

HUMAN HEALTH RISK ASSESSMENT (HHRA) SUBCOMMITTEE

**Conference Call Summary
Thursday, December 20, 2007
11:00 a.m. – 1:00 p.m. Eastern Time**

Welcome

Dr. George Daston, Procter & Gamble, HHRA Subcommittee Chair

Dr. George Daston, Chair of the HHRA Subcommittee, welcomed participants to the Board of Scientific Counselors (BOSC) HHRA Subcommittee conference call. The purpose of this call is to discuss the draft report that the Subcommittee members prepared as part of their review of the National Center for Environmental Assessment's (NCEA) HHRA Program. Dr. Daston stated that the Subcommittee members should focus specifically on expanding and clarifying the recommendations that emerged from their review. Minor grammatical errors will not be the focus of this call; the Subcommittee members should transmit any grammatical corrections to Ms. Joanna Foellmer, Designated Federal Officer (DFO) for the Subcommittee, after the teleconference.

Dr. Daston remarked that he had not drafted the executive summary of the report; he had planned to prepare it following the decisions and recommendations made during this call. Ms. Foellmer explained that the Subcommittee members will need to convene for another public call to discuss and approve the executive summary.

Administrative Procedures

Ms. Joanna Foellmer, NCEA/U.S. Environmental Protection Agency (EPA), DFO

Ms. Foellmer thanked the Subcommittee members for their participation. The BOSC HHRA Subcommittee is a federal advisory committee that has been asked to respond to a set of charge questions as part of its review of NCEA's HHRA Program. As DFO, Ms. Foellmer serves as the liaison between the Subcommittee members and the Agency and is responsible for ensuring that the Subcommittee members comply with the Federal Advisory Committee Act (FACA). Ms. Foellmer briefly explained the FACA requirements. All meetings involving substantive issues—whether in person, by phone, or by e-mail—are open to the public. This applies to all group communications that include at least one-half of the Subcommittee members. All meetings must be announced in the *Federal Register* at least 15 calendar days in advance of the meeting. The *Federal Register* notice for this meeting was published on December 4, 2007; the Docket Identification Number is EPA-HQ-ORD-2007-0920. In addition, all advisory committee documents are available to the public. The Subcommittee Chair and DFO must attend all meetings. There is time set aside for public comment during each meeting. No advance requests for comment had been submitted by the public, but Ms. Foellmer will call for public comment at 12:00 noon. Any comments received must be limited to 3 minutes each.

This is the fourth public meeting of the HHRA Subcommittee. The Subcommittee members convened for public calls on October 2, 2007, and October 31, 2007, and a face-to-face meeting in Bethesda, Maryland, on November 14–16, 2007.

A contractor is recording the call and will prepare a summary. Ms. Foellmer reminded all participants to identify themselves when speaking and speak clearly. She asked that participants mute their phone lines when they are not speaking to minimize background noise.

Draft Report Discussion

Dr. George Daston, HHRA Subcommittee Chair

Dr. Daston remarked that each section of the report was well-written, and he thanked the Subcommittee members for their contributions. He directed the Subcommittee members to the report's introduction, which he had drafted. He asked whether the Subcommittee members had questions; they did not.

Dr. Daston stated that Dr. Lauren Zeise had prepared the Program Relevance section of the report. He pointed out that a recommendation is implied but not explicitly stated under Question 1 (page 2, lines 1–4). The sentence reads: “The Subcommittee heard from high level managers in two EPA Regions about the critical need for greater output of IRIS values. The same message was heard from an NCEA contractor who evaluated user community’s impressions of IRIS”. Dr. Daston suggested that the Subcommittee members recommend that the HHRA Program add resources to increase the output of Integrated Risk Information Systems (IRIS) and Provisional Peer-Reviewed Toxicity Values (PPRTVs). He clarified that work is at capacity within the program, and the program is meeting its goals; however, an increased output would be beneficial to users of IRIS and PPRTVs. Dr. Richard Corley remarked that the same recommendation is listed elsewhere in the Subcommittee’s report. Dr. Daston replied that he thought repetition was preferable to implying a recommendation but not stating it explicitly. Dr. Zeise will insert this recommendation. The Subcommittee members will ensure that repeated recommendations are crafted with the same language so that they do not appear as two different recommendations. Dr. Daston will reiterate each recommendation in the Executive Summary.

