs attempt to obtain paperwork from other DFOs to avoid duplication of the paperwork.

Ms. Kowalski directed the members' attention to the chart that illustrated the schedule of items to be completed through 2008. The chart indicates when the face-to-face review meetings are scheduled or anticipated to occur and when the final reports are expected to be submitted to EPA. There will be a discussion of workload and distribution during tomorrow's meeting. It will be helpful to look at the materials tonight before that discussion. Dr. Barry Ryan (Emory University) asked about the colors and shading on the chart. Ms. Kowalski replied that the chart would be discussed in depth the next day. Dr. Clark commented that the chart is to help the BOSC prioritize its workload. Ms. Kowalski noted that none of the Executive Committee meetings are shown on the chart. Dr. Swackhamer asked if a list of acronyms was available. Ms. Kowalski responded that she would provide one.

Dr. Clark thanked Ms. Kowalski for her comments and then welcomed Dr. Kevin Teichman, Acting Deputy Assistant Administrator for Science, who presented the Assistant Administrator (AA)/ORD remarks in place of Dr. George Gray, the Assistant Administrator for Research and Development.

AA/ORD Remarks

Dr. Teichman welcomed the members to the meeting and explained that he would first focus on BOSC activities and then present an update on the budget. He stated that Dr. Gray could not attend this meeting because he was in Washington, DC, presenting the Fiscal Year (FY) 2009 budget to the Office of the Controller and Financial Officer. Dr. Teichman noted that this was Dr. Harding's last BOSC meeting; he thanked her for her service to the Board and ORD. He also mentioned that Dr. Cheryl Walker, who had agreed to serve on the BOSC Executive Committee, recently was elected to a leadership position in the Society of Toxicology and will not be able to serve on the Board. Dr. Clark also will be leaving the BOSC in October. A new Chair will be needed, and Dr. Teichman will be working on filling this position during the next few months.

The President's 2008 budget is being deliberated in Congress currently, and it is hoped that Congress will reach an agreement on the budget before October. EPA has been answering numerous questions to help move the approval process forward. Dr. Gray and Dr. Granger Morgan, Chair of the Science Advisory Board (SAB), testified before the Committee on Science and Technology regarding EPA's research and development budget. Dr. Morgan pointed to several concerns regarding the budget, including reductions to the Ecological Research and STAR Programs. Dr. Morgan also commented on the environmental decision science work that was moved from ORD to the Office of Policy, Economics, and Innovation (OPEI) at a reduced value. Dr. Teichman stated that Dr. Morgan's testimony is available on the Web at http://www.epa.gov/sab/pdf/2gm_final_written_testimony_03-14-07.pdf.

Dr. Teichman has been working with the SAB to change the annual budget review process. The concept is to have the SAB comment on the strategic direction of the Agency's research and development programs for a 5-10 year timeframe, rather than a 1-year budget review. This will be a topic on the

agenda for the SAB's June meeting, and there will be a 1- to 2-day meeting in September with the SAB to discuss future directions for ORD.

Dr. Teichman presented a few slides that he had previously presented to the House Science Committee Staff. In determining the priority research areas for FY 2008 budgeting, ORD is consolidating the MYPs so that fewer program and mid-cycle reviews will be required. This should reduce the workload of ORD staff involved in these reviews. ORD also would like to determine what materials the BOSC finds most helpful in performing these reviews in an effort to reduce the workload associated with these reviews.

Dr. Teichman noted that the overall budget has declined during the past 3 years, but the President's FY 2008 budget has increased in the areas of human health risk assessment, air, and nanotechnology. The major decrease in the FY 2008 proposed budget is for ecosystems research, with an \$11 million reduction. As a result of this decrease, the Environmental Monitoring and Assessment Program (EMAP) will be reduced, and ECOTOX and EPA's contribution to the National Land Cover Database will be eliminated.

Dr. Weiss asked if Dr. Teichman's slide indicated that there will be no funding for economics and decision science research. Dr. Teichman confirmed that the funding for economics and decision science research was moved to OPEI and that the program has been reduced in scope.

Dr. Teichman summarized ORD's responses to the SAB's comments regarding the declining budget:

SAB Comment: Concerns about declines in ORD's budget, in particular funding for ecosystems protection research.

ORD Response: EPA believes that the FY 2008 proposed budget addresses the highest priority environmental research needs, consistent with available resources.

SAB Comment: Ecological services is an important emerging environmental issue.

ORD Response: The Ecosystems Protection MYP is being revised to reflect ecological services as basic to identifying meaningful research outcomes.

SAB Comment: Concern that current homeland security research programs are not sufficiently informed by the behavioral and social sciences.

ORD Response: ORD is working with the Department of Homeland Security Centers of Excellence (Johns Hopkins University and the University of Southern California) to become better informed about the behavioral and social sciences to improve effective management and communication of EPA's homeland security research and risk assessments.

SAB Comment: Homeland security research could redirect funds from other research areas.

ORD Response: ORD is committed to the dual use of our homeland security research.

SAB Comment: ORD should provide support for the Agency's resource conservation initiatives.

ORD Response: This support is reflected in the Land Research MYP's strategic directions.

SAB Comment: Concerns regarding funding levels for the STAR research grants program.

ORD Response: ORD remains committed to maintaining the integrity of this program and continuing to strengthen the synergy of STAR with the intramural program.

SAB Comment: Support the nanotechnology initiative.

ORD Response: ORD continues to develop this research area.

Additionally, EPA's continued investment in computational toxicology and bioinformatics is responsive to the SAB's recommendations. The SAB recommended strengthening research collaborations with other

institutions. ORD's responsiveness to this advice is illustrated by several examples of collaboration, including the Children's Health Centers, Environmental Bioinformatics Research Centers, nanotechnology, the National Homeland Security Research Center, the NCCR III, and the Climate Change Science Program.

ORD research is guided by strategic directions, adjusted in per annual budget decisions, and applied to inform environmental decisions. Additionally, ORD's research programs include expert advice (decision inputs) and evaluation from many sources. Decision inputs are considered from program and regional offices, EPA's strategic plan, the Administration's priorities, congressional mandates, BOSC reviews, the SAB and other external advice, stakeholders, and National Program Directors (NPDs). ORD's research programs are evaluated by program and regional office feedback, BOSC evaluations, external advisory bodies, and Performance and Assessment Rating Tool (PART) assessments.

SAB reviews are performed on a variety of research areas, including Air Quality Criteria Documents, homeland security science, models, the *Report on the Environment*, and various Integrated Risk Information System (IRIS) assessments. The overall effort in human health is assessed. SAB examines the what, how, and why of ORD's research programs. ORD's scores on the Office of Management and Budget (OMB) PART reviews are improving, and ORD is demonstrating progress to OMB examiners. A PART assessment of the Ecological Research Program will occur in 2007, so the recent BOSC mid-cycle review of this program will be helpful.

ORD has been active in determining its 2008-2012 strategic direction since the spring and summer of 2006 when an executive-level discussion of budget scenarios occurred. Since then, NPDs have submitted strategic direction proposals along with laboratory and center responses, SAB review and advice has been sought, and the strategic directions have been incorporated into the FY 2009 budgeting exercise.

Dr. Teichman asked the BOSC members to focus on the proposed strategic directions: (1) clean air, (2) clean and safe water, (3) land protection and restoration, (4) healthy communities and ecosystems, and (5) compliance and environmental stewardship. The clean air strategic direction included changing the National Ambient Air Quality Standards (NAAQS) process so that reviews can be completed in a 5-year schedule. ORD would like BOSC input on the appropriateness of its strategic directions.

The SAB recommended research emphasis on the areas of global climate change, sensitive populations, urban sprawl, and environmental disasters (natural and Homeland Security-related). Dr. Teichman had to identify the research that currently is being done in these areas and the programs in which this research is being conducted. He noted that this has been a difficult process because the budget is not organized along those lines.

ORD is working with the SAB to take a strategic approach that is unique in that human health and ecology are considered together, unlike the individual focus of the National Oceanic and Atmospheric Administration (NOAA), which is ecology, and the National Institutes of Health (NIH), which is human health.

Dr. Clark commented that the Ecological Mid-Cycle Review Subcommittee discussed this unique approach in the mid-cycle review meeting on Wednesday. The Subcommittee was asked to assess if ORD is using the budget that is available in the most appropriate manner. He added that the decision process for determining how to use the available funding must be transparent, but the amount of the budget is not under ORD's control.

Dr. Harding stated that she would like to see information on the SP2 budget. Dr. Clark suggested that this be discussed during Dr. Harding's SP2 program review discussion and Dr. Harding agreed.

Dr. Clifford Duke (The Ecological Society of America) asked Dr. Teichman to expand on the idea of moving toward ecosystem services for the Ecological Research Program. There appears to be a primary emphasis on ecosystem services for human use; it will require much effort to expand this to protection of the environment. Dr. Teichman agreed, adding that those who allocate the budget consider the human health aspect to be the more important focus for now. ORD does not plan to assign dollar values to ecosystem services; ORD will look to the economists to assign values to services to inform benefit calculations associated with regulations. He expects that this will focus more on human benefits rather than ecological benefits. Although this was not the direction preferred by the ecological researchers, they will work to understand the impact of changes on human health. He noted that the overall goal is to consider ecosystems.

Dr. Saylor commented on ORD's goal to promote national and international leadership for environmental health and individual leadership to achieve high levels of quality. He stated that strategic planning is necessary to sustain and maintain leadership, as well as to rebuild the leadership that has eroded during the past few years as a result of budget reductions. For example, the Organisation for Economic Cooperation and Development (OECD) used to look to EPA for leadership, but this is no longer the case. Is strategic planning needed to rebuild this leadership position? Dr. Teichman replied that EPA's *Report on the Environment* is an important step in regaining this leadership position, especially now that assessments are available and good metrics are in place that should push strategic thinking across the Agency.

Dr. Rogene Henderson (Lovelace Respiratory Research Institute) asked about the Clean Air Scientific Advisory Committee's (CASAC) new process that is supposed to increase efficiency. She was concerned about getting upper level management's policy on regulations for these different pollutants before getting staff recommendations. The influence of upper management and political appointees may limit the options presented. She noted that the EPA staff papers have been excellent and the influence of the politicians on this process is eroding the morale of the scientific staff. She stated that CASAC wants the staff paper. Dr. Teichman replied that this is not a BOSC issue, but went on to explain that the staff paper is a product of the Office of Air and Radiation's (OAR) Office of Air Quality Planning and Standards (OAQPS) that is prepared with input from ORD. He speculated that Dr. Henderson may be correct in assuming that not all staff members are pleased with this change, which involves placing a political stamp on a product before it is made public; this new approach, however, will not affect ORD's part of the process. Dr. Henderson stated that the CASAC suggested that the process start with a workshop to discuss scientific issues. Following the workshop, ORD will develop a 200-page relevant document (shorter than the staff papers) for review by CASAC. This suggestion should increase efficiency without compromising the science.

Dr. Demerjian suggested that those who had not read *Building a Foundation for Sound Environmental Decisions* do so. It explains why it is critical for EPA to perform certain activities even when faced with budget decreases. This could help staff prepare for congressional briefings. Dr. Teichman confirmed that the document has been mentioned in such briefings, but he noted that some problems are more long-term in nature and the long-term research cannot be sacrificed for the hot topic of the day.

Dr. Clark thanked Dr. Teichman for his presentation and for responding to the members' questions, noting that this information will help provide background for the issues that the BOSC considers.

ORD Response to Science To Achieve Results (STAR)/Greater Research Opportunities (GRO) Report

Ms. Stephanie Willett, the Team Leader for the STAR/GRO Fellowship Program, explained that she had prepared a written response to the BOSC review, and this presentation would be an abbreviated version of the written report. As the STAR/GRO Program entered its 10th year, it was considered an ideal time for

the program to be reviewed. The BOSC was considered a good means for accomplishing this, so ORD asked the BOSC to review the program. A STAR/GRO Subcommittee was formed, which included eight members and one consultant. Ms. Willett noted that that Subcommittee's overall comments on the program were positive. Twenty recommendations to improve the program resulted from consideration of the seven charge questions that were posed to the Subcommittee.

