

**U.S. Environmental Protection Agency
Office of Research and Development**

**BOARD OF SCIENTIFIC COUNSELORS
EXECUTIVE COMMITTEE CONFERENCE CALL**

**March 26, 2002
1:00 p.m. – 3:00 p.m. EST**

Review of the Agenda

Dr. Jerry Schnoor (University of Iowa), Chair of the Board of Scientific Counselors (BOSC), quickly reviewed the agenda for the conference call, indicating that the call would include discussion of the revised National Risk Management Research Laboratory (NRMRL) report, the revised National Health and Environmental Effects Research Laboratory (NHEERL) report, the revised National Exposure Research Laboratory (NERL) report, and the National Center for Environmental Research (NCER) draft report. He noted that the National Center for Environmental Assessment (NCEA) report was approved at the February meeting subject to final vetting by Drs. Jerry Schnoor and Bill Chameides (Georgia Institute of Technology).

NCEA Report

Dr. Rae Zimmerman (New York University), Chair of the NCEA Subcommittee, indicated that she was expecting some comments from Drs. Ann Bostrom (Georgia Institute of Technology) and Bonnie McCay (Rutgers University). Dr. Bostrom said that she would e-mail her comments to Dr. Zimmerman following the conference call. Dr. Jim Johnson (Howard University) suggested that Dr. Zimmerman reword Section 2.1.7 on page 8 of the report. He commented that NCEA should take into consideration the research conducted by other organizations around the world when calculating the appropriate balance between health and ecological research. Dr. Schnoor asked that Dr. Johnson edit that sentence and send the revised wording to Dr. Zimmerman. As soon as she receives and incorporates these additional comments, Dr. Zimmerman will forward the report to Dr. Schnoor, Beverly Campbell (SCG), and Shirley Hamilton (NCER). Drs. Schnoor and Chameides will be responsible for vetting the report, and they will send their comments to Beverly Campbell who will do the final editing and formatting of the report before it is distributed.

NRMRL Report

Dr. Mitch Small (Carnegie-Mellon University), Chair of the NRMRL Subcommittee, reminded the BOSC members that this report was discussed during the December conference call. It was not approved at the February meeting because the Chair and Co-Chair were not present at that meeting. Dr. Small asked if Dr. Elaine Dorward-King (Rio Tinto Borax) would be able to remain on the BOSC given her relocation to London. Dr. Peter Preuss (NCER) replied that the final decision has not been made, but it appears that she will be able to remain on the board.

Dr. Small reviewed the 11 key findings in the executive summary, which was a consolidation of the 31 recommendations and findings in the NRMRL report. He asked if there were any comments on the draft report. Dr. Zimmerman asked if NRMRL had identified a client base (the target audiences) for their

publications. She also commented that NRMRL may be able to overcome its difficulty with benchmarking by separating the Laboratory's main functions and benchmarking those independently. Dr. Small replied that NRMRL strategic plan identified the Laboratory's clients. However, there was no link between the list of clients and formal measures to determine if NRMRL is reaching its clients. Dr. Johnson thought the report contained too many recommendations. He suggested that some of them be clustered together. For example, Recommendations 18 and 19 are related, and Recommendations 8 and 12 are both related to the strategic plan and could be combined. Dr. Johnson agreed to send an e-mail to Dr. Small identifying those recommendations that could be consolidated. Dr. Juarine Stewart (Clark Atlanta University) noted that Recommendation 22 is not a recommendation. Dr. Small responded that it is a finding rather than a recommendation. He agreed to reword it so that it is clearly a recommendation. The BOSC members agreed that the key findings and recommendations should be highlighted throughout the reports. The summary section at the end of each report will be titled "Key Findings and Recommendations." Dr. Herb Windom (Skidaway Institute) expressed some concern about trying to force the reports into a common format. Dr. Schnoor indicated that the BOSC members agreed at the last meeting that the reports could be organized differently. However, each should highlight in bold text the key findings and recommendations.