Dr. Daston stated that on page 3 of the Program Relevance section under Question 2, the first paragraph implies a recommendation that there be a mechanism for prioritizing updates on the assessments that were published more than 10 years ago and therefore have expired. Alternatively, the Subcommittee members could recommend that expired assessments be retained in the database if no update is necessary or if new data for the assessment is not available. Dr. Zeise and Dr. Henry Anderson thought that expired assessments were removed from the database. They asked whether a staff member from NCEA could clarify. Dr. Peter Preuss explained that in 2007, NCEA and the Office of Management and Budget (OMB) agreed that IRIS chemicals more than 10 years postpublication should be considered expired. On expiration, the literature associated with the chemical assessments should be reviewed to determine whether an update is necessary. If new data are not available for the assessment, it is noted in the database and considered an update. Dr. Zeise clarified that an assessment would be removed from the database if an update for it was not conducted. Dr. Preuss agreed but added that he did not know when that process would go into effect. Dr. Corley stated that he thought the chemical assessments could be labeled as “expired,” but he suggested that they not be removed from the database. Mr. Bruce Allen remarked that the HHRA Program might consider labeling an assessment as “expired,” but specifying the length of time that had passed since the assessment. Dr. Zeise cautioned that assessments labeled as “expired” might be avoided by users; this would be unfortunate. Dr. Zeise will draft a recommendation based on this discussion.

Dr. Zeise commented that the section discussing Long-Term Goal 2 (LTG 2) had alluded to program efforts to utilize structure activity. This topic also was discussed at the face-to-face meeting. Specifically, the Subcommittee members suggested that the program’s short-term technical data might lend insight into alternative ways of developing numbers. The Subcommittee might encourage this as part of the research agenda. Dr. Daston agreed and asked in which section the recommendation should be listed. Dr. Zeise replied that the recommendation can be listed under Question 2 of the Program Relevance section, which addresses the HHRA Program’s responsiveness to the needs of program offices and regions. Dr. Daston

clarified that the suggestion would be for the program to streamline some of its assessments with new risk assessment tools.

Dr. Daston asked if the Subcommittee members had questions or comments on the Program Structure section of the report, which was prepared by Dr. Corley. Dr. Daston noted that at the end of the discussion of Question 2 no recommendations were provided, but the language in the last paragraph had implied that the HHRA Program should consider developing a working relationship with the National Center for Computational Toxicology (NCCT). The HHRA Program could provide input to NCCT regarding the tools that would be valuable for its assessments. Dr. Zeise requested that an NCEA staff member describe the current relationship between NCCT and the HHRA Program. Dr. Preuss explained that NCEA staff members contribute to projects within NCCT. Discussions occur regularly regarding how NCEA staff can utilize tools developed at NCCT. Recently, the discussions have included subjecting chemicals of importance to NCEA to the types of pilot analyses that NCCT conducts on pesticides. Dr. Zeise suggested that the Subcommittee recommend that NCEA staff members deepen their ties with members of NCCT. Dr. Corley remarked that NCCT was not a focus of the Program Structure presentations during the Subcommittee's face-to-face meeting. Dr. Daston specified that the recommendation would be for the HHRA Program to continue its activities with NCCT but more clearly define its needs and goals. Dr. Corley stated that tools at NCCT have been applied to the HHRA Program in the past. Dr. Daston remarked that he appreciates the parallel structure between members of NCCT and its customers. Dr. Corley stated that he will insert a recommendation based on these discussions.

Dr. Zeise pointed out that a recommendation under Question 1 of the Program Structure section appears to assign equal importance to the PPRTV and the IRIS Programs (page 2, lines 30–36). She requested that a staff member from NCEA comment on whether a recommendation to allow public access to the PPRTV priority-setting process would be helpful. Dr. Preuss explained that priority setting for the PPRTVs is based on annual discussions between NCEA and the Office of Solid Waste (OSW). Dr. Zeise acknowledged that access to the PPRTV process would be useful to the public but noted that she was concerned about burdening the PPRTV Program with regulatory provisions that would reduce the rate at which toxicity values become available to the regions. Dr. Daston asked the Subcommittee members whether they thought the recommendation should be removed from the report. Mr. Allen remarked that the recommendation is limited in utility because PPRTV priority setting is via OSW rather than NCEA. Dr. Corley stated that the process of prioritizing PPRTVs was not clear to him during the previous meeting. He will remove the recommendation.