Ms. Willett summarized the major comments and recommendations from the BOSC report and the ORD responses to those comments:

BOSC Comment: Improve data collection and analyses.

ORD Response: ORD agrees and is taking steps to do so.

BOSC Comment: Track fellows 5 years after completing the program.

ORD Response: Yes, with considerations. If it is too expensive to track the fellows, it may not be implemented.

BOSC Comment: Hold universities accountable for tracking fellows initially.

ORD Response: Because the fellowship is awarded to the fellow and not the university, this is not allowed.

BOSC Comment: Increase EPA program funding.

ORD Response: No.

BOSC Comment: Increase expense budget.

ORD Response: Maybe. Currently, fellows receive \$5,000 to spend on research and/or travel to meetings. Increasing this may be at the expense of awarding more fellowships.

BOSC Comment: Examine other sources of funding in the near future.

ORD Response: Yes.

BOSC Comment: Add a mentoring component to the program.

ORD Response: Yes, but after a pilot program.

BOSC Comment: Eliminate the GRO Undergraduate Program.

ORD Response: Under consideration.

BOSC Comment: Review 2003 policy decision.

ORD Response: Yes.

BOSC Comment: Eliminate the GRO Graduate Program or increase resources using the GRO Undergraduate Program budget and form a consortium.

ORD Response: Under consideration.

BOSC Comment: Update and clarify evaluation and selection criteria in upcoming Requests for Applications (RFAs).

ORD Response: Completed.

BOSC Comment: Broaden and revise research categories.

ORD Response: Completed.

BOSC Comment: Review and compile the publication records of fellows.

ORD Response: Currently being undertaken. The 1995 and 1996 are the oldest fellowships and a bibliometric analysis of their publications indicated that they are highly cited. They are publishing in high impact journals, had 13 patents, and a number of “hot” papers were identified among their publications. The program plans to perform a bibliometric analysis of publications of the remainder of the fellows.

BOSC Comment: Require that fellows provide links to their professional Web pages.

ORD Response: Yes.

BOSC Comment: Adopt and report on the following metrics: (1) percent of minorities who obtain advanced degrees, (2) distribution or concentration of awards across institutions, and (3) ratio of masters versus doctoral students.

ORD Response: Currently being undertaken.

BOSC Comment: Develop a user-friendly Web site and a listserv for fellows.

ORD Response: A Web site was previously in place, and it will be reinstated and maintained.

BOSC Comment: Market the STAR Fellowship Program strategically to minority communities, especially if the GRO Program is eliminated.

ORD Response: Yes, marketing efforts will be increased.

BOSC Comment: Enhance efforts to increase the number of GRO undergraduate applicants.

ORD Response: Yes, in conjunction with the Fellows Web site, marketing efforts will be increased. Information will be shared with other parts of ORD so that efforts will be more widespread.

The STAR/GRO Fellowship Program leadership will initiate and complete eight action items in response to the BOSC’s comments. An update report will follow in 2 years. Ms. Willett thanked the BOSC members and Subcommittee members for their review and recommendations to improve the program.

Dr. Clark asked Dr. Duke to chair the discussion.

Dr. Duke thanked ORD for adapting a large number of the BOSC recommendations, particularly the recommendation to format a strategic plan for the fellowship programs. He looks forward to seeing that plan in the future. He pointed out one small recommendation that appeared to have been overlooked. It can be found on page 17 of the BOSC report. The recommendation was to invite fellows to conduct their research at EPA laboratories and other Centers of Excellence.

Dr. Sayler asked for clarification regarding the recommendation that the GRO Program be discontinued. Is the Subcommittee recommending that the resources for the GRO Program be placed in the STAR Fellowship Program or should the GRO Program be reinstated later in an improved form? Dr. Harding asked Ms. Willett to elaborate on how minority students will be marketed to increase participation in the STAR Fellowship Program if the GRO Program is eliminated. Ms. Willett responded that her understanding of the BOSC’s recommendation was that the GRO Program should not be eliminated but should be restructured and integrated more with the STAR Fellowship Program. She commented that the GRO Program was established 10 years ago because there was a need. This need still exists, and ORD is still trying to fill that need. Attempts are being made to increase communication with the minority community to encourage applications from minority students. The National Center for Environmental Research (NCER) staff attends conferences to communicate face-to-face with minority students about fellowship opportunities; she noted that there are plans to do more of this in the future.

Dr. Duke explained that EPA must follow a 2003 policy that broadened the eligibility requirements for the limited competition program; eligibility now is defined by the funding level that the institution

receives from the federal government, rather than its minority status. This policy is what spurred the Subcommittee's recommendations regarding the elimination of the GRO Program.

Dr. Sayler asked if ORD had pursued some creative ways to increase funding for the fellowship programs. For example, could the Agency use royalties gained from technology licenses/patents for fellowships or could EPA use environmental fines to fund fellowships? Dr. Teichman replied that ORD is trying to meet the noble objectives of the GRO Program, but it must do so within the constraints of the law. The Agency must be careful in how it targets certain groups. With regard to the use of environmental fines to fund fellowships, there has been little success because there is no cause and effect. In addition, the Agency is not supposed to seek ways to augment the President's budget request; however, EPA can leverage resources with its sister agencies. Ms. Willett stated that ORD is talking to other federal agencies, non-profit organizations, and alumni associations about co-funding fellowships.

Dr. Charles Haas (Drexel University) brought up a point regarding metrics. The majority of engineers with doctoral degrees do not usually follow a career path into academia or research and they typically have lower publication rates. Additional metrics to evaluate the contribution of these fellows should be explored. Ms. Willett responded that their career paths would be tracked and not just their publication rates.

Dr. Sayler mentioned that the number of significant digits used in these citation analyses are becoming unreasonable.

Dr. Weiss asked if ORD was seriously considering eliminating the GRO Program. She proposed that ORD conduct a more thorough analysis of what actions will bring success in directing more fellowship dollars to minority students. She also suggested a reexamination of the Office of General Counsel's interpretation of this policy. Ms. Willett responded that ORD is committed to the GRO fellowship effort and will do what is needed to maintain a targeted, limited competition program. Dr. Weiss commented that marketing minority students may increase the number of minority applicants for fellowships but it will not meet the objective of improving the capacity of minority institutions. Ms. Willett responded that there are other federal agencies with larger investments in this area, but EPA is concerned about increasing minority participation and will do so by any legal means available.

BOSC Membership Vacancies

Dr. Clark decided to use the remaining 10 minutes before the morning break to discuss nominations for the Executive Committee. By fall 2007, there will be three vacancies on the BOSC Executive Committee. He asked members to nominate individuals whose expertise would complement that of the current Board. He also asked members to consider different geographic locations and diversity. Nominations already on file will be reviewed, keeping in mind the expertise of those who will be leaving the BOSC. Future needs also must be considered. Dr. Clark noted that the BOSC members nominate individuals for consideration but EPA makes the final selections. He asked members to send their nominations to him within the next 2 weeks. He mentioned that people who have served on Subcommittees should be considered because they have completed much of the paperwork and it is easier to integrate them into the Executive Committee.

Ms. Kowalski stated that a Systems Biology expert is still needed. Dr. Henderson asked if there were any other needs. Dr. Clark commented that individuals with risk assessment, environmental engineering, and air issues expertise should be considered.

Subcommittee Draft Report

SP2 Program Review Draft Report Presentation

Dr. Harding explained that her presentation was an overview of the findings of the SP2 Subcommittee, but the specific details are provided in the report. She thanked the SP2 Subcommittee members for their efforts and praised the expertise of the members. She noted that at least two of the five Subcommittee conference calls centered on rating tool discussions. She thanked Dr. Elaine Francis, NPD of the SP2 Program, as well as the program scientists, who were very enthusiastic, for their time and efforts. She also acknowledged Ms. Heather Drumm, DFO for the Subcommittee, and Ms. Kowalski for their help on this review.

The SP2 Program provides EPA's Office of Prevention, Pesticides and Toxic Substances (OPPTS) with the scientific information that it needs to reduce or prevent unreasonable risks to humans, wildlife, and nontarget plants from exposures to pesticides, toxic chemicals, and products of biotechnology. It specifically addresses OPPTS' high priority research needs that are not addressed by any of ORD's other research programs. The program has three LTGs, the first of which is more external than the other two and is in response to a mandate to regulate chemicals. LTG 1 is divided into three subcategories—two focus on longer term directions and one focuses on short-term needs. LTG 2 provides the scientific underpinnings to perform risk assessment, and LTG 3 promotes the use of the results of ORD's research as the scientific foundation for decision-making related to products of biotechnology.

Evaluating the program and addressing the charge questions and LTGs required a Subcommittee with varied expertise, and each work group within the Subcommittee was comprised of two to three members who worked in partnership within small groups. Dr. Harding worked with Dr. Barry Ryan (Emory University), the Subcommittee Vice-Chair, to organize the drafts from the working groups into the final report. The overall impressions of the program were positive, and the SP2 Program is successful. The scientific research being performed is based on sound science and is being completed in a timely manner. The program is well managed at all levels and fills a unique niche within the Agency. LTGs 1 and 2 are more mature research programs; LTG 3 is related to biotechnology, which is prominent because it is in the public eye.

The Subcommittee was given the task of piloting the first use of the rating tool for a BOSC program review, and many of the same issues with which the Subcommittee struggled were identified at the Drinking Water Mid-Cycle Review meeting held on Wednesday. The Subcommittee developed a score for each LTG using the criteria to rate each as "Exceptional," "Exceeds Expectations," "Satisfactory," or "Unsatisfactory." After two conference calls to discuss the rating tool, the Subcommittee better understood its purpose and was more confident in using it.

The summary assessment for LTG 1 was that it "Exceeds Expectations" because the research is scientifically advanced and the scientific quality of the program is excellent. One example of this excellence is that research conducted by the program already has resulted in improved test methods for OPPTS. LTG 2 received a "Satisfactory" rating because, although it is doing the right science and there are a number of innovative and quality projects, there was still room for improvement. Some suggestions for improvement include a more ecosystem focus and exploration of high performance computing. This was considered a strong program, and the Subcommittee debated long and hard about giving it an "Exceeds Expectations" versus "Satisfactory" rating. LTG 3 also was given a "Satisfactory" rating because, although it is performing the right science, there is a question about whether the research is of high relevance or urgency for the Agency. There are primary needs not being addressed currently, and performance goals were only recently adopted.

In terms of relevance, all LTGs are consistent in scope and content with EPA's Strategic Plan Goal 4. The program is responsive to OPPTS, the Office of Pesticide Programs (OPP), and the Office of Pollution Prevention and Toxics (OPPT). One missing component regards gene transfer, which is related to LTG 3.

The Subcommittee had the most recommendations for improvement with regard to structure. The framework is logical and laid out in a reasonable and integrated manner, but there is a need to improve the communication between researchers working on LTGs 1 and 2. An integrated evaluation of the entire program on health risk should be performed to provide advice on program balance, especially with respect to exposure, and the methods need to be validated and/or verified. Additionally, the program needs to move toward an ecosystems approach that fully and accurately assesses both population and community risks associated with various aspects of SP2, and knowledge of the early products of agricultural biotechnology to meet future releases of plant-incorporated protectant (PIP)-crops should be broadened. The criteria for deciding what research areas will be investigated in the future are not clearly defined. Nanotechnology should have been highlighted more in the program review, and more collaborations in the areas of statistical analyses, bioinformatics, theoretical and mathematical modeling, and probabilistic risk assessments are needed.

How much progress the program has been making on each LTG was evaluated as program performance. The SP2 program strives to complete 100 percent of its planned outputs each year and keeps track of its record by documenting the percentage of Annual Performance Measures (APMs) delivered relative to the projected number. For all three LTGs, the program appears to be making solid progress on achievement of long-term research program goals and meeting intermediate range milestones.

The Subcommittee examined traditional measures to assess quality, including publication in high-impact journals and the peer-review process. There were no issues with the quality of the program; this is a well-regarded program. In terms of scientific leadership, the program provides technical leadership in a number of areas, in the United States and internationally. The scientists provide advice and assistance to the Agency. The quality and impact of peer-reviewed publications are apparent among the broader scientific community.

