OIG Management Activities

Congressional Testimony

On April 3 2003, Dr. Boesz testified before the U.S. Senate Appropriations Subcommittee on VA, HUD and independent agencies about four of the most significant challenges faced by NSF management: management of large infrastructure projects, Antarctic infrastructure planning, award administration, and the strategic management of human capital.

Dr. Boesz noted that the OIG had conducted two audits focusing on projects funded through NSF's Major Research Equipment and Facilities Construction appropriation account, and that approximately half of the recommendations remain to be implemented. The IG also discussed a report on health and safety issues in the Antarctic issued last month, which recommended that NSF address its aging facilities and infrastructure and that it initiate capital asset management planning and separate line item budgeting processes.

With regard to award administration, Dr. Boesz noted that this challenge was based on a reportable condition that appeared in NSF's financial audit report. The auditors recommended that NSF implement a comprehensive risk-based post-award monitoring program. Finally, she testified that NSF's human capital management plan is not expected until 2004 and that meanwhile there is an urgent need for training, office space, and equipment to support current and future human capital needs. The full text of Dr. Boesz's testimony is available on the NSF OIG website: www.oig.nsf.gov.

Management Challenges

Last December, OIG submitted its annual statement of what the office considers the most serious management and performance challenges facing NSF. Progress has been made on several of the challenges that reappear from last year's list and actions are underway to address the remaining issues. While the progress made to date is encouraging, corrective actions have not advanced to the point where NSF can afford to become complacent. The 11 specific challenges that OIG has identified through audits and general knowledge are summarized from the original letter below.
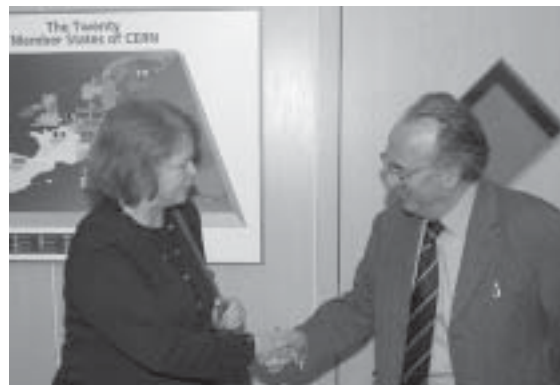
Workforce Planning and Training. Planning for NSF's future workforce needs and training the large number of temporary staff continue to be serious concerns. NSF has contracted for a multi-year "business analysis" of its operations that will include a human capital management plan identifying its future workforce requirements. Thus far, the contractor has reported that 40% of NSF's permanent workforce is currently eligible for either retirement or early out, and that number will grow to nearly 60% by 2007. Personnel records also indicate that since 1996, NSF's reliance on temporary staff has increased in tandem with the size of its appropriation. The increase in temporary staff places a greater burden on the agency to continually recruit and train these personnel and find them suitable office space.

Budget for Administration and Management. It is increasingly apparent that NSF's staff is in need of two basic resources: office space and travel funds. Assistant Directors are reporting that program managers are being forced to double up in offices or use cubicles that are inadequate for them to perform their work. If office space is inadequate at current workforce levels, it will severely constrain the agency's ability to add the staff needed to grow at the rate intended by the NSF Authorization Bill (HR 4664). The shortage of travel funds affects NSF's ability to successfully address several of the management challenges identified below. Funds are needed to conduct on-site administrative and technical reviews and properly oversee large infrastructure projects and other awards. NSF should seek to maximize the effectiveness of staff by allocating more funding for these two essential resources.

Management of Large Infrastructure Projects. The effective management of NSF's large infrastructure projects has been a concern of the OIG for several years. In particular, fund control and the accurate accounting for infrastructure projects have been cited as a problem in recent audit reports. At the request of a Senate Appropriations Subcommittee, we performed an audit this past year of the funding for major research equipment and facilities to determine if NSF used its Major Research Equipment and Facilities Construction (MREFC) appropriation solely to fund the construction and acquisition costs for these projects as required. We found that NSF could not ensure that it stayed within its authorized funding limits or that it provided accurate and complete information about project costs to key decision makers. Since the release of the audit report, NSF has reported progress toward correcting the types of problems identified.