Dr. Daston directed the Subcommittee members to Question 3 of the Program Structure section, which included a discussion of transferring PPRTVs to a more extensive IRIS review within a reasonable period of time. A recommendation is not listed explicitly. Dr. Daston asked if a recommendation for the program to add a process for transitioning some of its PPRTVs to IRIS values would be useful. He explained that IRIS priorities are set following nominations from numerous parties; it might be useful for IRIS values also to incorporate information from PPRTVs. He specified that the IRIS nominations list also might include the chemicals for which PPRTVs exist. Dr. Anderson noted that PPRTVs greatly outnumber IRIS values, and perhaps PPRTVs can be applied to IRIS values as much of the assessment work would already have been completed. Dr. Corley clarified that the recommendation would be for the program to consider PPRTVs as another source of input for the prioritization of IRIS assessments. He cautioned that values may not fully be transferrable in terms of prioritization schemes.

Dr. Daston stated that there are no recommendations under Question 4 of the Program Structure section, but the end of the last paragraph alludes to a recommendation, which appears in the Program Performance section of the report, for the HHRA Program to capture its expenditure of effort on unplanned emergencies as part of a performance metric. Dr. Daston remarked that this recommendation should be listed explicitly in this section as well. He added that Dr. Corley does not need to draft the recommendation because Dr. Daston will edit both instances of the recommendation and ensure consistency.

Dr. Daston asked if the Subcommittee members had comments on the Program Performance section, which was drafted by Mr. Allen. He commented that there was a great deal of supporting data in this section and that he had no comments. The Subcommittee members agreed that it was a succinct and accurate section.

Dr. Daston directed the Subcommittee members to the Program Quality section, which also was drafted by Mr. Allen. Dr. Zeise remarked that the discussion under Question 1, pages 3–4, lines 45 and 1–2 reads: “All steps necessary to accurately reflect and communicate the steps in a decision framework should be available for public review and evaluation.” She asked how such a process would occur. Mr. Allen responded that the recommendation was part of a general theme of increasing the transparency of the process. Dr. Corley pointed out that it refers to the preceding sentence on the Integrated Science Assessments. Dr. Zeise suggested that the tone of the sentence be softened, and Mr. Allen agreed. Dr. Zeise confirmed that this recommendation does not call for a formal framework or a description of each study; rather, it requests greater transparency in the process. Dr. Daston suggested that the recommendation be truncated after the first sentence in this recommendation, which reads: “In order to maintain the high level of quality that is evident in the HHRA work products, the subcommittee strongly recommends that all steps be taken to ensure the transparency of decisions made in the process of performing IRIS, PPRTV, and ISA assessments” (page 3, lines 40–43). Mr. Allen and Dr. Zeise agreed with the truncation. Dr. Zeise asked if the term “all steps” in the first sentence could be changed to “comprehensive”. Mr. Allen agreed that what constitutes “all steps” may not be clear.

Dr. Daston asked if the Subcommittee members had questions or comments regarding the Scientific Leadership section, which Dr. Mark Utell prepared. Dr. Zeise replied that she had a question about the discussion under Question 1, specifically the sentence that reads: “For example, novel computational methods are being developed by a recently formed Computational Toxicology Center, using toxicogenomics, structure-function, and systems biology approaches” (page 1, lines 18–21). She suggested that the clarity of the sentence could be improved by stating explicitly that the Subcommittee members recommend interactions between NCCT and the HHRA Program. She specified that NCEA staff members provide leadership to NCCT. Dr. Daston asked if Dr. Utell still was present on the call; he was not. Dr. Daston stated that he would be responsible for editing this section for clarity. A Subcommittee member stated that NCCT is not part of the BOSC review, and NCEA does not control this center. Dr. Zeise replied that the centers do interact, and NCEA scientists are involved in providing leadership in terms of the direction of NCCT. She stated that the Subcommittee’s review can commend NCEA for this leadership. Dr. Zeise requested that an NCEA staff member comment on the extent of NCEA’s involvement in NCCT. Dr. Preuss explained that involvement has been limited to collaboration on evaluating specific chemicals and the development of tools; however, NCEA staff members are heavily involved in some projects and are exploring ways to utilize tools from NCCT for chemical assessments. Dr. Zeise suggested that the Subcommittee recommend a more forward-looking approach to the working relationship. Dr. Preuss affirmed that NCEA anticipates increasing its interaction with NCCT as it develops. Dr. Daston stated that the recommendation appears in an earlier section of the Subcommittee’s review. He was unsure where it could be listed within the Scientific Leadership section. Dr. Zeise offered to incorporate the concepts from this discussion into the Program Relevance section. Dr. Daston first will modify the language for clarity, and Dr. Zeise will ensure that the Program Relevance section is consistent with these discussions. Dr. Daston added that the Subcommittee members can insert specific projects for support. For instance, NCEA provides expertise for a biologically based dose response model for arsenic.