Dr. Chameides asked about the term "staged-gate management process" used in the third bullet on page 2 of the NRMRL report. Some of the other reports include similar suggestions but they use different terminology. Is this term unique to NRMRL? Should the same terminology be used in the other reports? Dr. Small read the definition of a staged-gate management process from page 6 of the report. The BOSC members agreed that the same terminology could be used in the other reports. Dr. Schnoor noted that this is a common theme among the reports. Dr. Chameides asked Dr. Small to reword Recommendation 1 on page 4 regarding NRMRL's strategic plan. He suggested that the first sentence be deleted because it inferred that NRMRL's plan contains objectives that are not focused on its research priorities. Dr. Small agreed to delete the sentence.

Dr. Small asked if a list of the materials provided by NRMRL should be included in an appendix. Dr. Schnoor indicated that the written response to the self-study questions should be included as an appendix. It was agreed that a list of materials, as well as presentation materials and other items would not be included in the appendix. Dr. Small asked the BOSC members to send him their comments by Monday, April 1, 2002.

Dr. Schnoor called for a vote to approve the NRMRL report, and it was approved unanimously subject to final vetting. Drs. Bill Chameides and Jim Clark (ExxonMobil) volunteered to vet the NRMRL report. Dr. Small agreed to incorporate the changes discussed on this call, as well as any others sent by the BOSC members, and send the revised report (with edits marked in the file) to Dr. Schnoor, Beverly Campbell, and Shirley Hamilton. Beverly Campbell will send the report to Drs. Chameides and Clark, who have agreed to vet the NRMRL report. They will send their comments to Ms. Campbell, who will edit and format the report before distribution.

NHEERL Report

Dr. Jim Bus (Dow Chemical Company), Chair of the NHEERL Subcommittee, indicated that the draft NHEERL report was discussed extensively at the February meeting. He noted that the executive summary had been added since the last draft. Dr. Bus quickly reviewed the executive summary and pointed out that, unlike the NRMRL report, the key findings and recommendations are not included in the executive summary. As suggested during the last review, the recommendations are now numbered and summarized in a list at the end of the report. Dr. Bus indicated that a number of the recommendations have been reworded so that they can be understood if taken out of the context of the report. He noted that the report includes a statement that NHEERL should develop a plan to actively

engage the social sciences. This was not elevated to a key recommendation because there was no active dialog about this issue during the site visit.

Dr. Bus stated that the report contains 14 key findings/recommendations, and it encourages NHEERL to continue on the path that it has forged since the last BOSC review. He noted that the Laboratory had made considerable progress in implementing its strategic plan. Dr. Windom, Vice-Chair of the NHEERL Subcommittee, concurred with Dr. Bus' overview of the report.

Dr. Chameides suggested rewording the last sentence in the first paragraph of the executive summary because it was too self-congratulatory. Dr. Bus agreed to rewrite that sentence. Dr. Chameides also indicated that the report mentions that NHEERL's approach to mentoring employees is to increase opportunities for frontline leadership, but the report also praises NHEERL for reducing the supervisor/employee ratio. These two points appear to contradict one another. Dr. Bus responded that the supervisors are senior scientists. Dr. Chameides asked if it would be more appropriate to discuss the ratio of senior scientists to junior scientists. Dr. Bus noted that the NHEERL reorganization was designed to enhance opportunities for effective mentorship. He agreed to rewrite that section.

Dr. Dan Acosta (University of Cincinnati) said that he was having difficulty identifying NHEERL's clients/customers referred to in the report. Should the reports clearly identify the Laboratory's/Center's clients? Dr. Clark responded that NCER's response to the self-study questions identified 19 clients. Dr. Schnoor commented that the BOSC should have asked the Laboratories/Centers to identify their clients in one of the self-study questions. Dr. Bostrom indicated that the Communications Subcommittee could pose this question as part of the communications review. Dr. Schnoor supported Dr. Bostrom's suggestion.