When Dr. Harding felt ill, Dr. Ryan completed the presentation and led the subsequent discussion. He explained that the scientific leadership was quite strong overall, and the Subcommittee had examined a number of criteria including publicity and activities outside of EPA. The overall findings were that the leadership is excellent and the leaders' efforts are appropriate. Leadership is doing its best to recruit the best and brightest scientists.

The coordination of the program is good. The primary client is OPPTS, and communication with OPPTS is good; less emphasis is placed, however, on communicating with other organizations. More efforts to disseminate information to researchers "in the trenches" are needed, and more feedback should be solicited from OPPTS, but overall the coordination and communication of the program is good.

The program has achieved a number of positive outcomes. The materials and data derived from the program are being used in a timely fashion in policy- and decision-making. A detailed list of outcomes is provided in the report.

Before beginning the discussion of the SP2 report, Dr. Clark asked those who had joined the meeting via telephone to identify themselves. Drs. Giesy and Daston, Executive Committee members, and Dr. Elaine Francis, NPD for the SP2 Program, indicated that they had joined the meeting. Dr. Clark welcomed them to the meeting. He noted that Drs. Falk and Philbert were the designated vettors for the SP2 report but neither were present at the meeting. Therefore, Dr. Clark stated that he would lead the discussion on the report and take the role of vettor. He commented that the report demonstrates the value of using the rating tool. The Subcommittee was impressed with the work of the program, and suggested a number of

ways that it could be improved. The value of the tool is to summarize what the Subcommittee members think of the overall program, and the text of the review supports the rating and explains the rationale, which was provided in the draft SP2 report. Many reviews focus on outputs and outcomes, and often these reviews provide the first opportunity for ORD staff to explain these outputs and outcomes to personnel outside the Agency. This discussion in the report was well done. This report includes an executive summary that clarifies the findings and recommendations. Dr. Clark asked if the Executive Committee members had any comments on the report.

Dr. Demerjian asked about the program's focus regarding safer products. Would nanotechnology be classified under safe products? Dr. Harding responded that safe products are a minor aspect of the program and mostly embedded in LTG 1. Specifically, this deals with chlorinated compounds and nonchlorinated compounds, mostly as related to pesticides. The Subcommittee members were not able to determine how nanotechnology related to the SP2 Program, although it was clear that other ORD programs are investigating this topic. Dr. Ryan commented that the SP2 Program would be an appropriate place for nanotechnology research.

Given Dr. Harding's response, Dr. Sayler said he was confused about the Subcommittee's recommendation for the SP2 Program to take a leadership role in nanotechnology research. Dr. Harding replied that perhaps the wording should be changed to recommend that the SP2 Program have a role in nanotechnology research rather than a leadership role.

Dr. Demerjian asked if safe products were consumables and if major products were entering the environment. Dr. Harding responded that one project focused on lead and one on chromated copper arsenate (CCA)-treated wood. The projects were specifically targeted to those important to public and human health.

Dr. Sayler asked if the Subcommittee could make a recommendation regarding biofarming in addition to PIPs and if this program was the right place for such recommendations. Dr. Ryan replied that this was addressed in the recommendations for LTG 3, because the Subcommittee members believed that this was the most appropriate LTG for this issue. U.S. Department of Agriculture representatives said that they would be willing to consider this matter.

Dr. Haas commented that it appeared that the program set up projects to address specific products and asked if there were more examples of projects. Dr. Harding answered that the criteria to determine issues/products are not well-defined, and the program has been more reactive than proactive. Dr. Ryan added that the Subcommittee recommended that the program define criteria to select products and develop an active program to identify potential emerging issues (e.g., melamine).

Dr. Duke commented that there was an odd mixture of science questions on pages 12-13 of the report. The methods described did not appear to him to be research but more like workshop products. Dr. Harding responded that the Subcommittee was not concerned about this.

Dr. Swackhamer commented that it was a thorough review but it could be improved by explaining the derivation of the science questions on pages 12-13. Dr. Harding answered that the science questions were derived from the MYP, and agreed that this information should be added to the report.

Dr. Swackhamer suggested that an explanation be added to the theme presented in Table 3 on page 20. Additionally, the recommendations in the report should be made consistent (i.e., some are bulleted and some are not; some are at the end of the paragraph and some are at the beginning). She proposed that the recommendation come first in the paragraph. Regarding Question 2 on page 32, the recommendation is that the program should continue peer review. To be consistent, places where there is no mention of peer review should be pointed out. Dr. Harding replied that the Subcommittee members thought that peer

review was of enough importance to highlight it, but it is not a recommendation to do something differently. She added that some of the recommendations are to continue to do things that the Subcommittee believes are important.

Dr. Weiss commented that a number of recommendations ask for additional items, such as computing methods and substances for study. Given the limited resources available to the program, if these items are added, what would the Subcommittee recommend that they cut? Dr. Harding responded that, in developing the MYP, the program was tasked with compiling a list of additional research areas if more money was made available in future years. The Subcommittee does not know whether the program's budget will remain stable, increase, or decrease so these recommendations were written with the hope that the budget would be increased.

Dr. Weiss stated that the importance of the number of recommendations arises in assigning a rating to the program. If there is a large number of recommendations, someone might assume that the rating should be "Satisfactory." In this case, there were numerous recommendations, but many of the recommendations were additions and not changes to existing research, and the rating was lowered as a result. Dr. Clark explained that the rating of "Satisfactory" was assigned because there were some fundamental issues with the program. Dr. Ryan stated that the number of recommendations was not important, but the quality of the recommendations is significant.

Dr. Saylor recommended that the last recommendation on page 2 be checked to ensure that it maps to Table 1. He suggested that the third recommendation on page 3 be modified to "pursue cooperation in advanced development" because this is an expensive process and EPA will need to leverage its resources. Dr. Harding agreed with Dr. Saylor's suggestions.

Dr. Daston stated that he had been involved in a discussion regarding use of the rating tool because the Subcommittee did not understand the purpose of the tool. The Subcommittee applied the tool as best it could.

Dr. Clark thanked everyone for their comments and stated that the changes discussed were mostly editorial. He asked Drs. Harding and Ryan to incorporate the comments and revise the existing draft. Drs. Harding and Ryan also should obtain any input from Drs. Philbert and Falk. Dr. Clark asked that Drs. Philbert and Falk review the revised report to ensure that all of the comments were incorporated. Dr. Clark called for a motion to approve the SP2 report with the changes discussed and Dr. Saylor moved to approve the report with the requested changes. Dr. Duke seconded the motion and the report was unanimously approved by the Executive Committee.

Subcommittee Update

Technology for Sustainability Program Review

Dr. Giesy explained that the face-to-face meeting for the Technology for Sustainability Program Review was held April 25-26, 2007, in Cincinnati, Ohio. All Subcommittee members were present, and the presentations by EPA and their collaborators were excellent and well prepared. The draft report is approximately nearly completed. It will be finished by Monday, May 28, and then it will be circulated to the Subcommittee members so that they can review it and add their comments.

Dr. Clark asked how the materials provided for the program review differed from those provided for a mid-cycle review. Dr. Giesy responded that the Subcommittee members received a tremendous amount of material; more than they could read. He identified the most important documents for the Subcommittee's review, with the assistance of Ms. Clois Slocum, the DFO for the Subcommittee, and Ms. Kowalski. Instead of the typical poster session used for previous program reviews, the posters were

presented one at a time to the entire Subcommittee. Because of the limited number of posters, this approach worked well. When the Subcommittee requested additional information from ORD, it was provided promptly.

Dr. Clark asked about the Subcommittee's experience in assigning ratings to the program's LTGs. Dr. Giesy answered that it went better than he thought it would. The concern was that the term "Satisfactory" is pejorative. The consensus was to assign a rating of "Exceeds Expectations" because the program had accomplished so much with such a small number of scientists. There was one Subcommittee member who wished to assign a rating of "Satisfactory" to the program, but the Subcommittee was able to come to a consensus on the "Exceeds Expectations" rating without much discussion.

Dr. Sayler asked Dr. Giesy to elaborate on the poster session process. Dr. Giesy responded that because there were only six posters and the Subcommittee members would have had to travel quite a distance in the building to view them, it was decided that the posters be presented one at a time in the main meeting room. Each Subcommittee member was provided a handout of the poster, and the group as a whole concentrated on each poster. This process worked very well for this review. Dr. Giesy specifically requested that fewer posters be presented at the meeting. Dr. Sayler pointed out that the previous approach offered the advantage of allowing the Subcommittee members to interact directly with more program staff members. He has found this to be helpful for previous program reviews. Dr. Giesy acknowledged that advantage and stated that this new approach would only work with a small program.

Dr. Clark stated that on Friday's agenda is time for discussing the materials provided for program and mid-cycle reviews to determine if the Subcommittees are receiving all of the information that is needed and to ascertain what information has been most helpful. He explained that the Technology for Sustainability Program Review Report would be reviewed and vetted for discussion at the September Executive Committee meeting. It is likely that the Drinking Water and Ecological Mid-Cycle Review Reports will be available for discussion prior to the September meeting; a conference call may be scheduled in August to discuss one or both of these reports. The Technology for Sustainability Report also may be available before that call.

Rating Tool Pilot

Dr. Clark explained that the new rating tool had now been used in two program reviews (SP2 and Technology for Sustainability) and three mid-cycle reviews (Human Health, Ecological, and Drinking Water). The application of the rating tool for the mid-cycle reviews is slightly different than for the program reviews, but common issues have arisen. He asked the Executive Committee members to assess whether the tool is fulfilling its purpose and if any changes were needed? Because Dr. Harding was the first to use the tool for a program review, Dr. Clark asked for her input on its use.

Dr. Harding stated that there was some difficulty in getting the Subcommittee to understand how to apply the tool to the review. She thinks the tool serves a useful purpose; that is, to assess the whole program collectively and qualitatively. The questions arise when determining how strictly to apply the criteria (e.g., meeting "all" goals vs. "most" goals). Her Subcommittee had to decide whether to take the definition literally or interpret the spirit of the definition. The Subcommittee members equated the "Satisfactory" rating with "C" grade, which is not considered a good score. Therefore, the Subcommittee members initially wanted to rate everything "Exceeds Expectations" or "Exceptional" because the SP2 Program was performing good work. She recommended that the Subcommittee not be expected to give a rating at the face-to-face meeting but wait until after the members have drafted the report. Dr. Harding thought it was premature to assign the rating at the face-to-face meeting.

Dr. Ryan commented that the tool is useful for framing a discussion about a large program and allowing a qualitative assessment of the program as a whole. It is a very specific rating tool that encourages the

members to review the entire program. He added that there was additional pressure in being the first Subcommittee to apply the rating tool because if the program was rated as “Exceptional,” then it would be difficult for the program to show improvement during its next review. In Dr. Ryan’s opinion, the ratings that were assigned to the program were appropriate. The rating tool was effective, but it took some time and effort to reach consensus.

Dr. Giesy stated that his Subcommittee discussed the rating tool from the very first conference call, and the Subcommittee members were continually reminded that the rating had to be a consensus. He added that application of the tool will be a learning experience; as the tool is used for more reviews, more guidance can be given to future Subcommittees.

Dr. Clark explained that he applied the tool for two mid-cycle reviews. His approach was to examine the definition, provide a single assessment about how things had changed since the site review (i.e., the previous 2 years), and then consider the Subcommittee’s expectations. Yesterday’s Ecological Mid-Cycle Review meeting was attended by only three Subcommittee members; two viewed the program as “Satisfactory” and one as “Exceeds Expectations.” At that point, the discussion was halted so that the members could consider the ratings further and input could be obtained from the absent Subcommittee member.

Dr. Sayler explained that his Drinking Water Mid-Cycle Subcommittee applied the tool prior to the face-to-face meeting. He asked the members to apply it to ORD’s response to the initial program review and across the LTGs, so a preliminary rating was discussed early in the review process. Most of the mid-cycle review was completed by lunch time. A straw poll indicated that five members agreed with one rating but there was one dissenter. After some discussion, the one member revised his score slightly and the group reached a consensus, with a qualified rating of “Meets or Exceeds Expectations.” The Subcommittee justified its rating and reported this in the debriefing. The Subcommittee will provide a letter report to the BOSC that included this rating and its justification. Dr. Sayler acknowledged that the Executive Committee can change the rating if the justification does not meet its requirements. He agreed that it may be risky reporting the preliminary rating to ORD, because it could be changed before the report is completed.