Dr. Zeise asked whether the creation of Particulate Matter (PM) Research Centers was the result of an NCEA initiative. This is discussed in the Scientific Leadership section (Question 1, page 1, lines 32–34) as: “...the vision in creating academic Particulate Matter Research Centers to help strengthen high quality science for use in the Integrated Science Assessments”. Dr. Preuss responded that the centers emerged because the need was recognized for more research approaches to determine the toxic effects of PM. The Office of Research and Development (ORD) had requested that a National Academies

Committee provide assistance regarding PM research needs. The National Academies Committee provided ORD with a set of reports detailing the areas in which research efforts should be directed. From these reports, ORD organized a series of centers, and NCEA was a major participant in this process. Dr. Anderson asked if the recommendation should be removed from the report based on these discussions. Dr. Preuss emphasized that the recommendation is partially correct because the NCEA staff members were the impetus for the identification of a need for research into the toxic effects of PM. The Subcommittee members agreed that “the vision in creating” should be changed to “the role of NCEA in fostering” (Question 1, page 1, line 32). Dr. Daston will insert that edit into the Scientific Leadership section of the report.

Dr. Daston stated that Dr. Anderson composed the Program Coordination and Communication section of the report. Dr. Anderson noted that the Subcommittee may need to discuss further the recommendation under Question 3, to make “...PPRTVs publicly available for others to use in hazardous waste site risk assessment and encourage their use where appropriate”. He added that a number of other reviews have provided the same recommendation. Dr. Daston agreed that it is a reasonable recommendation. Dr. Zeise stated that the recommendation includes a sentence that reads: “... [PPRTVs] have not undergone the Agency and interagency review required for toxicity values to be placed in IRIS” (Question 3, page 3, lines 35–36). She commented that the Subcommittee should acknowledge the external peer reviews that exist within the process. Dr. Anderson will insert that change.

Dr. Zeise directed the Subcommittee members to the discussion under Question 1. She stated that she agrees with the statements that IRIS is the “flagship” program (page 1, line 43), but she noted that the Subcommittee members should not underestimate the importance of the LTG 2 guidelines; they are used extensively. She suggested that the Subcommittee members recognize this effort in their report. Mr. Allen agreed. Dr. Anderson explained that the need for senior staff was being discussed in that section of the report. He had inserted that sentence as a transition. He offered to remove the term “flagship,” or insert the phrase, “while the HHRA products, the IRIS documents, and the PPRTVs, and guidelines are the most visible...” Dr. Zeise agreed with that insertion.

Dr. Daston stated that Dr. Anderson drafted the Program Outcomes section of the report. He noted that, in the recommendation under Question 1 (page 1, lines 28–29), the Subcommittee members encourage an increase in the transparency of the prioritization process. He suggested that preceding recommendations regarding increasing transparency be reiterated in this section. Mr. Allen clarified that the entire paragraph served as a recommendation. Dr. Daston affirmed this, and explained that it will need to be formatted like the preceding recommendations in the report.

Dr. Daston directed the Subcommittee members to the three Summary Assessments and asked if there were questions or comments pertaining to LTG 1; there were none. He asked whether there were comments regarding the assessment of LTG 2. Mr. Allen mentioned that he had corrected a few grammatical errors. He asked if minor edits should be submitted to Dr. Daston in advance of the more substantive edits that will be inserted based on the discussions during this call. Dr. Daston requested that all grammatical changes be submitted in advance of the final conference call in case substantive or technical edits emerge.