Dr. Chameides asked about the term "roll out" used in the NHEERL report. Is it a common term? The BOSC members agreed that the term was fairly common and its meaning was easily understood. Dr. Schnoor asked Dr. Bus to reword the third sentence in the third paragraph of the executive summary. He noted that the BOSC should not predict the likelihood of a stable or downsized workforce at EPA. Dr. Bus agreed to replace the word "likely" with "potential." Dr. Chameides suggested using the wording, "in a period of budgetary constraint..." Dr. Schnoor pointed out that the NHEERL report is the only one of the five reports that addresses the problem of attracting distinguished scientists. Dr. Bus noted that this may be a more significant problem for NHEERL because of its diverse employee base. The Laboratory is having difficulty attracting and retaining expertise in the core scientific areas. NHEERL management believes that increased flexibility, such as that allowed for the National Institutes of Health (NIH), would help the Laboratory attract the high-quality scientists it needs. Dr. Schnoor asked if other Laboratories/Centers mentioned this problem. A representative from NERL who was on the call replied that NERL has had difficulty attracting distinguished scientists and has lost a number of its senior scientists when they received better offers. Dr. Schnoor stated that the BOSC may want to consider this as a cross-cutting issue for ORD.

Dr. Schnoor called for a vote to approve the NHEERL report, and it was approved unanimously subject to final vetting. Dr. Schnoor asked that all comments on the NHEERL report be submitted to Dr. Bus no later than April 1, 2002. Dr. Bus will revise the report accordingly and send it to Dr. Schnoor, Beverly Campbell, and Shirley Hamilton. Ms. Campbell will send the report to Drs. Chameides and Johnson, who have agreed to vet the report. They will send their comments to Ms. Campbell, who will edit and format the report prior to distribution.

NERL Report

Dr. McCay, Chair of the NERL Subcommittee, stated that the latest draft of the NERL report responds to the comments made at the February BOSC meeting, and contains comments from Jewel Morris (NERL).

She noted that the report has no executive summary, and asked if one should be prepared. Dr. Schnoor replied that each report must contain an executive summary. The preface that he will prepare will precede the five reports.

Dr. McCay reported that NERL has made great strides toward comprehensive strategic planning. The Laboratory has invested considerable time and effort into the planning process and in changing the culture of the Laboratory to become a high-performing organization. Dr. McCay quickly reviewed the major changes in the report since the last draft. She noted the new section on benchmarking. NERL has been trying to coordinate their benchmarking efforts with those of ORD. Dr. McCay stated that the Subcommittee has had difficulty completing Section 2.4.2 Future Needs. If this section repeats the recommendations it will be redundant with the last section. She asked for input from the BOSC with regard to this section.

Dr. Acosta thought the report inferred that there is a morale problem with the Principal Investigators (PIs) at NERL. Was this an important issue during the site visit? Should it be emphasized in the report? Dr. McCay replied that there were only a few PIs at the site visit and, because not all of them agreed with that sentiment, the Subcommittee elected not to emphasize this issue in the report. Dr. Chameides noted that the discussion of organizational structure indicates that some of the PIs are disgruntled. He also mentioned that the third paragraph on page 10 of the report states that the “overall management structure of NERL appears too highly hierarchical to the outside observer.” Is the management structure actually too hierarchical? The report should make a clear statement about the structure. Dr. Chameides asked if the problem is that NERL has not yet successfully implemented the matrix structure. Dr. McCay replied that the structure is in transition, which could account for the discomfort of the PIs. Dr. Schnoor noted that the PIs had concerns about the extra layer of bureaucracy created by the Assistant Laboratory Directors (ALDs). He suggested that the problem may be communications rather than the organizational structure.

Dr. Bostrom pointed out that several of the recommendations are redundant. She recommended combining those that are related; for example, Recommendation 2 could be combined with Recommendation 8. Dr. Bostrom also noted the recommendation regarding the STAR Graduate Fellowship program. Given that the program has been zeroed out in FY2003, should that recommendation be revised? Dr. McCay responded that the report mentions the successor to the fellowship program, but Dr. Bostrom clarified that the National Science Foundation (NSF) is not obligated to award the \$10 million as graduate fellowships. Therefore, there may not be a successor program. Dr. Bostrom asked if the BOSC should make a statement about the value of the fellowship program. Dr. Schnoor suggested that such a statement may be more appropriate in the NCER report. Dr. McCay proposed that the recommendation be reworded to indicate that the fellowship program has been valuable and could be used for recruitment.