Dr. Henderson commented that most EPA programs are considered to be above average, and the “Satisfactory” rating is not viewed as above average. Dr. Sayler replied that the Drinking Water Program did exceed expectations, even if all of the goals were not met.

Dr. Daston, who was involved in developing the tool, said that he was not concerned by anything he had heard. Smart people always want to change whatever is presented to them, so it is not surprising that there are suggestions for changes to the rating tool. If the consensus is that the term “Satisfactory” is pejorative, then the term can be changed. ORD and OMB should not have a problem with the change as long as it is defined. He commented on the need to do a better job of orienting the Subcommittees to the purpose and use of the rating tool. OMB will execute its normal distribution no matter what the BOSC does, and a “Satisfactory” rating provides the program the opportunity to improve on its next review. Dr. Daston cautioned that it could be counterproductive to inflate the program ratings.

Dr. Clark stated that he appreciated the feedback on the application of the rating tool and the guidance for applying it in the future. The tool provides useful information to EPA and indicates what they are doing well. The issue is that there is inconsistency in applying the rating terms. If the meanings of the ratings are changed, it will be difficult to compare scores among the various reviews. He asked if the language in the definition could be changed. Dr. Daston replied that he did not want to go back and renegotiate the language with OMB; the Executive Committee will have to be disciplined in how the tool is applied. Dr. Clark agreed that more instructions and guidance should be provided to future Subcommittees.

Dr. Haas commented that the rating tool is an absolute metric. It is impossible for everything to exceed expectations, but it does not mean that the program is ineffective. Expectations will be different among the Subcommittees, and changes in budget will have to be considered as well. Should the program be penalized as unsatisfactory or satisfactory if the resources available are not adequate to perform the work? Dr. Clark answered that this should be addressed in discussions with ORD.

Dr. Weiss explained that she was a member of the work group that developed the rating tool. She was concerned to hear that the “Exceptional” rating is so quickly removed from consideration, essentially leaving a 2-point rating system (“Exceeds Expectations” and “Satisfactory”). There is a bias in this system because OMB will use the ratings to compare EPA programs to other federal programs across the government and will not read the text that supports and explains the rationale for the rating. She was concerned the OMB would transform the ratings into numerical indicators so that ORD programs can be compared with those of other agencies. She advised against making any significant changes to the rating system. Specifically, she did not support any changes that would encourage Subcommittees to assign a lower rating.

Dr. Clark explained that this tool was not created for OMB; it was developed by the BOSC in collaboration with ORD and OMB and designed so that it would be useful input for OMB PART reviews. The rating tool is intended to summarize the BOSC’s overall assessment of a program; without it, OMB might just count the number of recommendations and assume that more recommendations equate to a lower rating, which makes no sense. The BOSC should apply the tool carefully and fully explain the rationale for the rating, but it is not intended to serve OMB. Dr. Weiss pointed out that the work group that developed the tool would not consider a numerical rating system and insisted that any rating be accompanied by a textual explanation.

Dr. Giesy stated that the members of his Subcommittee did not think that the terms were equally aligned. For example, the gap between “Satisfactory” and “Exceeds Expectations” is much smaller than the gap between “Satisfactory” and “Unsatisfactory.” The Subcommittee would have preferred the ratings “Exceeds Expectations,” “Meets All Expectations,” and “Meets Most Expectations.” These terms better express the results of the review; some elements of the program are excellent and some items are not being addressed at all. Dr. Clark reiterated Dr. Daston’s comment that the terms could be changed but the definitions should not be altered.

Dr. Harding mentioned that the Subcommittee needs to better understand the consequences of a rating before it undertakes the review. Subcommittees should be briefed on how the tool will be applied. Dr. Clark agreed that the Subcommittees need more guidance on how to apply the tool. He also suggested that the rating term “Satisfactory” be changed to “Meets Expectations.” If there are any other recommendations regarding rating tool terms, please send them to Dr. Clark and he will discuss them with Dr. Daston and the other members of the work group that developed the tool. The work group will decide the feasibility of acting on the suggested changes. Inputs and ideas are encouraged, and the work group will determine if “Satisfactory” should be changed to “Meets Expectations.”

The meeting recessed at 1:45 p.m. so that the BOSC members could travel to the EPA Narragansett Laboratory for a tour of the facilities. Dr. Jonathan Garber, Dr. Wayne Munns, Dr. Susan Ayvazian, Dr. Marilyn Tenbrink, and Mr. Peter Celone welcomed the BOSC to Narragansett and Dr. Garber provided an overview of the Atlantic Ecology Division’s (AED) facilities and capabilities. The AED resulted from ORD’s reorganization to align with the risk assessment paradigm and it supports the Agency’s mission by producing methods, models, and data to quantify risks posed by anthropogenic stressors to coastal waters and watersheds. AED is one of the four divisions of the National Health and Environmental Effects Research Laboratory (NHEERL) that focus on ecological research. AED has four branches—the Population Ecology Branch, Habitat Effects Branch, Monitoring and Assessment Branch, and Watershed Diagnostics Branch. AED is located in an 11-acre federally owned complex that employs approximately

600 researchers. The AED workforce includes 72 staff members and 3 post-docs (total of 70.2 full-time equivalents [FTEs]), and 75 percent of the staff hold advanced degrees. Approximately 30 contractors and 12 SEEs also are located onsite at AED. There is 80,000 square feet of workspace in 7 buildings and the laboratory has a year-round supply of natural high-salinity seawater. AED operates with a total annual budget of \$12 million.

The laboratory began as a national water quality laboratory in 1965 with strengths in environmental toxicology and chemistry but transitioned to an ecological research laboratory in the mid-1990s with a focus on ecological risk assessment. The AED has a highly trained, enthusiastic work force, analytical laboratories and instrumentation for aquatic toxicology and chemistry, a seawater system and wet laboratory facilities that allows AED to conduct experiments from beaker size to large tanks, and a research fleet and field capabilities.

Research efforts are focused on coastal ecology and seawater systems. The laboratory has a fleet of vessels and field research capabilities, including the ability to rapidly deploy a force to take samples quickly and safely. Researchers have backgrounds in marine science, oceanography, biology, zoology, chemistry, ecology, civil and environmental engineering, and other relevant fields. Areas of scientific expertise at AED include aquatic toxicology, toxicological test method development, ecological risk assessment, marine chemistry, marine organism culturing, coastal systems ecology, landscape ecology, population modeling, and wildlife risk assessment.

A unique aspect of the laboratory is the direct access to seawater in the Narragansett Bay. The seawater is clean, and the salinity is stable throughout the year. The temperature, however, changes quite a bit. The intake is 600 feet out at a depth of 18 feet. The daily flow is 500,000 gallons. The seawater is received raw and it can be filtered, heated, or chilled. The seawater filtration system can supply filtered water at a rate of 300 gallons per minute. Seawater can be heated or cooled to accommodate the requirements of the organisms. The dissolved oxygen levels and salinity are controlled. Flexible systems allow for research using small aquaria for studying organisms to large tanks for examining populations and communities.

The information center at AED includes a GIS laboratory that provides analysis and display of spatially oriented data. There also is a training room at the facility, data servers, an I-O room, and various printers and other equipment. AED has two 27' vessels as well as kayaks.

The laboratory delivers science that solves the Agency's problems. The research addresses water quality criteria and guidelines, criteria for water and sediment, dissolved oxygen, and nutrients. AED also conducts wildlife risk assessments for pesticides and develops population models and extrapolation methods. To prove that the models and methods are working, AED conducts monitoring and assessment for coastal states and provides an infrastructure for state monitoring.

Dr. Henderson asked if the laboratory uses a critical load approach similar to that used in Europe. Dr. Garber responded that a critical load approach has not been instituted yet. Critical loads are under consideration but it is not the method that currently is in use.

Dr. Sayler asked if the laboratory had microbiological capabilities. Dr. Garber replied that it has had such expertise in the past but does not currently have such capabilities.

Dr. Garber provided an overview of AED strategic planning in the context of EPA and ORD strategic planning, including use of MYPs, APMs, Annual Performance Goals (APGs), the Administrator's planning guidance, the ORD planning process, and NHEERL Implementation Plans. Current research directions include aquatic stressors, contaminated sediments, wildlife risk assessment, and monitoring and assessment. AED's goal is to conduct ecological effects research that supports decision-making (conditions assessment to diagnostic risk assessment to risk-based policy management and decision-

making). AED research programs have goals that are identified in the MYPs and the research conducted by the laboratory can be linked to the LTGs in the MYP.

Dr. Haas asked about one of the research areas for which there were no full-time equivalents (FTEs). Dr. Garber responded that this is supported by AED at a low level but it is not officially on the books.

AED research is focused on: (1) clean water goals, (2) land stewardship goals (contaminated sediments), (3) wildlife risk assessment, and (4) monitoring and assessment. During the 40+ years research has been conducted at Narragansett, limits have been established for contaminated sediments and the laboratory has received many awards. AED's work is designed to be national in scope but has local and regional impact. The laboratory deals with real problems while meeting emerging research needs, and its research is recognized as excellent. AED engages in many partnerships and communicates with states and the scientific community. It has developed capacity in the states, many of which have adopted AED's methods.

Dr. Swackhamer asked how much the laboratory interacted with NOAA. Dr. Garber replied that NOAA's mission is fisheries and regulations, which shapes its specific research focus. There is a great deal of institutional interaction, and the laboratory provides NOAA with seawater. Recently, there has been discussion regarding EMAP approaches.

Dr. Demerjian asked if AED monitors the seawater for contaminants and changes. Dr. Munns responded that large-scale monitoring is not performed locally, but the laboratory assists states in performing monitoring. The seawater the laboratory uses is monitored for suspended solids, dissolved oxygen, temperature, and chemicals. If there is a local spill, the seawater intake is shut down.

Dr. Sayler asked if the laboratory's monitoring of the seawater would detect a microbiological event. Dr. Garber responded that if it was an unknown event, then the monitoring would not detect it. Dr. Sayler asked if the laboratory had any connections with Homeland Security. Dr. Garber replied that it did not.

Dr. Harding asked if any of the NHEERL ecological divisions focus on regional issues rather than national issues. Dr. Garber responded that there is a regional and national focus for all of the divisions. The divisions work on issues that are national in scope as well as issues regional issues.

Following the presentation, the BOSC members toured the facilities. Dr. Munns concluded the tour with some closing comments on the future directions for AED. He noted that AED's priorities are changing to that of water quality and ecological research and there is a steady erosion of FTEs and extramural budget. There is increasing attention to outcomes and performance measures. The outcomes concept is being incorporated into the organization as quickly as possible. There is an intensified focus on developing tools for watershed assessment, characterizing ecosystem services production functions, and research to support ecological benefits assessment. There is an increased orientation to decision support and an increased reliance on interdisciplinary collaboration and partnerships. AED is changing, and much of that change is driven by what work is performed locally.

Dr. Haas asked if there is a mechanism in place to ensure that ORD remains involved in risk analysis. Dr. Munns answered that there is a National Center for Environmental Economics within OPEI, which is providing economic analysis support to the Agency. Partnerships are being sought with NGOs and scientific societies to foster discussions on integrating economics and science to assess ecosystem services for decision-making. Dr. Sayler asked is this extended beyond the marine area and Dr. Munns responded that it did, mentioning efforts on biofuels, the Willamette Valley, the Tampa Bay area, and the North and South Carolina coast. Training materials have been developed on energy analysis. Human ecology would now be called ecosystem services (i.e., the effects of the environment on humans) from an integrated standpoint.

Dr. Swackhamer asked about the flexibility of the laboratory in responding to the “crisis of the day.” Dr. Munns replied that if the crisis is an oil spill, the laboratory has the expertise to assess and remediate it, but the laboratory does not get involved unless requested. If a natural catastrophe occurs, AED’s line management structure can direct the laboratory to provide the support needed. He noted that this mechanism has not been exercised yet.