Dr. Boesz is greeted by Prof. Luciano Maiani, Director General of CERN, during a visit to the Large Haldron Collider Project.

Award Administration. Although the agency has a robust system of award management over its pre-award and award disbursement activities, NSF needs and is developing a comprehensive, risk-based management program to monitor its grants during the post-award phase. NSF should establish policies to ensure that awardees are complying with the requirements of their grant agreements, including 1) implementing a comprehensive risk-based program that describes when and how monitoring will occur; and 2) establishing a system of risk assessment of awardees to ensure that each receives the appropriate level of oversight. NSF recently issued a draft version of a Risk Assessment and Award Monitoring Guide and has been working closely with OIG to address this challenge. The Guide is generally responsive to the recommendations outlined in the FY 2001 Management Letter Report, however, more detail will be needed before the Guide can serve as an effective reference covering the full range of issues that are likely to face many grant and program officers.

Cost Sharing. Our audit work indicates that NSF grantees continue to experience significant problems in accounting for cost sharing, raising questions about whether required contributions are actually being made. The issues cited in our reports are primarily related to the commingling of reimbursable and cost-shared expenses, time and effort reporting, and cost-sharing certification. Acting on a recommendation by NSF, the National Science Board recently modified NSF's policies to eliminate voluntary cost sharing from proposals. While the new policy may help limit the amount of cost sharing borne by awardees, problems with how it is accounted for remain.

Data Security. Although NSF has made significant progress in strengthening data security in recent years, more improvements are needed. Our FY 2002 review of NSF's information security program identified three significant deficiencies related to weaknesses in access controls, the security management structure, and the certification and accreditation of major systems. Although NSF management disagreed with our assessment of the severity of these problems, it agreed with our recommendations and is taking action to correct the problems. Despite problems, we commend the agency for many of the improvements made in its security program over the past year.

GPRA Data Quality. In order to achieve the performance-oriented government envisioned in the President's Management Agenda, the Office of Management and Budget (OMB) has directed agencies to align program activities with outputs and outcomes by FY 2004. However, according to an August 2002 report on performance, budget, and cost integration prepared by an outside consultant hired by NSF, Division Directors (DDs) have been critical of the large number of annual GPRA performance goals presented by NSF and suggested they be prioritized. The report stated that "DDs also questioned the value of the GPRA measures and mentioned that they do not use them to develop their budgets." A majority of DDs surveyed also indicated that performance information captured by NSF institutionally was inadequate and

had to be supplemented through the efforts of their respective staffs. If performance measures are not relevant to either the preparation of budgets or management of a program, an important purpose for compiling GPRA information has been overlooked.

Cost Accounting Systems. Managerial (cost) accounting information is used to assess operational effectiveness and efficiency and is also useful in informing capital investment decisions such as prioritizing the funding of large infrastructure projects. In the OIG's FY 2001 Management Letter Report, our auditors found that NSF had not developed a cost accounting system adequate to track cost data either by infrastructure project or by strategic outcome goal. To obtain a full accounting for these projects or outcomes, NSF currently must perform additional processing, some of it manual, that increases the risk of errors and reduces its usefulness to decision makers. NSF recently contracted with a consulting company to identify options for establishing additional cost accounting and performance measurement capabilities. As a result, NSF developed a draft action plan to achieve better alignment between resources and goals of the agency. Once OMB approves the final plan of action, NSF has indicated it will begin implementation.