Dr. Anderson noted that he agreed with the Subcommittee’s assessment that LTG 2 exceeds expectations. He suggested that the Subcommittee members insert additional examples to illustrate and justify how this LTG exceeds expectations and advances the science of risk assessment. He noted that the Subcommittee members discuss areas of exceptional work within LTG 3, and he suggested that they follow a similar process for their assessment of LTG 2. Dr. Zeise stated that she drafted this section; she asked whether Mr. Allen would insert additional examples to highlight how LTG 2 exceeds expectations. Mr. Allen agreed to this task. Dr. Daston affirmed that people who read the Subcommittee’s review of the HHRA Program might focus on the Summary Assessments. For this reason, it is important to address in this section the Subcommittee’s reasons for its selection of Summary Assessments. Dr. Daston emphasized

that the Subcommittee members do not wish to change their assessment term for LTG 2; rather, they must describe clearly their deliberations preceding their selection of “Exceeds Expectations,” so that those who read the Subcommittee’s review understand the assessment. Dr. Zeise suggested that Mr. Allen review the list of elements to include for LTG 2 in the Subcommittee’s charge. She stated that the HHRA Program had requested detailed recommendations regarding uncertainty. The section of the charge reads: “The appropriateness, quality and use of HHRA’s methods, models and guidance by IRIS and other EPA programs, states and other risk assessors to enhance assessments including 1) the science and objectivity of environmental health assessments, 2) characterization of risk information and uncertainty, and 3) quantitative analysis of uncertainty for decision making on environmental health risks”. Mr. Allen agreed to address that section.

Dr. Daston confirmed that there were no comments regarding LTG 3.

Public Comment

Ms. Foellmer called for public comment at 11:57 a.m. and again at 12:00 noon. No members of the public offered comments.

Draft Report Discussion (Continued)

Dr. George Daston, HHRA Subcommittee Chair

Dr. Daston confirmed that the discussion of the Subcommittee’s draft report was complete.

Next Steps

Dr. George Daston, HHRA Subcommittee Chair

Dr. Daston asked whether the Subcommittee members could submit edits to the report within 2–3 weeks. The Subcommittee members confirmed that they would. Dr. Daston added that he will prepare the executive summary of the report within that timeframe. A final conference call subsequently will be scheduled.

Dr. Corley asked if the report section discussing LTG 1 had been transmitted to the Subcommittee members. Dr. Daston confirmed that it had, but Dr. Corley stated that he had not noticed the document pertaining to LTG 1 among the sections of the Subcommittee’s report. Dr. Daston said that LTG 1 can be discussed during the final conference call if Dr. Corley has comments after reviewing the document.

Dr. Daston stated that Ms. Foellmer will schedule the final Subcommittee conference call after reviewing the availabilities of the Subcommittee members. Ms. Foellmer confirmed that the process of scheduling a public call requires approximately 1 month.

Dr. Daston stated that the Subcommittee members had intended to submit their report to the BOSC Executive Committee in time for its meeting on January 24–25, 2008. The Subcommittee members will need to modify their timeline. Dr. Daston stated that if the Executive Committee requires the Subcommittee’s report on the HHRA Program within a critical timeline, then it can discuss the review with the Subcommittee members by teleconference in advance of the report’s publication. Dr. Preuss agreed that it was acceptable to modify the timeline.

Dr. Daston thanked the Subcommittee members for their contributions and adjourned the call at 12:05 p.m.