Dr. Acosta commented that there is a negative tone to the recommendations in the NERL report, compared to the other reports. The report reads like NERL has made little progress since the last review. Dr. Bostrom suggested that the summary of recommendations at the end of the report include some of the more positive language that precedes the recommendation in the body of the report.

Dr. Schnoor asked if the Subcommittee agreed with Jewel Morris' comment on page 7, Section 7 regarding program balance between the human health and ecological research programs. Ms. Morris indicates that the number of FTEs is not indicative of the balance because many staff contribute to both areas, resulting in a more equalized distribution of talent across the human health and ecological programs. Dr. McCay said that she has rewritten that section to indicate that NERL has achieved a balance between the two programs. Dr. Schnoor suggested that the report identify modeling and database development as two of NERL's strengths. He also proposed that Section 2.2 be rewritten in a more positive tone. The current wording indicates that NERL is not adapting well to the new organization. Is

that the case? Dr. Stewart replied that NERL is having difficulty adapting to the new organization. Dr. Chameides said that he did not glean that from the report. If there is a problem, then the report should state it clearly and make it explicit. With regard to benchmarking, Dr. Chameides suggested that the BOSC recommend that NERL proceed with benchmarking the Laboratory. He noted that all of the other reports have included such a recommendation, and did not understand why the same recommendation was not made for NERL. Dr. McCay agreed that such a recommendation should be included in the report, and she agreed to incorporate it into the next draft.

Dr. Bus pointed out that the Laboratories/Centers have their own systems and mechanisms in place. Perhaps the Laboratories/Centers need to look inside ORD and document best practices as part of their benchmarking exercise. Dr. Johnson agreed, but emphasized the need for benchmarking against external organizations. Dr. Schnoor said that if the NHEERL Subcommittee members think that NHEERL is a model for benchmarking, they should state it in the report. Dr. McCay commented that NERL management said that NHEERL was a model.

Dr. Bostrom questioned the last sentence in the second paragraph under Section 2.2 on page 7 of the NERL report. Do the NERL PIs believe that the extramural research program has adversely affected their ability to sustain long-term research and carry out innovative exploratory research? Dr. Bostrom asked Dr. Preuss if this was true or just a misconception. She did not believe that the funding for the STAR program affected the research budget of the Laboratories/Centers. Dr. Preuss clarified that the \$100 million funding for the STAR program was taken from the Laboratory/Center budgets. Most of that funding was used for cooperative agreements, contracts, and other mechanisms to support the intramural research program. More importantly, the funding was controlled by the individual Laboratories/Centers. Dr. Bostrom thought it would be helpful to clarify this issue in the report. Dr. McCay agreed to reword the sentence.

Dr. Chameides pointed out the natural tension within the organization—the ORD Strategic Plan is focused on meeting client needs, which is at odds with the Laboratory sustaining long-term core research. ORD must conduct both short-term, mission-oriented research as well as long-term core research. Once the mission-oriented issues have been addressed, there are limited funds available for the long-term research. Dr. Stewart agreed that the intramural program at NERL has shifted more toward mission-oriented research. Dr. Bostrom commented that careful planning is needed to achieve synergy between mission-oriented and long-term core research. Dr. Small mentioned that this issue came up during the previous review. He agreed that the NERL report should acknowledge that the problem still exists. He pointed out that it is mentioned in the current NRMRL report. Dr. Schnoor noted that this topic is relevant to all five reports and should be discussed as a cross-cutting issue.

Dr. Schnoor asked the BOSC members to send their comments on the NERL report to Dr. McCay no later than April 1. Drs. McCay and Stewart agreed to revise the report as needed. The revised draft will be reviewed for approval at the May BOSC meeting. The revised report must be sent to Beverly Campbell and Shirley Hamilton by April 13, so that it can be copied and included in the meeting notebooks.