Management of U.S. Antarctic Program. Our audit work continues to focus on Antarctic support activities because of their many inherent risks. One issue that has been raised in Committee of Visitors (COV) reports, as well as our audit work, is the need to improve long-range capital planning and budgeting for repairing and maintaining the Antarctic infrastructure, including facilities, transportation, and communications. As a recent COV report noted, most facilities and equipment have been extended well beyond their useful lives. While OPP has upgraded some of the facilities and equipment, there are still a considerable number that are approaching or have exceeded their useful lives. Old buildings and equipment present increased operational risks, and in some cases, may pose safety and health concerns. Another important element of OPP's plan to improve infrastructure is the need to acquire specially modified tractors and equipment for support of more overland science traverses. Such traverses are not only useful in conducting research projects, but could deliver fuel and other supplies to South Pole Station and other research locations, freeing LC-130 aircraft to perform other missions.

Broadening Participation in the Merit Review Process. Increasing the participation of minority scientists as proposers, reviewers, and investigators, while maintaining the integrity of the award process, remains an important challenge for NSF. The National Academy of Public Administration last year recommended establishing broader-based review panels with participants drawn from a wider range of institutions, disciplines, and underrepresented minorities. However, NSF's efforts to track the demographics of the reviewer population have been hampered by the desire of many reviewers not to disclose their race or ethnicity. NSF's Advisory Committee on GPRA while noting progress commented: "NSF should consider carefully the demographic changes that are anticipated in the academic research community. The agency should develop and implement strategies to ensure as much

as possible that its processes incorporate broad representation of the full demographic range of the future research community." We agree with the Committee that NSF's success in broadening participation in the merit review process will help determine its future effectiveness.

Math and Science Partnership. As the performance of American school children on math and science tests has lagged behind other countries, NSF was designated in 2001 as the lead agency on a key element of the President's initiative, *No Child Left Behind,* aimed at strengthening and reforming K-12 math and science education. The agency has already dispensed $147 million for *comprehensive* awards designed to improve student achievement at all grade levels, and $90 million has gone to *targeted* partnership grants that focus on specific disciplines or grade ranges. The sustained involvement of NSF remains essential. NSF staff will need to help coordinate the efforts of the various parties, monitor the progress of the projects, and ensure that federal funds are handled properly, while at the same time administering the subsequent program solicitation of approximately $200 million.

Legal Review

The Inspector General Act of 1978, as amended, mandates that our office monitor and review legislative and regulatory proposals for their impact on the Office of Inspector General (OIG) and the National Science Foundation's (NSF) programs and operations. We perform these tasks for the purpose of providing leadership in activities that are designed to promote economy, effectiveness, efficiency, and the prevention of fraud, waste, abuse and mismanagement. We also keep Congress and NSF management informed of problems and monitor legal issues that may have a broad effect on the Inspector General community. The following issues merit discussion in this section.

Program Fraud Civil Remedies Act of 1986 (PFCRA) (31 U.S.C. §§ 3801-3812)

We support legislation to amend PFCRA to include NSF and the 26 other DFE agencies that are currently excluded from participation under PFCRA's enforcement provisions. The issue of NSF's inclusion under PFCRA has been raised in several prior semi-annual reports, and note that NSF has actively supported our recommendation. The Office of Inspector General's concern involves the ability of "Designated Federal Entity" (DFE) agencies to fully implement their statutory mission to prevent fraud, waste and abuse by availing themselves of the enforcement capabilities contained within PFCRA.

The DFEs are predominantly smaller agencies that are more likely to have cases involving smaller dollar amounts. PFCRA sets forth administrative procedures that enable defrauded agencies to proceed administratively to recover double damages

and penalties when the amount of loss is less than $150,000.00. Using the enforcement provisions of PFCRA will enhance the recovery efforts of NSF and other DFE agencies in instances of fraud that fall below PFCRA's financial cap of $150,000.00. We believe that by not including DFE agencies under PFCRA, PFCRA fails to maximize its potential. However, amending PFCRA to include NSF and the other DFE agencies will further the OIG community's statutory mission to deter fraud, waste and abuse.