Action Items

- ✍ Dr. Daston will prepare the executive summary and transmit it to the Subcommittee members for review in advance of the Subcommittee's fifth public meeting.
- ✍ Dr. Zeise will insert a recommendation to add resources to increase the output of IRIS and PPRTVs in the Program Relevance section of the report (Question 1).
- ✍ Dr. Daston will ensure that repeated recommendations are crafted with the same language so that they do not appear as two different recommendations. He will incorporate these recommendations into the executive summary.
- ✍ Dr. Zeise will draft a recommendation based on the Subcommittee's discussions about retaining expired assessments in the IRIS database. The recommendation will be inserted into the Program Relevance section under Question 2.
- ✍ Dr. Zeise will insert a recommendation for the program to streamline some of its assessments with new risk assessment tools. The recommendation will be inserted into the Program Relevance section under Question 2.
- ✍ Dr. Corley will remove the following recommendation from the Program Structure section, Question 1: "In the absence of IRIS documents for a priority chemical, PPRTV's can have significant impact on decisions made by customers of the HHRA program. Also, the absences of either IRIS or PPRTV's for a given chemical can result in a false sense of priority in site-specific cleanup activities. Thus, the BOSC subcommittee recommends that the HHRA program make its prioritization process and resulting PPRTV's publically available, much like the IRIS program."
- ✍ Dr. Corley will insert a recommendation for the HHRA Program to continue its activities with NCCT but more clearly define its needs and goals. The recommendation will be inserted into the Program Structure section under Question 2.
- ✍ Dr. Corley will insert a recommendation for the HHRA Program to consider PPRTVs as another source of input for the prioritization of IRIS assessments. The recommendation will be inserted into the Program Structure section under Question 3.
- ✍ Dr. Daston will reiterate a recommendation from the Program Performance section of the report under Question 4 of the Program Structure section. The recommendation is for the HHRA Program to capture its expenditure of effort on unplanned emergencies as part of a performance metric. Dr. Daston will edit both instances of the recommendation and ensure consistency.
- ✍ Mr. Allen will change the adjective "all" in "all steps" to clarify the recommendation under the Program Quality section of the report (page 3, lines 40–43). The term "comprehensive" may be used instead.
- ✍ Mr. Allen will truncate the recommendation under Question 1 of the Program Quality section. Only the first sentence of the recommendation will be retained.
- ✍ Dr. Daston will edit the Scientific Leadership section for clarity. He will insert a statement that the BOSC Subcommittee commends interactions between NCEA and NCCT. Supporting instances of scientific leadership may be listed.

- ✍ Dr. Zeise will incorporate into the Program Relevance section the discussions from the Scientific Leadership section.
- ✍ Dr. Daston will change “the vision in creating” to “the role of NCEA in fostering” in the Scientific Leadership section (Question 1, page 1, line 32).
- ✍ Dr. Anderson will change the sentence “[PPRTVs] have not undergone the Agency and interagency review required for toxicity values to be placed in IRIS,” (Coordination and Communication section, Question 3, page 3, lines 35–36) to acknowledge that external peer review does exist within the process.
- ✍ Dr. Anderson will change the term “flagship” (describing the IRIS Program, Communication and Coordination Section, Question 1, page 1, line 43) to recognize the importance of LTG 2 guidelines in this process. He may insert the phrase, “...while the HHRA products, the IRIS documents, the PPRTVs, and the LTG 2 guidelines are the most visible...” into this section.
- ✍ Dr. Daston will reiterate in the Program Outcomes section the preceding recommendations to increase transparency in the prioritization process (Question 1, page 1, lines 28–29).
- ✍ Subcommittee members will submit grammatical corrections to Ms. Foellmer in advance of the fifth public meeting.
- ✍ Mr. Allen will insert examples of how LTG 2 qualifies as “Exceed Expectations” in the Summary Assessment. In the discussion of LTG 2, he will address uncertainty, as requested in the Subcommittee’s charge.
- ✍ The Subcommittee members will transmit their edits to Ms. Foellmer within 2–3 weeks.
- ✍ Dr. Daston will prepare the executive summary and transmit it to the Subcommittee members within 2–3 weeks.
- ✍ Ms. Foellmer will contact the Subcommittee members to determine their availabilities for a fourth public call. She will schedule a call in approximately 1 month.
- ✍ The Subcommittee members will delay the submission of their report to the BOSC Executive Committee. The Executive Committee can vet the report at its face-to-face meeting in March 2008 or in advance of the meeting by teleconference.

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AGENDA

December 20, 2007

11:00 am – 1:00 pm Eastern Time

11:00–11:10 a.m.	Welcome - Roll Call - Overview of Agenda - Objectives of Call	Dr. George Daston, Subcommittee Chair
11:10–11:15 a.m.	Administrative Procedures	Joanna Foellmer, Subcommittee DFO
11:15–12:00 noon	Draft Report Discussion	Dr. George Daston, Subcommittee Chair
12:00–12:15 p.m.	Public Comment	
12:15–12:50 p.m.	Draft Report Discussion Continued	Dr. George Daston, Subcommittee Chair
12:50–1:00 p.m.	Next Steps - Action Items - BOSC Executive Committee Review	Dr. George Daston, Subcommittee Chair
1:00 p.m.	Adjourn	