



OFFICE OF
INSPECTOR GENERAL

**STATEMENT OF
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NATIONAL SCIENCE FOUNDATION
before the
U.S. SENATE
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON VA, HUD, AND INDEPENDENT AGENCIES
May 15, 2002**

Madam Chair, Senator Bond, and distinguished members of the Subcommittee, I am Dr. Christine Boesz, Inspector General at the National Science Foundation (NSF). I appreciate the opportunity to appear before you today. As you know, NSF continues to be an innovative agency dedicated to maintaining American leadership in the discovery and development of new technologies across the frontiers of scientific and engineering research and education. NSF has had an extraordinary impact on scientific and engineering knowledge, laying the groundwork for technological advances that have shaped our society and fostered the progress needed to secure the Nation's future. Because the scientific enterprise and its underlying basic research are everchanging, NSF continuously faces new challenges. Consequently, my office is working closely with NSF management to identify and address issues that are important to the success of the Agency. Today I would like to provide an update on the status of NSF's progress in three areas critical to its success: post-award management, workforce planning, and large facilities management.

POST-AWARD MANAGEMENT

NSF's primary mission is to fund extramural research and education activities that will advance science and engineering. Over ninety-five percent of NSF's FY 2002 budget is in support of these activities, which are funded primarily through grants and cooperative agreements. The Agency's scientific directorates and offices have a shared responsibility with the Office of Budget, Finance, and Award Management to oversee the financial and programmatic management of these awards. Because of its enormous

impact on NSF's daily operations, for the past two years I have identified award administration as one of NSF's top ten management challenges.¹

In addition, during the most recent annual audit of NSF's financial statements, our external auditors identified, as a reportable condition, weaknesses in NSF's internal controls over the financial aspects of post-award management.²

The auditors found that, while NSF has a robust system of award management over its pre-award and award phases, it needs to develop a more rigorous, risk-based monitoring program for the post-award phase. In addition, NSF needs to significantly improve its current policies and procedures for the valuation and tracking of its assets, including facilities and equipment held and maintained by other entities.

NSF management agrees that award administration is one of NSF's top management challenges, but disagrees that it should be classified as a reportable condition for the purposes of financial statement reporting. Nevertheless, NSF is working to continuously improve its business processes by refining its award management procedures to include a more structured, risk-based monitoring element. Further, NSF is taking steps to improve its oversight of assets for which it holds title.

In support of these efforts, my office is currently conducting a review of best practices in grant award administration to assist NSF in addressing this audit finding and meeting its management challenge. We are looking at organizations in both the public and private sectors that dispense and administer financial assistance awards, and we plan to issue our report by the end of the year. In addition, we will continue to assess NSF's overall progress in developing a more effective post-award management system.

WORKFORCE PLANNING

Despite an increasing workload and a budget that has grown from \$1 billion to \$5 billion over the past 20 years, the number of full-time equivalent positions (FTEs) at NSF has remained relatively static.³ In addition, NSF, like much of government, is

¹ Memorandum from Christine C. Boesz, Inspector General, National Science Foundation, to Eamon M. Kelly, Chairman, National Science Board, and Rita R. Colwell, Director, National Science Foundation (January 30, 2002) (on file with the National Science Foundation Office of Inspector General) [hereinafter 2001 Management Challenges]; Letter from Christine C. Boesz, Inspector General, National Science Foundation, to Senator Fred Thompson, Chairman, Senate Committee on Governmental Affairs (Nov. 30, 2000) (on file with the National Science Foundation Office of Inspector General) [hereinafter 2000 Management Challenges].

² Auditor's Report, Fiscal Year 2001 National Science Foundation Financial Statement Audit, (January 18, 2002).

³ Compare NSF's FY 1983 Budget Request to Congress with NSF's FY 2001 Budget Request to Congress. Between 1983 and 2001, FTEs increased by less than 2 percent, from 1200 to 1220.

vulnerable to a wave of retirements in key areas. Because of these concerns, I identified workforce planning and training as another management challenge for NSF.⁴

The strategic management of human capital is a major component of the *President's Management Agenda*⁵ and has been identified by the Government Accounting Office (GAO) as posing a significant risk government-wide.⁶ Last year, this Subcommittee requested that my office analyze the adequacy of the agency's staffing and management plans in light of the efforts to expand NSF's budget over the next five years.⁷ In response to that request, my office has performed a review of NSF's workforce planning activities.

NSF's workforce planning to date, like that of most Federal agencies, has largely been confined to stating broad goals and standards. It falls short of an actionable plan, which requires specific objectives, clearly assigned responsibilities, well-defined milestones for discrete actions, and practical measures of effectiveness for accountability. However, NSF is in the process of contracting for a multi-year business analysis of its operations that will include a human capital management plan component identifying its future workforce requirements.⁸

While it may be premature to attempt a meaningful assessment of future workforce planning at NSF, due to the imminent launch of the Agency's ambitious business analysis initiative, I can offer some preliminary conclusions. I believe that the Agency's proposed business analysis, if diligently conducted by the contractor and properly overseen by NSF, represents a comprehensive and rigorous approach to reviewing NSF's primary operations and the human resources needed to staff them. It has the potential to generate an actionable plan that will help NSF identify and meet its current and future workforce needs, as well as plan ways to head off future problems. The ultimate value of the initiative, of course, will be determined by the validity of the findings of the business analysis and the actions that NSF takes pursuant to them. Given NSF's investment in time and resources, I look forward to substantial, concrete results that will improve the agency's business processes, including workforce planning and management.

