

October 20, 2000

**MEMORANDUM TO NATIONAL SCIENCE BOARD MEMBERS**

**SUBJECT:** Preliminary Report of October 18-19, 2000 Meeting

The major actions of the Board at its 360th meeting on October 18-19, 2000, are summarized for the information of those members and consultants absent and as a reminder to those present.

**1. Board Actions**

- a. Drs. Nina Fedoroff, Jane Lubchenco, Warren Washington and John White were sworn in as members of the NSB class of 2006 by Dr. Eamon Kelly.
- b. The Chairman established a Task Force on S&E Infrastructure as a Subcommittee of the Committee on Programs and Plan (CPP). Dr. John White is Chair, with members Dr. Lubchenco, Jones, Rubin, Richardson, Washington & Wrighton of the NSB and Drs. Mary Clutter and Robert Eisenstein of NSF, and Executive Secretary Mr. Paul Herer.
- c. The Chairman established a Task Force on National Workforce Policies for S&E as a Subcommittee of the Committee on Education and Human Resources (EHR). Dr. Joseph Miller is Chair, with members Dr. Fedoroff, Langford, Natalicio, Savitz, Simberloff and Tien, and Executive Secretary Dr. Daryl Chubin.
- d. The Chairman announced that Dr. Michael Rossmann has joined the CPP Subcommittee on Polar Issues; and Dr. Warren Washington, the Committee on Strategic S&E Policy Issues.
- e. The Board approved a set of Major Research Equipment Projects as candidates to include in the NSF Budget in FY 2002 and beyond.
- f. The Board concurred with the recommendation from the Audit and Oversight Committee to have the Executive Committee approve the Management Response by the Board to the OIG Semiannual Report.
- g. The Board concurred with the recommendation from the Task Force on International Issues in S&E to have the Executive Committee approve the final report to the new Administration.
- h. The Board approved the Commemorative Brochure for the NSB 50<sup>th</sup> Anniversary subject to final edits approved by the task force chair and the Board chair. **Members were asked to submit final comments by Friday, October 27.****

## **2. Awards**

The Board approved the following award:

Amount not  
to exceed

### MATHEMATICAL AND PHYSICAL SCIENCES

Division of Material Research  
National High Magnetic Field Laboratory  
Florida State University  
(NSB-00-169)

\$117,500,000  
for 60 months,  
the final three  
years of which  
are contingent upon  
satisfactory progress  
in the R&D program,  
management, and  
leadership of the  
NMR program

## **3. NSB Committees**

(Committee summaries are provided by executive secretaries.)

### **a. Executive Committee (EC)**

The committee heard a status report on the NSF budget.

### **b. Audit & Oversight (A&O)**

#### **Regular**

The committee heard reports on the work of the NSF Management Controls Committee, the issuance of NSF Important Notice 126, "NSF's Paperless Proposal and Award System -- Next Steps," and NSF's role and responsibilities under PL 106-107 (the "Federal Financial Assistance Management improvement Act"). They also heard updates on GPRA, federal research misconduct policy, the preparation of NSF's annual financial statements and audits of the financial statements and of information systems.

#### **Supervisory**

The committee received an update on the status of the OIG's budget for the current fiscal year and on the process for reviewing and issuing the OIG's Semiannual Report for the period ending September 30, 2000. Because the Semiannual Report for the current period will be issued between the NSB's October and December meetings, the A&O Committee will ask the Executive Committee to approve the Management Response by the Board to the OIG Semiannual Report.

The committee also heard presentations on the OIG's audit planning efforts for this fiscal year and NSF management reported to the committee on its response to a recent OIG audit report.

**c. Programs and Plans (CPP)**

CPP considered the proposed award for the National High Magnetic Field Laboratory at Florida State University and recommended its approval to the full Board. The committee found it a strong program overall, but recommended that the final three years of support under this award be contingent upon satisfactory progress in the R&D program, management, and leadership of the NMR program. The committee also reviewed potential Major Research Equipment projects as part of planning for the FY 2002 budget request.

The committee received information on the plans and timeline for the management review of AURA, which currently manages the National Optical Astronomical Observatories (NOAO). There was also a presentation and broad discussion on the strategic context for leading edge cyber infrastructure.

CPP received reports from the Polar Issues Subcommittee and the new Task Force on Science and Engineering Infrastructure. CPP recommended the new Polar Issues Subcommittee charge to the full Board for approval, and heard a summary of updates on Arctic and Antarctic research. The Task Force on Science and Engineering Infrastructure held its first meeting, and is developing a work plan.

The committee also received two brief written information items, on the status of Materials Research Science & Engineering Centers, and on plans for Physics Frontier Centers.

**d. CPP Subcommittee on Polar Issues (PI)**

The subcommittee heard a review of a proposed MRE project. The subcommittee also heard reports from OPP staff on the polar instrumentation development program; approval by the Arctic Council of the Arctic Climate Impact Assessment Project; the Western Arctic Shelf-Basin Interaction Project; the Gakkel Ridge Program in the Arctic; an Antarctic weather forecasting workshop and an Antarctic transportation workshop, and the Degree Angular Scale Interferometer Project.