Dr. Clark stated that the funding appears to be controlled by the NPDs and not the Laboratory and Center Directors. Dr. Munns replied that he was not sure if that was the case; the NPDs do have major influence but there are other issues in play that are limiting the extramural funding within ORD. He noted that the planning process is complicated and difficult to understand on a local level. Budget decisions are made at a higher level with ORD.

Dr. Munns thanked everyone for their attention and expressed his hope that the BOSC members enjoyed the tour.

FRIDAY, MAY 25, 2007

Dr. Clark reconvened the second day of the meeting at 8:30 a.m. He explained that several members had to depart early to catch their flights so he was going to do his best to cover the agenda items by 12:30. He mentioned that meeting dates need to be set for the January 2008 and the May 2008 meeting Executive Committee meetings. The Endocrine Disrupting Chemicals (EDC) and PM/Ozone Mid-Cycle Review face-to-face meetings will take place on September 18, 2007, and the Executive Committee meeting will be held September 19-20, 2007. Drs. Teichman and Gray will be in Research Triangle Park (RTP), NC, that week so there is a possibility that the September meeting location could be changed to RTP. Another option is to hold the mid-cycle reviews in Washington, DC, as scheduled, and schedule the Executive Committee meeting for September 17, 2007. Dr. Ryan said that he was not available on September 17. Dr. Clark announced that the SAB meeting will be held in Washington, DC, on September 19-20, 2007. If possible, he would like to hold a 1-day Executive Committee meeting on September 17, 2007, and the two mid-cycle review meetings on September 18, 2007. It may be necessary to schedule an Executive Committee conference call in August 2007 so that some business may be handled before the face-to-face meeting. Ms. Kowalski will arrange a 2-hour conference call during the week of August 6, 2007. The Drinking Water and Ecological Mid-Cycle Review Reports will be discussed during the August conference call.

After some discussion, a meeting date of January 24-25, 2008, was chosen for the Executive Committee meeting and it will be held in Washington, DC. The May 2008 meeting is scheduled for May 15-16, 2008, and it probably will be held at one of the EPA laboratories or centers. BOSC members should contact Ms. Kowalski with preferences regarding the May meeting location. She can provide information on the various ORD laboratories if necessary.

Subcommittee Updates

Mid-Cycle Review Subcommittees

Human Health Mid-Cycle Draft Report

Dr. Clark, Chair of the Human Health Mid-Cycle Review Subcommittee, stated that the BOSC members received the Human Health Mid-Cycle Review Report in the meeting notebooks. The Subcommittee met via two conference calls and a public meeting in Washington, DC. The Subcommittee reviewed the changes that had been implemented in the Human Health Research Program (HHRP) in response to the 2005 BOSC program review. A new MYP had been developed and LTG 4 served as the foundation of

the new MYP. The Subcommittee focused on five charge questions to determine if the changes made to the HHRP since the program review were appropriate and adequate. All of the reviewers focused on program metrics. The new MYP focused on emerging research that will be conducted in the next 3 to 5 years. The Subcommittee used the rating tool to evaluate progress and with some discussion was able to arrive at a consensus rating for the overall program. Dr. Clark pointed out that the rating tool was designed to examine each LTG, but mid-cycle reviews apply the rating tool somewhat differently.

A rating of “Satisfactory” was assessed for work completed to date, and an overall rating of “Exceeds Expectations” was assessed based on discussions of additional work in progress and intended directions for the program and new initiatives that are under development. Dr. Clark noted that this mid-cycle review rating does not carry the same weight the rating for a full program review. The Subcommittee assessed the HHRP’s responsiveness to the 2005 BOSC program review. One Subcommittee member analyzed each BOSC finding and recommendation and documented each change in the HHRP as a result of these recommendations; this 12-page summary was included as an appendix to the report. The Subcommittee wanted to include such detail to acknowledge the fact that ORD is responding to the BOSC reviews.

Part of the Subcommittee’s charge was to determine if the new MYP is clear and consistent. LTG 4 will evolve to become the unifying theme of HHRP research. The Subcommittee approved of this approach as it reflects the growing emphasis on evaluating and demonstrating the impact of research on improving environmental health. The Subcommittee assessed the performance metrics as indicators of impact and recommended that the compiled data be analyzed to determine such impacts as publications per research dollar invested, per full-time equivalent (FTE), and per year; this information can be used to compare productivity and effectiveness in output. The program plans to document how risk assessment data have been used to support human health decisions.

The Subcommittee is enthusiastic regarding the potential of LTG 4 to serve as a unifying theme for the HHRP because the accomplishments in LTG 4 are a means to demonstrate and evaluate ORD’s impact on improving environmental health. The opportunity to perform a retrospective analysis is in place. The past several years can be examined and then used as a baseline before going forward. Specific comments are available in the mid-cycle review report.

Dr. Harding asked for clarification regarding the question the Subcommittee was answering when assigning the rating for the mid-cycle review. Dr. Sayler replied that he asked his Subcommittee members to assign a rating for all of the charge questions, then an overall rating was determined. Dr. Clark added that the Ecological Mid-Cycle Review Subcommittee examined all of the charge questions and determined an overall rating for the program. Dr. Harding asked why the Subcommittee provided two ratings. Dr. Clark answered that the Subcommittee was impressed with the planned direction of the program and wanted to send a positive message about its future direction. The efforts of the program since the program review, however, were determined to be “Satisfactory.” Dr. Swackhamer commented that giving a rating for future work may dilute the impact of the rating tool for the OMB. Dr. Clark responded that the Subcommittee members thought the two ratings were appropriate after hearing what the HHRP had in place and about its future plans. Dr. Swackhamer reiterated her concern regarding the usefulness of the rating tool.

Dr. Weiss commented that she thought the mid-cycle reviews were for the benefit of ORD and would not necessarily be used by OMB. Dr. Haas added that the intention of the mid-cycle review is a conditional rating; if the activities are fulfilled as expected, then “Satisfactory” would be the rating. Dr. Clark explained that the appropriateness of what the HHRP plans to do exceeded the Subcommittee’s expectations, and this rating was meant to inform the program staff that the plan was better than satisfactory. Dr. Harding asked if the Subcommittee would have assigned the two ratings if the term “Satisfactory” was changed to “Meets Expectations.” Dr. Clark responded that he was not sure.

Dr. Ryan proposed that two ratings, past and future, be given in all mid-cycle reviews to standardize the process. Dr. Clark added that the future rating could be given unofficially and left out of the report. Dr. Sayler commented that mid-cycle reviews use a sliding scale; the LTGs have been changed based on program review recommendations, so the goals probably have not been completed because they were changed. Dr. Ryan agreed that a mid-cycle review is different from a full program review, and he thought that two ratings may be appropriate. Dr. Weiss commented that the HHRP has made extensive new plans and it is this effort that is being praised by the Subcommittee. Ms. Kowalski clarified that a mid-cycle review is not a program review; it is designed to rate the program's progress to commitments made with respect to the BOSC recommendations from the program review. She noted that the definition of a mid-cycle review and what is being rated must be consistent. Dr. Weiss commented that the rating tool was not developed for mid-cycle reviews. Is it necessary to use it for these reviews? Ms. Kowalski replied that there is a set of charge questions for each mid-cycle review, one of which tasks the Subcommittee with rating the program's progress using the rating tool. Dr. Clark commented that this was the first mid-cycle review to implement the rating tool and it was easier to determine the changes that had been made to the HHRP since the program review, but difficult to apply the tool to a mid-cycle review.

Dr. Clark asked how this was handled in the Drinking Water Mid-Cycle Review. Dr. Sayler responded that the Subcommittee did not like the word "Satisfactory" but did not have difficulty in applying the tool and reaching consensus. The Subcommittee evaluated the progress made in relation to the recommendations from the full program review. The program had done a great deal and was very responsive to the recommendations from the full review, including improving and developing a framework for the program goals. Areas in which the program still needs improvement include scientific leadership and inter-ORD communication regarding research topics. The Subcommittee reiterated these points to program personnel during the mid-cycle review and rated the program as "Exceeds Expectations." The program was very responsive during the mid-cycle review and all requested materials and information were provided promptly. He noted that the Drinking Water Program had a change in NPD since the program review.

Dr. Demerjian stated that the mid-cycle review is evaluating the evolution of progress and not the ultimate endpoints or outcomes of the program. It might be useful to comment on the progress and whether the Subcommittee thinks that the potential for achieving outcomes will be improved based on the changes and the progress made by the program.

Dr. Clark suspended the discussion on the rating tool so that Dr. Henderson, who had agreed to serve as the vettor, could provide comments on the Human Health Mid-Cycle Review Report.

Dr. Henderson commented that she liked the way the report was organized (i.e., executive summary followed by responses to the charge questions). She appreciated the information contained in Appendix B, which documented the responses of the program to the BOSC recommendations. She considered the program's response to the prior review to be quite detailed. One area of the report that could be improved is in the Executive Summary. She noted that there was an emphasis on LTG 4 but there was no explanation or definition of LTG 4, which made that section difficult to follow. The reader must search through Appendix A to find the definition of LTG 4. She suggested that LTG 4 be defined in the Executive Summary.

On page 10, regarding the metrics to indicate research progress, Dr. Henderson asked which publications were used in discussions of information for NAAQS and which were used in risk management. On page 11, the Roman numeral should be V, not IV. On page 17, the third bullet should be placed before the second bullet.

Dr. Sayler thought the document was a bit long for a mid-cycle review. Dr. Henderson responded that she did not find it to be too long, and it was not repetitious.

Dr. Sayler commented that he liked that the ORD responses to the BOSC reports are available on the Internet. He suggested that this URL be referenced in the report.

Dr. Clark stated that the Human Health Mid-Cycle Review Report is formatted as a BOSC program review report and not a letter report. He asked if the Executive Committee is comfortable with this format. Dr. Daston cautioned that it might not be wise to bind future Subcommittees into a set format. Dr. Clark responded that the Executive Committee should provide some guidance on the report format. Dr. Daston agreed but stated that he was not comfortable imposing a requirement that the Subcommittee must submit, for example, a 3-page letter report. Dr. Clark suggested that the Executive Committee recommend that mid-cycle review reports be a short BOSC report and not a letter report, because letter reports tend to be topical.

Dr. Harding's first impression was that the report was too long; she would recommend preparing a shorter, more concise report. Although the HHRP is a large program, longer reports often are not read as thoroughly. Dr. Clark agreed that this was one of the largest programs, and this could be reflected in the size of the report. He thought a paragraph response to each charge question would be more appropriate than a page.

Dr. Swackhamer asked if shorter was better considering the audience of the reports. Dr. Teichman responded that a discussion of appropriate materials prepared for the reviews may help determine the appropriate format and length of the reports. Dr. Clark added that ORD is the primary audience of these reports. Ms. Kowalski commented that all of the BOSC reports are submitted to the AA/ORD.

Dr. Clark stated that he would draft some guidance for preparation of mid-cycle review reports, which addresses the expectations of the report, the audience, goals, and length. He agreed that shorter is better, but added that the report must be responsive to the charge questions and all comments and recommendations should be explained. The text is helpful to ORD. Dr. Henderson agreed, stating that the NPD needs the details.

Dr. Teichman stated that mid-cycle reviews should be differentiated from program reviews. Guidelines should be given to ORD about what materials to prepare. Dr. Teichman added that one comment that frequently arises is the amount of work ORD staff members spend on the planning process. ORD should not be spending so much time on developing MYPs and preparing for BOSC and PART reviews that it cannot execute the research that is expected.

Dr. Clark requested that anyone with substantive changes to the Human Health Mid-Cycle Review Report should send them to him. With regard to the rating, one option is to change the wording and another is to leave the text about future research and remove the second rating from the report, leaving the one rating of "Satisfactory." He will rewrite the report with only one rating of "Satisfactory" but retain the text praising the program's future directions.

Dr. Henderson moved to accept the draft report with the changes discussed. Dr. Sayler seconded the motion. The Human Health Mid-Cycle Review Report was approved unanimously by the BOSC Executive Committee. Dr. Clark will revise the report, which will be sent to Dr. Henderson, who will ensure that the requested changes have been incorporated.