NCER Report

Dr. Clark indicated that a first draft of the report had been prepared with input from each Subcommittee member. He prepared the executive summary and listed the key findings and recommendations in the conclusions section at the end of the report. The draft report was distributed to the Subcommittee members last week and their comments are due by April 5, 2002. Once those comments have been incorporated into a revised draft, the report will be distributed to the BOSC members for review. Dr. Schnoor asked that the revised report be made available for review at the May meeting.

Dr. Clark stated that the tone of the report is evidenced in the first sentences of the executive summary:

“NCER has a strong and dynamic research program that is well connected to ORD and EPA Program Offices. The Center’s research programs are sustained by strong and creative leadership from its management and by commitment and enthusiasm among the staff.”

He noted that Dr. Preuss has been a dynamic leader who has stimulated staff to make significant improvements since the previous BOSC review. The report highlights two issues: (1) completion of the strategic plan, and (2) benchmarking and use of metrics to quantify programmatic success and impact. Dr. Clark acknowledged Dr. Preuss’ involvement in ORD-wide benchmarking efforts and his leadership in this area. The report also notes the enthusiasm and professionalism of the staff. NCER has made tremendous strides in forming a cohesive staff dedicated to their work, improving the work process, and creating a work environment that rewards innovation. However, there remain some issues associated with the effort required for grant coordination and administration. The Subcommittee has offered some suggestions for improving efficiency. Dr. Clark indicated that a number of the Subcommittee’s recommendations are intended to ensure that NCER’s management and decision practices are better documented in transparent processes. Documentation of NCER’s successes and impact also is needed. This documentation becomes the legacy for training junior staff and it can be used as a basis for justifying program funding. Dr. Schnoor asked if the Subcommittee discussed the STAR Graduate Fellowship program. Dr. Clark replied that it did not come up during the site visit.

Dr. Clark indicated that the Subcommittee members thought there should be fewer Requests for Applications (RFAs), as well as more social science and ecological research. Dr. Chameides asked about the low (10%) award rate for the STAR program. He did not agree with the Subcommittee members that the award rate would be improve if the solicitation were more targeted. Dr. Schnoor asked if it might be helpful to conduct the relevancy review before the peer review. Dr. Bostrom pointed out that the relevancy review did not eliminate applications, it merely ranked them in priority order. Therefore, Dr. Bostrom thought that the paragraph in the report was misleading. The real issue is the limited funding. EPA receives numerous proposals, but has limited funds available. Dr. Clark asked if the BOSC thought that limiting the number of solicitations might increase the award rate. Dr. Schnoor noted that the report did not cite the award rates described by Dr. Preuss at one of the BOSC meetings. Dr. Clark replied that those statistics did not sway the Subcommittee to change its position so the writers decided not to include them in the report. Dr. Bostrom did not think that the STAR award rate should necessarily be comparable to NSF’s overall award rate.

Public Comments

There were no members of the public on the conference call, so there were no public comments.

Wrap-Up

Because the conference call ended abruptly at 3:00 p.m., Dr. Schnoor followed up the call with an e-mail that thanked the Chairs and Co-Chairs for their great work on the reports and for leading the respective discussions. He indicated that two additional reports—the NRMRL and NHEERL reports—were approved by the BOSC during the call, noting that the NCEA report was approved at the February 11-12, 2002, meeting. Dr. Schnoor asked that comments on the reports be sent to the appropriate Subcommittee Chair by Monday, April 1, 2002. Following incorporation of final comments, the NRMRL and NHEERL reports should be sent to Beverly Campbell (bcampbell@scgcorp.com), Dr. Schnoor, and Shirley Hamilton. They will ensure that the reports are vetted and finalized for publication.

Dr. Schnoor asked that the NERL and NCER reports be revised and a final draft made available for approval at the May 13-14, 2002, BOSC meeting. These reports should be sent to Beverly Campbell and Shirley Hamilton by April 13, 2002, so that they can be copied and included in the meeting notebooks.