Senate Staff Professional, Cheh Kim (center) confers
with Art Elkins, Counsel to the IG, and Dr. Boesz
at a recent OIG conference

NSB Requests Sunshine Act Interpretation

The newly enacted National Science Foundation Authorization Act of 2002, Pub. L. No. 107-368 (2002), requires the National Science Board (NSB) to open its committee, subcommittee and task force meetings to the public in accordance with the Government in the Sunshine Act, 5 U.S.C. § 522b (2000). At the request of the Board's Chairman, our office researched the openness requirements of the Sunshine Act and their application to Board meetings, particularly the meetings of its various subdivisions. Our research suggested several issues for the Board to consider as it develops policy for implementing the open meeting requirements of the NSF Authorization Act of 2002.

The first matter to be considered are the circumstances under which NSB discussions might be considered a "meeting". We suggested that the Board carefully consider the nature of the business that it conducts through its subdivisions and whether their discussions are deliberations that trigger the openness requirements of the Sunshine Act. We also evaluated the Sunshine Act's exemptions to open meetings in light of the typical business conducted by the Board and its subdivisions and suggested topics of discussion that may properly fall within an exemption and those that may not. This information will assist the Board in making future decisions regarding when closure of a meeting is proper.

Finally, we suggested that the Board consider educating its members on the procedural and substantive requirements of the Sunshine Act. Through greater awareness of the open meeting requirements, Board members will have the tools necessary to know when a meeting occurs and make informed decisions as to when to properly close a meeting. Since the beginning of the year, the Board has succeeded in achieving greater openness in its committee meetings.

Outreach / Prevention Activities

Our office continues its efforts to educate those in the awardee and government communities about our work. In addition to delivering presentations to NSF grantees at conferences and university meetings, we have opened links between international agencies engaged in science oversight, spearheaded working groups on grant fraud and research misconduct, written papers on fraud and conflicts of interests, provided training to the IG community, and presented an overview of the OIG role to government employees.

Partnering with International Agencies. NSF OIG is playing a leading role in establishing channels of communication between science oversight agencies around the world. In December, we hosted visitors from the National Natural Science Foundation of China (NSFC). The NSFC modeled itself after NSF and is particularly interested in how NSF, the OIG, and the National Science Board oversee its large and diverse research portfolio. Over the two-day visit, we had a number of informative discussions on a variety of audit and oversight issues. The delegation also visited the National Aeronautics and Space Administration OIG to compare how other federal agencies with a different mission handle their oversight responsibilities. As part of our exchange with NSFC, we are hosting an NSFC manager as an intern for a 6-month period. In March, we met with visitors from the Korea

A delegation from The National Natural Science Foundation of China, led by Vice President, Li Zhuqi (seated center), poses with OIG staff during a December visit. Dr. Stanley Jaskolski of the National Science Board (standing far right) also attended the meetings.

Science & Engineering Foundation and discussed the role of the OIG in the Federal government and various audit related issues.

The Inspector General is sponsoring an international workshop on accountability and oversight in Paris, France, on May 27 and 28, 2003. The primary purpose of the workshop is to gain a better understanding of best practices with respect to the auditing of science projects and to look at accountability for international collaborations.

OIG Working Groups. We organized and hosted a meeting of the Grant Fraud Working Group for OIG offices. During the October 2002 meeting, we presented a three-part program focusing on critical issues involved in grant fraud including: the regulatory requirements in OMB circulars and what auditors look for when conducting an audit; possible indicators of grant fraud, particularly with regard to motive, opportunity, and method; and specific categories of grants that have proven to be most susceptible to fraud. Based on the favorable feedback received from participants, plans are in progress to host the next meeting during the Summer/ Fall of 2003.

We also continued to support the activities of the Inspector Generals' Misconduct in Research Working Group chaired by the NSF IG. For instances in which an agency rather than the OIG investigates research misconduct, we developed an implementation checklist to guide OIGs in evaluating the agency process.

Publications. Our article, "Research Misconduct and its Relationship to Fraud," was published in the Journal of Public Inquiry, Fall/Winter 2002 (see www.ignet.gov). The article outlines our office's procedures for investigating research misconduct, highlights past instances in which research misconduct cases became criminal fraud cases, and encourages OIGs to either investigate these allegations or provide oversight of agency research misconduct investigations.