Drinking Water Mid-Cycle Review

Dr. Sayler stated that most of the details of the Drinking Water Mid-Cycle Review had been covered during earlier portions of the meeting, but did state that the Drinking Water Research Program did a good job on bibliometric analysis of outputs and is looking for methods to quantify outcomes. One item that the Subcommittee was concerned about was the MYP, which will not be finalized until 2008. The program indicated that an MYP was forthcoming during the 2005 program review; the amount of time that it is taking to develop the MYP is a concern to the Subcommittee. He acknowledged that some of the delay was associated with the appointment of a new NPD. He expects that development of the MYP will progress at a faster rate at this point.

The overall rating assigned by the Subcommittee for the program was "Exceeds Expectations." The draft report will be ready for review by the Subcommittee members on June 19, 2007. A conference call to discuss the draft report will be held on July 7, 2007, and the final draft report will be forwarded to the BOSC Executive Committee by the end of July, for review during the August conference call.

Ecological Research Mid-Cycle Review

Dr. Clark stated that he had already shared many of the details regarding the Ecological Mid-Cycle Review and added that Dr. Giesy had been unable to attend the meeting. When the Subcommittee members who were present attempted to assign an overall rating for the program, there were two who advocated for "Satisfactory" and one for "Exceeds Expectations," so the discussion was suspended until Dr. Giesy's input could be obtained. Dr. Clark will work with the Subcommittee to draft the report and a consensus rating for the program will be determined. Dr. Clark has asked the Subcommittee members to submit their drafts to him no later than June 1, 2007. A conference call is scheduled for June 28, 2007, to discuss the draft report, and a final draft will be provided to the BOSC Executive Committee in July 2007 so that it can be discussed during the August conference call.

Dr. Duke will be the vettor for the Ecological Mid-Cycle Review Report and Dr. Haas will be the vettor for the Drinking Water Mid-Cycle Review Report. Dr. Clark explained that it is appropriate to have two vettors for the program review reports but only one vettor is needed for the mid-cycle review reports.

Endocrine Disrupting Chemicals (EDCs) Mid-Cycle Review

Dr. Clark explained that an EDCs Mid-Cycle Review Subcommittee is being formed to conduct the mid-cycle review of the EDCs Program. Dr. Swackhamer has agreed to chair the Subcommittee, and Ms. Heather Drumm will serve as the Subcommittee DFO. Dr. Clark asked Dr. Harding for input on selections for the Subcommittee. Dr. Harding responded that the members of the original Subcommittee were excellent and any of them would be good additions to the Mid-Cycle Review Subcommittee. Once the Subcommittee is formed, a schedule for the conference calls will be established. The face-to-face meeting will take place on September 18, 2007. Dr. Clark mentioned that Dr. Elaine Francis is the NPD for this program.

Particulate Matter/Ozone Mid-Cycle Review

Dr. Henderson will chair the PM/Ozone Mid-Cycle Review Subcommittee, and Mr. Lawrence Martin will serve as the Subcommittee DFO. Dr. Demerjian also has agreed to serve on this Subcommittee because he was on the Subcommittee that conducted the program review. A cardiovascular expert and one other person have agreed to serve on the Subcommittee. The face-to-face meeting is scheduled for September 18, 2007.

Program Review Subcommittees

Human Health Risk Assessment Program Review

Dr. Daston will chair the Human Health Risk Assessment Subcommittee. Ms. Joanna Foellmer will serve as the DFO. The members of the Subcommittee have been identified, and the package is awaiting Agency approval. The face-to-face meeting will be held sometime in October or November 2007, probably in the second or third week of November. The conference call schedule will be determined after the date for the face-to-face meeting has been set.

Homeland Security Program Review

Dr. Sayler, Chair of the Homeland Security Subcommittee, explained that the Homeland Security face-to-face meeting was scheduled to occur the third week of October 2007, but the DFO has informed him that the program requested that it be delayed until April or May 2008 because the staff is not ready and the program needs to obtain stakeholder input. The face-to-face meeting probably will be held in the second quarter of 2008. The Subcommittee is comprised of Dr. Sayler and eight other members, including a statistician, an epidemiologist, a microbiologist, and other experts. Most of the members have a security clearance or in the process of obtaining one. Dr. Sayler hopes that the Subcommittee members will be available for the review now that it has been postponed. He noted that the charge questions for the review have not been developed yet.

Dr. Clark asked if there were any materials from ORD that could be given to the Subcommittee members to familiarize them with the program. Dr. Sayler said that he would talk to Mr. Greg Susanke, the Subcommittee DFO, about distributing some background information to the Subcommittee.

Program Review/Mid-Cycle Base Materials

Dr. Clark asked the Executive Committee members if the Subcommittees were receiving too much information, the right amount of information, or too little information to conduct the reviews efficiently. He asked members to examine the information that most informs the review discussions. He directed everyone to their notebooks to view the list of materials that commonly are provided for these reviews and asked if there were any items on the list that were not used in conducting the reviews. He requested that the BOSC members examine the list and provide feedback to Ms. Kowalski about what information is truly valuable.

Dr. Sayler stated that he thought the amount and level of materials provided for the Drinking Water Mid-Cycle Review were appropriate. His Subcommittee wanted electronic as well as hard copy versions of all materials provided.

Dr. Harding commented that there is a great deal of material to examine for a program review. She suggested that the NPD organize the materials to make them easier to review. She stated that her Subcommittee needed everything that they received and did not ask for more information. The Subcommittee did, however, ask for clarification of materials already received. Dr. Ryan added that it would be helpful if the bibliometric materials were linked to the LTGs.

Dr. Harding stated that the SP2 program had one primary client, OPPTS. If the program has more primary clients, there may be a need for more information from the program.

Dr. Clark stated that posters were presented only in program reviews and asked about the utility of the poster sessions in these reviews. Dr. Harding responded that the posters contained very important technical information that clarified programmatic issues such as outcomes. Dr. Clark commented that Ms.

Kowalski had provided an example of a poster that would help the BOSC determine how ORD research is achieving outcomes and LTGs. Ms. Kowalski stated that the material on a poster that was presented for a previous BOSC review was rearranged so that the information needed for the BOSC review was easier to find. None of the information on the poster was changed; the information presented was just reorganized. This was one example of how the information can be better organized to facilitate BOSC reviews.

Dr. Clark commented that the posters for the HHRP review were focused on science. Dr. Ryan stated that a similar poster based on LTGs was presented for the SP2 Program, but other posters were based on science and applied to the LTGs. Dr. Clark stated that the goal is to present the information in a way that informs the reviewers. Dr. Ryan thought that the science posters could be removed, but the posters relating to the LTGs were necessary.

Dr. Clark thanked the BOSC members for their comments, stating that it appears that the members do not want less information. He had received a previous suggestion that the presentations be focused around the charge questions. Because the programs are analyzed by LTG, the Subcommittee members usually have to search for the information to answer the charge questions.

Dr. Sayler commented that the staff biosketches are not that helpful and may not be worth the effort required to create them. Dr. Harding added that receiving them on a CD was better than receiving hard copies. If this type of material is provided, it is better to be distributed via CD.

Ms. Kowalski asked for clarification on the opinions regarding the posters. The provided handout is based on feedback from the 2005 program reviews; limiting the number of posters to 20-25 per review seemed to be the prevalent opinion of the BOSC in 2005. Ms. Kowalski asked about the level of presentation desired by the BOSC members. Dr. Sayler responded that the Water Quality and the Drinking Water Subcommittee members appreciated the posters at the APM level. The Subcommittee members also wanted the ORD staff to present information on outputs and outcomes.

Ms. Kowalski asked if the level of detail in the materials provided was commensurate with the task of the Subcommittees. Dr. Ryan replied that he liked the review poster and the scientific posters and believes that both are necessary to evaluate the quality of the science. Dr. Harding commented that the APMs and APGs are identified in the MYP but the posters really make it clear what is being accomplished by the program.

Ms. Kowalski stated that EPA wants to understand what the BOSC members need to complete their reviews. Dr. Duke thought that the sample poster linked the science and the program to the LTGs, and he recognized the value of that. The programmatic links as well the science need to be captured. The science is needed to understand the program's role and to assess the quality of the research.

Public Comment

At 10:15 a.m., the discussion was paused so that Ms. Kowalski could call for public comments. No comments were offered and the discussion resumed.

Program Review/Mid-Cycle Base Materials (Continued)

Dr. Henderson thought that the presentations at the PM/Ozone program review were excellent; she was not certain whether they were at the APM or APG level. She commented that a nice balance was achieved when the poster was related to the LTGs. Ms. Kowalski responded that the PM/Ozone review posters were not at the APM level; they were at the APG or multiple APM level. Dr. Demerjian added that there were a lot of posters for the PM/Ozone review, and asked if presenting them at the APM level would limit the number of posters. Ms. Kowalski replied in the affirmative.

Dr. Demerjian stated that the level of information provided for a review should be left up to the NPD, if the BOSC is too prescriptive then the Subcommittee members may not get what they need to do the review. He would prefer the program to determine what to provide to the Subcommittee.

Ms. Kowalski explained that Subcommittee members should provide feedback to the program about what they would like to see at the face-to-face meeting so that program personnel know what to expect and how to prepare. In addition, there must be sufficient time at the meeting for the Subcommittee to see and hear all of the information.

Dr. Henderson stated that she liked the way the PM/Ozone Program presented its material. Drs. Demerjian and Henderson liked the sample poster that Ms. Kowalski presented. Dr. Ryan added that it would be helpful to have each poster organized in the same manner. Dr. Saylor commented that receiving copies of the posters in advance also is helpful. Dr. Harding stated that her Subcommittee members read the poster abstracts prior to the meeting and this made it easier to assign and review the posters. Dr. Ryan said that he read the posters; not just the abstracts prior to the meeting. Dr. Clark explained that he used the poster abstracts to make poster assignments before the meeting. Dr. Harding commented that Ms. Drumm created a spreadsheet based on LTGs and titles of posters, and she used this spreadsheet to assign posters to the Subcommittee members. Dr. Clark agreed that the spreadsheet would be a better approach for assigning the posters.

Dr. Demerjian suggested that the posters be provided on a CD in advance of the face-to-face meeting. Ms. Kowalski stated that the posters were provided in advance for some meetings, but it was not always possible because the posters were not ready.

Dr. Saylor stated that he circulates the poster booklets at his university so they are a good communication tool for the Agency. He suggested that poster abstracts could be removed from the list and biosketches could be provided on a CD or online, not in the meeting binders. Dr. Ryan agreed that the biosketches are the least valuable material. Dr. Saylor added that he is not sure that the bibliographic list is valuable because it goes back 10 years, and it is unclear who is doing the research. Dr. Clark added that several members had suggested separating intramural and extramural publications. Dr. Saylor stated that his Subcommittee did not need a bibliography. He did, however, find the bibliometric analyses useful and thought it would be helpful to split the STAR and intramural publications in these analyses. Dr. Saylor added that separating the STAR publications from the intramural publications will promote the STAR Program. Dr. Ryan agreed.

Dr. Harding stated that she would like to see the publications mapped back to the APGs so that the reviewers could see the output of the MYP. Dr. Francis had indicated to her, however, that it was too complicated to link each publication to an LTG.

Ms. Kowalski stated that the Subcommittee Chair can request or not request any of the items on the list.

Standing Subcommittees

Computational Toxicology Subcommittee

Dr. Clark asked Ms. Kowalski to provide an update on the Computational Toxicology Subcommittee on behalf of Dr. Daston, who was not present at the meeting. Ms. Kowalski stated that the Computational Toxicology Subcommittee is planning to organize a meeting for fall 2007.

NCER Subcommittee

Dr. Clark explained that in Dr. Philbert's absence, Ms. Susan Peterson, the Subcommittee DFO, would provide an update on the NCER Subcommittee. Ms. Peterson explained that EPA is in the process of completing the invitations to the Subcommittee members. The first conference call will be held on July 9, 2007. The face-to-face meeting will be held July 24-25, 2007. NCER is working on the draft agenda. A consultant is going to be added to the Subcommittee to cover the area of communications, and she asked for nominations from the Executive Committee. Ms. Peterson added that the charge questions have been prepared.