**e. CPP Task Force on S&E Infrastructure (INF)**

Dr. White, task force chair, opened the first meeting by reviewing the charge, and reminded the Task Force that it has been requested to present the "terms of reference" for the study, a workplan, and a timetable to the CPP and the full Board for approval at the December 2000 meeting. He noted that the charge is very broad and that the Task Force must focus its efforts on things that will make a real difference to science and engineering. Considerable discussion ensued on what should be the "terms of reference" for the study. Some of the issues raised were whether assessment should focus on the current state of infrastructure or future development; and how infrastructure should be defined for the purposes of the study. It was agreed that Dr. White will develop the first draft of the workplan and terms of reference and the documents will then be refined iteratively by the task force, using conference calls and email.

#### **f. Education and Human Resources (EHR)**

The committee heard presentations by David Ellis, chair of the Advisory Committee (AC) for the EHR Directorate, on issues discussed by the AC and the need for continuing interaction with the Board EHR Committee; by Bill Wulf, on the National Academy of Engineering's Committee and Forum on Diversity in the Engineering Workforce and how to make the "business case" for diversity and to leverage existing programs and commitments; and by Linda Rosen, U.S. Department of Education, on the findings and recommendations of the recent Glenn Commission report on mathematics and science teaching.

The presentations spurred much discussion and consideration for follow-up activities. In addition, the committee discussed the October 17 joint meeting with the GPRA Subcommittee of the EHR Advisory Committee on the NSF Niche in K-16 Education. David Ellis and consultant Clara Tolbert, members of the GPRA Subcommittee, participated in this discussion. The committee plans to hold a teleconference to share impressions and develop follow-up questions. The topic will be discussed again at the EHR Directorate's AC meeting in November.

The chairs of two subcommittees of the EHR Committee delivered status reports – the S&E Indicators Subcommittee and the new Task Force on National Workforce Policies for S&E.

#### **g. EHR Subcommittee on Science and Engineering Indicators (SEI)**

Rolf Lehming, Science Resources Studies Division, proposed a 2000/2001 production schedule for *Science and Engineering Indicators-2002* that was approved by the subcommittee:

The subcommittee members provided additional comments on the thematic outlines and external reviews received on the K-12, Public Attitudes, and Academic R&D chapters. The subcommittee approved the three revised chapter outlines and directed SRS to proceed drafting the chapters. Dr. Tapia stressed, and Dr. Suzuki concurred, that data on Hispanics and Asians should be disaggregated as far as possible, along with data on native and foreign born faculty. It was noted that the quality of the external reviews has been excellent, thoughtful, and detailed. SRS chapter authors were asked to provide brief written summaries of reviewers' comments on all chapter outlines and how they will be addressed.

The draft thematic outline for the Higher Education chapter was discussed along with reviewers' comments, and the subcommittee approved the contents and thematic outline for this chapter. Dr. Tapia recommended including a discussion of the need and motivation for bringing foreign workers into the U.S. on H-1B visas, either in this chapter or the S&E Workforce chapter.

#### **h. EHR Subcommittee on National Workforce Policies for S&E (NWP)**

The task force held its inaugural meeting, hearing first from NSB Chairman Kelly on his expectations. The charge addresses a broad range of issues, including the impact of increased H1-B visas on U.S. students, the teacher workforce, the emphasis on retraining and certificates in addition to degrees as preparation for hi-tech jobs, and the status of postdoctorates. The task force was asked to focus on national policies, not NSF. Task force Chairman Dr. Joseph Miller led a discussion of the steps to be taken to produce a workplan for presentation to the EHR Committee at the December 2000 meeting.

**i. Task Force on International Issues in S&E (INT)**

The task force approved changes to the report for the new administration based on comments from Board members. The task force will send the final revised transition draft to the Board shortly and will ask the Executive Committee to handle final approval of the document some time in November.

The task force discussed the text and recommendations of the report providing guidance to NSF, and agreed that a revised version will be discussed in an upcoming conference call. The task force expects to complete the NSF guidance report this fall and share it with the full Board at the December meeting.

The task force decided to invite Norman Nuereiter, the new Science and Technology Advisor to the Secretary of State, to its December meeting.

**j. Committee on Strategic S&E Policy Issues (SPI)**

The Chairman reported on his testimony on international benchmarking to the Basic Research Subcommittee of the House Science Committee on October 4. The committee then discussed a technical memorandum prepared by Science Resources Studies staff as background for its October 20 meeting on applications of economic methods to support Federal research allocation decisions. It also discussed a draft of its agenda for a stakeholders' symposium in early 2001 focused on the draft committee report.

**k. Task Force on NSB 50<sup>th</sup> Anniversary (NSB50)**

The task force heard a report from Terry Savage, Editorial Director, Low+Associates, on the 50<sup>th</sup> anniversary commemorative brochure. She provided a sample of the layout and design of the brochure and discussed the final production schedule. The brochure will be released at the December Board meeting and will be made available on the NSB Web page. The NSF Director suggested that Curt Suplee, Director, Office of Legislative & Public Affairs, review the text and provide comments to the Board Office by close of business October 27. The task force approved the brochure and will recommend Board approval.

The task force discussed the guest list and program for the Board's December 12 celebratory event and learned that the Board may have an opportunity to meet with the President during the 12-14 December timeframe. The meeting would commemorate the 50<sup>th</sup> anniversary of the first Board meeting, which was held in the White House during President Harry S. Truman's term of office.

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Marta Cehelsky  
Executive Officer