⁴ 2001 Management Challenges and 2000 Management Challenges, *supra* note 1.

⁵ EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES, *THE PRESIDENT'S MANAGEMENT AGENDA: FISCAL YEAR 2002* (Aug. 2001).

⁶ *High-Risk Series: An Update*, GAO-01-263 (2001); *Human Capital: Meeting the Government-wide High-Risk Challenge*, GAO-01-357T (2001).

⁷ S. REP. NO. 107-43 (2001).

⁸ NSF has issued a Request for Quotations for a multi-year business analysis of its operations, including a comprehensive human capital management plan. NSF expects to award this contract, which is estimated at \$15 million over a three to four year period, next month. RFQ Number CPO 020027.

LARGE FACILITIES MANAGEMENT PLAN

NSF's management of large facility projects is another issue that I have identified as one of the Agency's top ten management challenges.⁹ In response to the President's Budget *Blueprint*,¹⁰ increased scrutiny from the Office of Management and Budget (OMB) and the Congress, and recommendations from my office, NSF developed a *Facilities Management and Oversight Plan* (Plan) last fall.¹¹

As part of its implementation, the Plan calls for significantly upgrading the current procedures and guidelines for oversight and management of large facility projects. The implementation has been slower than originally anticipated, and recruitment of a new Deputy Director for Large Facility Projects is now expected to be completed this summer. However, despite the delay, I am encouraged by recent progress. Last month, members of the team charged with drafting the new guidelines and procedures briefed my office on their progress, and I am pleased to see NSF is on track for full implementation later this year.

To assist NSF in carrying out this plan, we have identified additional ways that NSF can enhance its policies and procedures to provide a more robust facilities management system.

During our audit of the Major Research Equipment (MRE) appropriation account, which was requested by this Subcommittee, we found several areas that NSF needs to address to continue improving its management and oversight for large projects and facilities. My office issued a report responding to your request earlier this month.¹² We found that questionable practices discovered during our audit of the Gemini project¹³ have occurred in other MRE-funded projects as well. NSF's existing policies and procedures have led the Agency to apply funding sources inconsistently among these projects and fail to account for each project's total cost.

As a result of these findings, we have recommended that NSF revise its financial management policies and procedures to ensure that it identifies the full cost of major research equipment and facilities and improves its administration of MRE accounts.

⁹ 2001 Management Challenges and 2000 Management Challenges, *supra* note 1.

¹⁰ EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES, A BLUEPRINT FOR NEW BEGINNINGS: A RESPONSIBLE BUDGET FOR AMERICA'S PRIORITIES 161 (Feb. 2001).

¹¹ NATIONAL SCIENCE FOUNDATION, LARGE FACILITY PROJECTS MANAGEMENT & OVERSIGHT PLAN NSB-01-153 (Sept. 2001).

¹² OFFICE OF INSPECTOR GENERAL, NATIONAL SCIENCE FOUNDATION, AUDIT OF FUNDING FOR MAJOR RESEARCH EQUIPMENT AND FACILITIES, Report No. 02-2007 (May 1, 2002).

¹³ OFFICE OF INSPECTOR GENERAL, NATIONAL SCIENCE FOUNDATION, AUDIT OF THE FINANCIAL MANAGEMENT OF THE GEMINI PROJECT, Report No. 01-2001 (Dec. 15, 2000).

NSF should be able to incorporate these improvements into its current efforts to implement the large facilities Plan.

Finally, the MRE account provides funding for two distinctly different types of projects: those that invest in state-of-the-art, scientific tools for research and the development of new knowledge and ideas; and those that support the investment in mission critical property, plant, and equipment (PP&E) owned by NSF. The latter provide the facilities and logistical means for a broad range of science endeavors, primarily in NSF's Polar Programs. Both types of projects require effective management, i.e., planning, budgeting, construction oversight, and risk management, to ensure that these multimillion-dollar projects proceed on schedule, stay within budget, and perform as expected. Both also require full-cost accounting in accordance with Federal accounting standards.

But funding these types of projects from a single appropriation account creates a situation where the replacement, renovation, and upkeep of assets critical to the safety and health of researchers and their support personnel could potentially compete with new scientific tools for limited funding. In updating its large facilities policies and procedures, therefore, NSF should (1) plan and prioritize the mission critical PP&E projects separately from the development and construction of research tools and (2) distinguish their different funding sources, to avoid possible negative impact on the broad range of programs these assets support. More specific accounting will reduce confusion about how funds are being allocated, improve the accuracy of budget planning, and allow more effective monitoring of the use of funds.

I am pleased to see NSF addressing large facility management through the development of this Plan. As the guidelines and procedures are fully developed and implemented, my office will continue to assess this critical area and recommend further enhancements where necessary. We share the same goal – efficient and effective management of these large and complex projects – and I look forward to assisting NSF in realizing this goal.

Madam Chair, this concludes my statement. I would be happy to answer any questions you or other members of the subcommittee may have, or to elaborate on any of the issues that I have addressed today.

CONTACT INFORMATION

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