National Exposure Research Laboratory (NERL) Subcommittee

Dr. Demerjian, Chair of the NERL Subcommittee, explained that there are nine areas of expertise that must be covered, so he participated in a conference call with Dr. Larry Reiter, Director of NERL, and Ms. Jewell Morris to identify the priority expertise needed in the short term. Four areas of expertise were specified and Ms. Peterson identified candidates in each of the areas. Three Subcommittee members currently are on board, and the fourth one will be contacted within a week. The face-to-face meeting will be held in October 2007.

Ms. Kowalski explained that the NCER and NERL Subcommittees are pilots. A 1-2 day meeting will be held for each Subcommittee in which NCER or NERL staff, respectively, describes the center/laboratory and its work to the Subcommittee. NCER plans to provide an overview of the center during a conference call in advance of the face-to-face meeting. The NCER face-to-face meeting will focus on the charge questions. She did not know if NERL would take this same approach. Dr. Demerjian stated that as soon as the Subcommittee is established, a conference call will be scheduled to discuss how to proceed. Ms. Kowalski explained that each Subcommittee may take a different approach.

Dr. Demerjian commented that the exposure expert that has been recruited has epidemiological experience and is not an exposure modeler. The expert in exposure modeling that was recruited is overcommitted and cannot join this Subcommittee. This is a concern because NERL does a great deal of exposure modeling.

Prior to the morning break, Dr. Teichman presented Dr. Harding with an award, recognizing her service to ORD on the BOSC. Dr. Harding said that it had been a pleasure and privilege to serve on the Board.

ORD Update

Dr. Teichman described the EPA laboratory infrastructure. Energy efficiency is a priority for all EPA laboratories and the Agency is seeking more ways to increase overall efficiency. Mr. Lek Kadeli, ORD's Deputy Assistant Administrator for Management, is leading the efforts and will report to the BOSC on progress in the future.

A science forum on computational toxicology was held in RTP this week. It was a successful event with more than 400 people in attendance.

A draft of the 2007 *Report on the Environment* was released on May 10, 2007. It will be reviewed by the SAB in mid-July 2007. It shows the metrics across the environment, provides a guide for strategic planning, and helps identify trends. Ms. Kowalski stated that she would send the URL for the report to the BOSC members.

Dr. Teichman described some of the work being done with EPA's sister agencies. The European Union (EU) developed a 7-year strategy for environmental work and research. EPA has signed a Memorandum

of Understanding (MOU) with the EU to ensure that the Agency remains aware of the EU's environmental efforts and vice versa.

A framework for metals risk assessment has been released and it is available on the Office of the Science Advisor Web Site. The framework covers lead emissions and metals in general.

Dr. George Gray is leading an interagency biofuels effort. Biofuels are important as an energy source and for pollution reduction. The other members of the effort are equal to Dr. Gray's in their respective agencies. The effort will study biofuels' impact on the environment, how to generate them most effectively, and how to reduce the pollution effects (runoff).

Two new FACA committees are being established for the Global Climate System. One will support EPA's efforts for the U.S. Climate Change Science Program and is specifically devoted to periodic assessment of climate changes and variability. The other will support the climate change impacts to humans. Dr. Joel Scheraga is the NPD for the Global Change Program and he has more information on the two new committees if members are interested.

The House Appropriations Committee has reported the budget for 2008. There is additional money for the global climate change research. This is an increase over the President's budget request. It will not be official until it passes in the House and Senate and the President signs it.

Dr. Teichman recognized the efforts of Drs. Daston and Philbert who agreed to participate in a joint work group for the Children's Centers. Several conference calls have taken place already, and the face-to-face meeting is scheduled for the middle of June.

Dr. Teichman reported that the People, Prosperity, and the Planet (P3) Student Design Competition awards were presented on the National Mall in May. Students from across the United States undertake projects that promote sustainability. The student teams demonstrate their projects on the Mall, and the winners are announced in a ceremony at the National Academies of Science (NAS). Dr. Teichman said that it is exciting to see the innovation and enthusiasm of these students.

The *Futures Handbook* has been released by the Office of Science Policy. It is a guide for futures planning. In the past, the BOSC was briefed on Project Horizon, a federal agency effort. This guide is designed to help agencies determine the policies that need to be in place to achieve their goals. It also helps agencies identify and predict emerging problems.

Dr. Perry McCarty of Stanford University, an NCER grantee, has won the 2007 Stockholm Water Prize. Dr. McCarty is researching the safe supply and treatment of water. ORD participated in the 2007 Grainger Challenge Award for Sustainability, which is a competition to remove arsenic from water in Bangladesh. ORD performed the technical verification of the various technologies. Dr. Teichman noted that all three of the recipients gave their award money to the Bangladeshi people so that they could implement the technologies.

Dr. Teichman said that he was not able to participate in the previous day's laboratory tour because he was dealing with a situation with the Natural Resources Defense Council (NRDC). The NRDC is suing EPA because of its work on contaminated beaches. Dr. Teichman commented that EPA is doing the best science possible within its current budget. He also was dealing with issues regarding asbestos. The RTP laboratory will be performing toxicity studies on asbestos as a part of the SP2 Program.

Dr. Teichman attended an OMB meeting about nanotechnology. Other federal agencies (National Science Foundation, National Institutes of Health, National Institute for Occupational Safety and Health, and U.S. Food and Drug Administration) were present at the meeting. The goal of the meeting was to ensure that

federal agencies are coordinating their efforts on nanotechnology planned for 2009 to avoid duplication. The 2009 budget is still being deliberated.

Dr. Demerjian asked if the BOSC was going to review the 2007 *Report on the Environment*, noting that his had been mentioned at a previous meeting. Dr. Clark answered that the BOSC would be involved in the review and this would be discussed later.

Dr. Teichman reported that Bill Wehrum was nominated as the AA for the Office of Air and Radiation (OAR), but the Senate did not pick up his nomination; he resigned effective June 1, 2007. Therefore, OAR will have a new leader, Robert Meyers, who currently is the Deputy AA.

Dr. Harding asked Dr. Teichman to describe how budget cuts are made and how individual program cuts are determined. Dr. Teichman asked if she was referring to the 3 percent decrease in the proposed budget. He stated that his presentation represented the 2008 budget request. The Agency is working with OMB and other federal agencies to decide how much money EPA should receive. The Agency is working with the Laboratory and Center Directors and NPDs to determine which areas can be cut. They also identify areas that should be added or expanded if the budget is increased. Adjustments to the budget are made based on the President's budget requests and Congress' actions. Dr. Harding asked if the NPDs have input on where the cuts should be made and Dr. Teichman responded that they did.

National Coastal Condition Report III

Ms. Virginia Engle joined the meeting via teleconference from ORD's research laboratory in Gulf Breeze, Florida. She has been working on EMAP since 1990 and is the co-editor for the NCCR III. Her presentation will explain how the program responded to the BOSC's comments on the second NCCR.

The second NCCR was published in 2004. The BOSC reviewed it and sent its comments to ORD in May 2005. Dr. Kevin Summers was the primary contact when ORD responded to the BOSC. Data were collected from field surveys in 2001 and 2002 for this report. Because the data were collected before the review and could not be changed, it was not possible to address some of the BOSC's comments.

The NCCR III is the result of a partnership between multiple agencies, and other federal agencies play a large part in providing data for the report. The assessments are based on the National Coastal Assessment (NCA) data collected in 2001-2002 and includes trends from 1990-2002. NCCR III also contains data for Alaska and Hawaii, as well as a NOAA case study for Narragansett Bay. The report indicates that the national condition of estuaries is fair. The NCCR has contributed to EPA's *Report on the Environment*, the Heinz Center's State of the Nation's Ecosystems, National Geographic's July 2006 "Loving Our Coasts to Death," and the National Estuary Program Coastal Condition Report.

The BOSC's letter report on the review of the NCCR II stated that it: (1) was a useful compendium of information on condition of nation's coastal environment, (2) was effective in communicating coastal monitoring findings, (3) provided a clear example of the outcome of monitoring efforts, and (4) was good example of successful cooperation and coordination among environmental agencies. The BOSC suggested several improvements, including a clear definition of the report's audience. The Board also suggested the application of monitoring data to: (1) planning, prioritizing research, and regulatory decisions; (2) affect outcomes and environmental results; and (3) identify causes of degradation and recommend corrective actions. The BOSC also recommended that other national-scale be incorporated into the report. Other suggestions for improving the report included: (1) addition a discussion of limitations and uncertainty, (2) continue working with the states to adopt key EMAP monitoring strategies, (3) expansion of monitoring programs (particularly in Alaska), and (4) continue efforts to make comparisons with previous reports.

Ms. Engle stated that the NCCRs are intended for multiple audiences, including Congress, environmental managers, and the informed public. For the NCCR III, the intended audience is clear and the report meets the needs of the multiple agency partners. NCCR III includes fact sheets and an executive summary to make it easier to understand. The full report is available on the Web, which allows various audiences to download components according to their needs, including data. Providing these different levels of detail in the report allows it to meet the different needs of the various audiences.

The intent of the NCCRs is to provide assessments of coastal condition at regional and national scale. The third report continues to provide assessments of coastal condition, but it also includes highlights and a case study of Narragansett Bay to expand the data further. The National Estuary Program Coastal Condition Report (NEP CCR) includes assessments of monitoring data and examines NEP-specific issues and applications of data.

The Narragansett Bay case study examined human uses and other aspects of the bay and investigated trends to determine if they were consistent with the reported data. There was a north to south gradient of poor to good conditions, which is consistent with the trend for compromised human uses. It is possible to take the data further and apply it elsewhere, but it is difficult to do so at a regional or national scale. The NEP CCR examines the overall condition of NEP estuaries versus all estuaries. Ms. Engle stated that the NEP estuaries are a good representation of all estuaries.

The NCA provides the only consistent data at a national scale that assess condition at the regional and national scales and estimates of confidence levels. The NCCR III contains other national monitoring data, including NOAA's large marine ecosystem fisheries data, 305(b) water quality data, fish consumption advisories, and shellfish and beach closures. At a workshop in Baltimore, Maryland, the previous week, experts discussed core coastal indicators. Once these indicators are determined, they will be used to improve the next report and survey that will be completed in 2010.

The NCCR contained an appendix that described the limitations of the data and the uncertainty due to sampling protocols. The NCCR II contained an appendix on quality assurance. This additional appendix was determined as unnecessary for the third report. Ms. Engle presented a color-coded map that indicated those states that are adopting EMAP for assessing state bodies of water. ORD and the Office of Water are continuing their outreach to states to encourage use of EMAP in their programs. Some states that have successfully adopted EMAP approaches in their programs have produced reports detailing the conditions of estuaries in their state.

Monitoring programs were expanded to include Alaska, Hawaii, and Puerto Rico. The Aleutian region and several island territories (Guam, American Samoa, Puerto Rico, and the U.S. Virgin Islands) were surveyed in 2004 and will be included the fourth report. Alaska and Hawaii are in good shape compared to other areas in the United States. Alaska will continue to be included in future surveys.

Temporal change analyses and results are presented in the NCCR III for the early EMAP period of 1990 to 1993. Regions and the nation as a whole were analyzed for the percent of area in poor condition. There has not been much change in the percent of area in poor condition over the time of the surveys. The exception to this is water quality, where there has been great improvement since the first NCCR. Alaska was not included in the comparison to keep the NCCR III consistent with the earlier reports.

A public comment notice for the NCCR III was published in the *Federal Register*. The period for public comments closed on May 8, 2007. The internal and external technical reviews of the report have been completed. After all of the technical comments have been addressed, it will undergo a policy review by EPA, NOAA, and the U.S. Geological Survey. Following the release of the NCCR III, the next step is to produce the NCCR IV, which will include NCA data from 2006. The Office of Water has assumed responsibility for the NAP for all types of water bodies in the United States, and difficult resource types

will be surveyed every year. The EMAP design includes approximately 1,000 sites. The 2010 survey, which will be conducted by states with Office of Water §106 funding, will be comparable. The report is expected to be released in 2012.