Action Items

The following action items were identified during the discussions:

- ❖ Dr. Bostrom and Dr. McCay will e-mail their comments on the NCEA report to Dr. Zimmerman following the conference call.
- ❖ Dr. Johnson will e-mail to Dr. Zimmerman rewording for Section 2.1.7 on page 8 of the report indicating that NCEA should take into consideration the research conducted by other organizations around the world when calculating the appropriate balance between health and ecological research.
- ❖ Dr. Zimmerman will incorporate the final comments into the NCEA report and send it to Dr. Schnoor, Beverly Campbell, and Shirley Hamilton.
- ❖ Drs. Schnoor and Chameides will be responsible for vetting the NCEA report, and they will send their comments to Beverly Campbell who will do the final editing and formatting of the report before it is distributed.
- ❖ Dr. Johnson agreed to send an e-mail to Dr. Small identifying those recommendations in the NRMRL report that could be consolidated.
- ❖ Dr. Small agreed to reword Recommendation 22 so that it is clearly a recommendation.
- ❖ Dr. Chameides asked Dr. Small to reword Recommendation 1 on page 4 regarding NRMRL's strategic plan. He suggested that the first sentence be deleted because it inferred that NRMRL's plan contains objectives that are not focused on its research priorities. Dr. Small agreed to delete the sentence.
- ❖ Dr. Small asked the BOSC members to send him their comments on the NRMRL report by Monday, April 1, 2002. Dr. Small agreed to incorporate the changes discussed on this call, as well as any others sent by the BOSC members, and send the revised report (with edits marked in the file) to Dr. Schnoor, Beverly Campbell, and Shirley Hamilton. Beverly Campbell will send the report to Drs. Chameides and Clark, who have agreed to vet the NRMRL report. They will send their comments to Ms. Campbell, who will edit and format the report before distribution.
- ❖ Dr. Chameides suggested rewording the last sentence in the first paragraph of the executive summary because it was too self-congratulatory. Dr. Bus agreed to rewrite that sentence. Dr. Bus also agreed to rewrite the section that discussed mentoring employees so that the reference to increasing opportunities for frontline leadership and the praise for reducing the supervisor/employee ratio do not appear to be contradictory.
- ❖ Dr. Bostrom suggested that the Communications Ad Hoc Subcommittee ask the Laboratories/Centers to identify their clients and Dr. Schnoor supported this suggestion.
- ❖ Dr. Schnoor asked Dr. Bus to reword the third sentence in the third paragraph of the executive summary. Dr. Bus agreed to replace the word "likely" with "potential." Dr. Chameides suggested using the wording, "in a period of budgetary constraint..."

- ✧ Dr. Schnoor asked that all comments on the NHEERL report be submitted to Dr. Bus no later than April 1, 2002. Dr. Bus will revise the report accordingly and send it to Dr. Schnoor, Beverly Campbell, and Shirley Hamilton. Ms. Campbell will send the report to Drs. Chameides and Johnson, who have agreed to vet the report. They will send their comments to Ms. Campbell, who will edit and format the report prior to distribution.
- ✧ Dr. McCay asked for BOSC input concerning Section 2.4.2 Future Needs of the NERL report.
- ✧ Dr. McCay agreed to reword the recommendation regarding the STAR Graduate Fellowship program to indicate that the fellowship program has been valuable and could be used for recruitment.
- ✧ Dr. Schnoor suggested that the NERL report identify modeling and database development as two of the Laboratory's strengths. He also proposed that Section 2.2 be rewritten in a more positive tone.
- ✧ Dr. McCay agreed to add to the NERL report a recommendation for the Laboratory to proceed with benchmarking.
- ✧ Dr. Schnoor asked the BOSC members to send their comments on the NERL report to Dr. McCay no later than April 1. Drs. McCay and Stewart agreed to revise the report as needed. They will send the revised report to Beverly Campbell and Shirley Hamilton by April 13, so that it can be copied and included in the May meeting notebooks.
- ✧ Dr. Schnoor asked that comments on the NCER report be sent to Dr. Clark by Monday, April 1, 2002. Following incorporation of final comments, Dr. Clark will send the report to Beverly Campbell and Shirley Hamilton by April 13, so that it can be copied and include in the May meeting notebooks.

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