Another article, "Key Issues in Conflict of Interest for Scientific, Engineering and Educational Research", appeared in The Journal of Research Administration[1] published by the Society of Research Administrators (SRA). The concepts discussed in this paper, along with other compliance issues, were presented at workshops during the SRA Annual Meeting. We also prepared and displayed a poster featuring COI issues, which received the 2002 Best Poster Award at the SRA Annual Meeting.

Presentations. OIG staff presented at the bi-annual Conference for Deaf and Hard of Hearing Federal Employees about the history, mission, and audit and investigative responsibilities of the OIG. Our presentation helped to familiarize hearing impaired feds with OIG activities and reduce their uneasiness in reporting allegations of fraud, waste, and abuse. The conference was sponsored by the Deaf & Hard of Hearing in Government, a non-profit organization that serves as a national resource for the federal government.

---

[1] Volume XXXIII 2002, Numbers 2 and 3

We also provided instructors for the new IG Academy course, Editing Investigative Products Training Program (see www.tigta.gov/igacademy/course_igeiptp.html). The three-day course provides investigations' supervisors with the tools necessary to effectively and responsibly edit investigative reports, and to develop the writing skills of their subordinates. Our office provided instructors and course materials for modules on legal issues and language development.

Sherrye McGregor, OIG staff attorney, speaks to university administrators about compliance issues.

Presentations were also made to various awardee groups on a variety of issues including the role of the OIG, the audit planning and audit selection process, typical audit findings, and suggestions for award administration and oversight at the grantee institution. The groups include:

- Experimental Program to Stimulate Competitive Research (EPSCOR)

- Historically Black Colleges and Universities-Undergraduate Program (HBCU-UP)

- Tribal Colleges and Universities Program (TCUP)

- Advanced Technological Education Program (ATE)

- Urban Systemic Initiatives (USI)

- Council for Undergraduate Research

- National Council of University Research Administrators (NCURA)

- Council on Governmental Relations (COGR)

Quality Certifications

The following certifications of key internal control systems of the NSF Office of Inspector General offer assurance to our stakeholders of the integrity and accuracy of our processes and products.

Office of Audit Passes Peer Review

Government Auditing Standards require OIGs to have an external quality control review conducted of its audit operations and quality control system at least once every three years. The purpose of the peer review is to determine whether the

audit organization under review has a quality control system in place to provide reasonable assurance that it is following all applicable auditing standards. During this reporting period, the United States Postal Service (USPS) OIG conducted an external quality control review of our audit operations. We are pleased to report that USPS-OIG found that our quality control system provides reasonable assurance that our audits are conducted in conformance with auditing standards. The peer review report made 2 constructive comments including the improvement of audit documentation, and the need to obtain timely background checks of OIG employees. All issues are being addressed.

OIG Receives Certification from the Office of Special Counsel

Under Federal law, the head of each agency is required to ensure that Federal employees are informed of their rights regarding the Whistleblower Protection Act (WPA) and prohibited personnel practices (PPP). The Office of Special Counsel (OSC) has created a certification program under which it will certify that an agency is in compliance with this law if the agency undertakes 5 steps:

1. Placing informational posters at agency facilities;

2. Providing information about PPP's and the WPA to new employees as part of the orientation process;

3. Providing information to current employees about PPP's and the WPA;

4. Training supervisors on PPP's and the WPA; and

5. Creation of a computer link from the agency's web site to OSC's web site.

NSF OIG has successfully completed each of these steps and received OSC certification.

Information Technology Certification

In February, we submitted a certification and accreditation package to the CIO, that contained an internally prepared Security and Contingency Plan for the OIG server, and a "System Testing and Evaluation Questionnaire" and "Certification and Evaluation Report" prepared by IBM Business Consulting Services. These documents, prepared in accordance with NSF IT security policies and guidance from the National Institute of Standards and Technology (NIST), were the basis for the IG to certify that the OIG server substantially meets all applicable Federal policies, regulations and standards.