Dr. Sayler asked what could be gleaned from the report about water quality in terms of microbiology when most of the data is related to toxics and nutrients. Ms. Engle responded that the group did not think microbiological data would be useful because the survey is conducted at one point in time, although the same argument can apply to nutrients as well. Analyzing beach closures is a better method, but it does not supply information about estuarine waters. It may be possible to examine state data collected on a more frequent basis. Dr. Sayler asked if there was any impetus to progress in this direction. Ms. Engle replied that the discussion at the core coastal indicators workshop in Baltimore provided the impetus.

Dr. Clark asked if the transfer of data collection responsibilities to the states would be a smooth transition (states will be using §106 funding instead of ORD grant money). Ms. Engle replied that she had not been involved with planning for the lake survey, but the funding mechanism from the §106 appears to be working smoothly. Her hope is that the 2012 survey will go as smoothly and it will if the Office of Water personnel continue to seek ORD technical advice on survey design and then provide this information to the states.

SAB Activities

The BOSC has expressed an interest in reviewing the *2007 Report on the Environment*, and the best method to accomplish this is to form a workgroup within the BOSC to conduct the review. The Chair of the workgroup will be the liaison to the SAB and may receive an invitation to the SAB meeting to provide BOSC input for the SAB review. Dr. Sayler reminded the BOSC members that he is serving on the SAB committee that will be conducting the review. Drs. Demerjian, Duke, Ryan, Falk, and Haas have expressed interest in reviewing the report. One approach would be to appoint Dr. Sayler as the Chair of the workgroup because he already is on the SAB committee. Another approach would be to appoint another Chair and ask the SAB to allow him/her to serve as the liaison from the BOSC.

Dr. Clark asked for volunteers to Chair the workgroup. The first conference call will take place on June 19, 2007, and the meeting will be held in Washington, DC, July 10-12, 2007. Dr. Sayler commented that the review will be divided between the SAB committee members. Dr. Ryan responded that he will be involved with a field study starting on July 1 and will be in Boston and Germany during the review. Dr. Sayler stated that he will be in Australia for several weeks in June and will not have time to do much before the review meeting. Dr. Haas is not available at all, and Dr. Duke is not available on July 12. Dr. Clark emphasized that the BOSC is not responsible for the final product. Dr. Sayler said that he could collect the BOSC's comments and present them to the SAB. It was agreed that Dr. Sayler would communicate the BOSC's comments on the report to the SAB. Dr. Clark asked how this should occur. Ms. Kowalski stated that she could consolidate the BOSC's comments before sending them to Dr. Sayler.

Dr. Clark stated that Dr. Sayler will chair the workgroup and will divide the chapters for review. The Subcommittee will provide comments to Ms. Kowalski, who will compile them and send them to Dr. Sayler. The comments will not be due until early July. Ms. Kowalski said she will be out of the country in early July but she will work with Ms. Drumm to support the workgroup. She requested that Ms. Drumm be copied on all correspondence regarding the workgroup. Ms. Kowalski will send the link for the report to all workgroup members; the URL also should be available in the May 10, 2007 *Federal Register*. The assignments will be divided between the workgroup members via e-mail. Members should identify the sections that they would like to review and send that information to Ms. Kowalski.

Future Discussion/Future Business

Ms. Kowalski provided information about the out-year schedule of program and mid-cycle reviews as well as a table of upcoming activities. She explained that when the program reviews first began, many were completed within a short period of time. Now, EPA is attempting to better distribute the workload for completing these reviews on a 4- to 5-year cycle. Ms. Kowalski worked with budget personnel and others to create the review schedule. The reviews now are distributed more evenly to ensure that the workload is more manageable for the BOSC and the ORD scientists. Mid-cycle reviews are coordinated with Executive Committee meeting dates. The PART review calendar is unknown at this time, but the BOSC reviews should be scheduled so that there is not a conflict. The BOSC schedule has been shared with OMB and others, but it is a proposal at this point. A bar chart was created to illustrate the workload for 2009 and beyond. The BOSC will be quite active until the end of 2007. The dates for face-to-face meetings are anticipated dates. This activities list should allow members to be proactive in volunteering for Subcommittees.

Dr. Clark asked for input on the schedule by September. Dr. Duke stated that he would welcome the opportunity to serve as the Vice Chair of the Global Change Subcommittee when that program is reviewed again in the future.

Dr. Clark stated that the BOSC works with ORD to determine topics and areas that should be examined. If BOSC members have suggestions for topics, they should submit them to him or Ms. Kowalski so that he can discuss them with Dr. Teichman. One topic that surfaced during a review was leadership. The BOSC has expressed concern about the lack of a succession plan that will assure the Agency's continued leadership. This topic is worth consideration. How do we define it? What are we looking for in terms of leadership? Some areas of leadership are established through STAR. Metrics of leadership could be devised that communicate what the BOSC views as important in terms of defining, characterizing, planning, and supporting leadership.

Dr. Henderson added that another topic is how to regulate based on atmosphere rather than by chemicals. How is the research organized? What information is needed? The NAS will be publishing a report on toxicity testing in the 21st Century within the next month. Dr. Clark stated that the BOSC may want to review and comment on this document when it is released.

Dr. Clark will discuss ideas for ORD input for the next meeting with Dr. Teichman. He is interested in an infrastructure update from ORD. Dr. Weiss said she was interested in learning more about strategic planning given budget reductions. Dr. Clark pointed out that ORD began developing MYPs when the BOSC advised ORD to do more strategic planning.

Dr. Haas stated that an NRC panel evaluated the issue of skill sets and he asked if there is any conscious planning with regard to needed skill sets. Dr. Clark replied that this already may be under discussion at the laboratories and centers because it is an area that the early BOSC reviews attempted to address. Dr. Teichman said that he would like to give this idea more thought. The BOSC is on the agenda for the Executive Council meeting so he will ask the Laboratory and Center Directors about other areas on which they would like the BOSC to provide input. He noted that the issue of succession planning is impacted by the loss of people from retirement, including the determination of which jobs to replace. Emerging issues in terms of strategic planning also will be discussed with the SAB. The results of this discussion will be shared with the BOSC. A general plan to spend future resources wisely has been developed, and the *Report on the Environment* is being used to guide Agency policy making and strategic planning. The goal is for future environmental policies to make a difference.

Dr. Clark thanked the members for a productive meeting and adjourned at 12:19 p.m.

Action Items

- ✧ Ms. Kowalski will work with Bob Holland to decrease travel processing time.
- ✧ Ms. Kowalski will provide a list of acronyms to the BOSC members.
- ✧ BOSC members will send nominations for potential Executive Committee members to Dr. Clark within 2 weeks.
- ✧ Drs. Harding and Ryan will incorporate suggested changes to the SP2 report and solicit input from Dr. Falk and Philbert.
- ✧ Drs. Falk and Philbert will review the next draft of the SP2 report to ensure that all requested changes have been made.
- ✧ Members will send input and ideas regarding changes to the rating tool to Dr. Clark.
- ✧ Dr. Clark will discuss all suggested changes to the rating tool with Dr. Daston and the rating tool workgroup.
- ✧ The rating tool workgroup will determine if the term “Satisfactory” should be changed to “Meets Expectations.”
- ✧ Members should provide input to Ms. Kowalski concerning the preferred location for the May 2008 meeting (it will be held at one of the ORD laboratories/centers).
- ✧ Dr. Clark will revise the HHRP report to include the suggested changes and one overall rating and send it to Dr. Henderson who will ensure that all the changes have been incorporated.
- ✧ Dr. Clark will compile the draft Ecological Mid-Cycle Review Report and ensure that it is ready for the Executive Committee to review before the August conference call.
- ✧ BOSC members will review the list of program/mid-cycle review materials provided under Tab 9 of their meeting notebooks and provide feedback to Ms. Kowalski regarding which materials are necessary and which are not.
- ✧ Dr. Sayler will Chair the BOSC workgroup for review of the *Report on the Environment*.
- ✧ Ms. Kowalski will send the link for the *Report on the Environment* to the workgroup members.
- ✧ Members will identify which sections of the *Report on the Environment* they would like to review and send that information to Ms. Kowalski.
- ✧ *Report on the Environment* workgroup members will send their comments to Ms. Kowalski and Ms. Drumm in early July. The DFOs will compile the comments and send them to Dr. Sayler who will communicate the workgroup’s comments to the SAB committee.

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**35th EXECUTIVE COMMITTEE FACE-TO-FACE MEETING
DRAFT AGENDA
May 24-25, 2007**

Newport Harbor Hotel and Marina
49 America's Cup Avenue
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Telephone: (401) 847-9000

Thursday, May 24, 2007

8:00 a.m. – 8:30 a.m.	Registration	
8:30 a.m. – 9:00 a.m.	Welcome and Introductions - Review of January Meeting Minutes - Overview of Agenda	Dr. James R. Clark Chair, Executive Committee
9:00 a.m. – 9:15 a.m.	BOSC Designated Federal Officer (DFO) Remarks - Administrative Issues	Ms. Lori Kowalski Office of Research and Development (ORD)
9:15 a.m. – 9:45 a.m.	Assistant Administrator ORD Remarks	Dr. George Gray Assistant Administrator for ORD
9:45 a.m. – 10:30 a.m.	ORD Response to Science To Achieve Results (STAR)/Greater Research Opportunities (GRO) Report	Ms. Stephanie Willett National Center for Environmental Research (NCER), ORD
10:30 a.m. – 10:45 a.m.	Break	
10:45 a.m. – 11:45 a.m.	Subcommittee Draft Reports - Safe Pesticides/Safe Products Program Review Draft Report Presentation - Discussion	Dr. Anna Harding Subcommittee Chair Executive Committee
11:45 a.m. – 12:45 p.m.	Lunch	
12:45 p.m. – 1:00 p.m.	Subcommittee Update - Technology for Sustainability Program Review	Dr. John Giesy Subcommittee Chair
1:00 p.m. – 1:45 p.m.	Rating Tool Pilot	Executive Committee

May 24-25, 2007 BOSC Executive Committee Meeting Agenda

1:45 p.m. – 2:00 p.m.	Transport to ORD Narragansett Laboratory for a Site Visit	Executive Committee
2:00 p.m. – 5:00 p.m.	Site Visit	
5:00 p.m.	Adjournment	

Friday, May 25, 2007

8:30 a.m. – 10:15 a.m.	Subcommittee Updates	
	<u>Mid-Cycle Review Subcommittees</u>	Dr. James R. Clark Subcommittee Chair
	- Human Health Mid-Cycle Draft Report Presentation	
	- Discussion	Executive Committee
	- Ecological Research Mid-Cycle	Dr. James R. Clark Subcommittee Chair
	- Drinking Water Mid-Cycle	Dr. Gary Saylor Subcommittee Chair
	- Endocrine Disrupting Compounds (EDC) Mid-Cycle	TBD Subcommittee Chair
	- Particulate Matter/Ozone Mid-Cycle	Dr. Rogene Henderson Subcommittee Chair
	<u>Program Review Subcommittees</u>	
	- Human Health Risk Assessment Program Review	Dr. George Daston Subcommittee Chair
	- Homeland Security Program Review	Dr. Gary Saylor Subcommittee Chair
	<u>Program Review/Mid-Cycle Base Materials</u>	Dr. James R. Clark Chair, Executive Committee
	<u>Standing Subcommittees</u>	
	- Computational Toxicology	Dr. George Daston Subcommittee Chair
	- NCER	Dr. Martin Philbert Subcommittee Chair
	- National Exposure Research Laboratory (NERL)	Dr. Ken Demerjian Subcommittee Chair

May 24-25, 2007 BOSC Executive Committee Meeting Agenda

10:15 a.m. – 10:30 a.m.	Public Comment	
10:30 a.m. – 10:45 a.m.	Break	
10:45 a.m. – 11:15 a.m.	ORD Update	Dr. Kevin Teichman Acting Deputy Assistant Administrator for ORD
11:15 a.m. – 11:45 a.m.	National Coastal Condition Report III	Ms. Virginia Engle ORD
11:45 p.m. – 12:15 p.m.	SAB Activities	Dr. George Lambert SAB Liaison to the BOSC
12:15 p.m. – 12:45 p.m.	Future Discussion/Future Business - Meetings in September 2007/2008 - Mid-Cycle Reviews in 2008 - Future Work	Dr. James R. Clark Chair, Executive Committee
12:45 p.m.	Adjournment	