

OIG Management Activities

Management Challenges

As required by law, the OIG submitted its annual statement summarizing what the office considers to be the most serious management and performance challenges facing NSF. To be considered for the challenges list, an activity must fall under at least two of the following criteria established by our office: 1) inherent risk (i.e., high potential for fraud, waste, or abuse); 2) activity critical to NSF's mission; 3) presence of known problems; 4) potential obstacle to achieving the President's Management Agenda. The most serious NSF management challenges identified by the OIG include:

Workforce Planning and Training. The strategic management of human capital is recognized as an important priority throughout government and is an important element of the President's Management Agenda. NSF is vulnerable to a wave of retirements in key areas as 63 percent of the agency's executive workforce, as well as a large percentage of the science and engineering staff, are eligible to retire within five years. Meanwhile NSF's budget for salaries and expenses continues to lag behind the growth of the agency's overall program budget. NSF's Management Controls Committee evaluated this issue as a medium risk that could worsen in the not-too-distant future. As part of the OIG's FY 2002 appropriations bill, Congress requested that our office analyze the adequacy of the agency's staffing and management plan. An interim analysis will be submitted early in April, and our final report is due in the summer of 2002.

Management of Large Infrastructure Projects. In response to an OIG audit report, as well as concerns expressed by Congress and OMB, NSF began updating its policies and procedures during 2001 to strengthen the management and oversight of large facility projects. As part of this process, NSF developed a *Large Facility Projects Management and Oversight Plan*. While we believe the plan is an important first step in ensuring that NSF's large facility projects provide appropriate stewardship over public funds, it constitutes only a broad outline of NSF's intentions. More-detailed guidelines are required in order for corrective action to be effective.

HIGHLIGHTS

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Award Administration. While NSF has demonstrated its efficiency in making awards, we believe that the agency should improve post-award monitoring by establishing written policies and procedures to ensure financial and administrative compliance. In the course of performing financial and compliance audits on a variety of awardees, we have found that some are at greater risk for compliance problems than others. Since NSF staff resources are limited, factors such as award size, type of entity, and amount of experience with Federal grants should be considered when determining which awardees should be accorded greater oversight. NSF's Division of Grants and Agreements (DGA) is developing a risk-management approach to post-award monitoring activities.

Cost Sharing. Cost sharing leverages the government's investment in basic research by obtaining contributions from grantees and others. In FY 2000 NSF made 3,111 awards that required cost sharing amounting to \$508,516,513. Our audits of awardees continue to reveal problems with cost sharing that include shortfalls in contributions, instances of missing or insufficient documentation, and systems that are inadequate to ensure their proper accounting.

Given the large amount of these commitments, the failure to honor cost sharing obligations or to keep proper accounts can have serious consequences for NSF's awards. If promised cost sharing is not realized, either the programmatic objectives are not met or the project is not funded as originally projected. In either case, NSF has paid a larger share than what was agreed to and opportunities for the agency to fund other awards are curtailed. We believe that NSF should re-examine its policies on the reporting of cost sharing and resolving of any questioned amounts to better ensure compliance with Federal guidelines.

Data Security. NSF faces the challenging task of facilitating an open research culture while protecting its critical information assets against unauthorized intrusion. Our review of NSF's information security program indicates that there may be weaknesses that increase security risks. NSF has concurred with our recommendations and has initiated corrective action.

GPRA Data Quality. The President's Management Agenda outlines plans to formally link performance review with budget decisions beginning in FY 2003, complementing the objectives of the Government Performance and Results Act (GPRA). While NSF is making steady progress in complying with GPRA, the agency needs to evaluate and improve both its formulation of GPRA measures and its verification of data in order to facilitate the integration of budget and performance information. In a report issued in June 2001, GAO found that some strategies were vague and failed to identify specific steps for achieving their goal.

In addition, we believe that the validity of NSF's GPRA data and outcome measures has not been firmly established. In order to address these concerns, which

were raised by GAO in a report on NSF's FY1999 Performance Report, the agency retained a contractor to verify and validate selected GPRA performance data, including outcome measures. These measures are based on the reports of various external expert panels including the Committees of Visitors (COVs) and Advisory Committees (ACs), which conduct evaluations of program activities. Although the contractor concluded that NSF's processes were adequate, we found that the contractor did not assess the process used by the committees to make their determinations, nor did it evaluate the underlying data used by the committees in making their judgments. Our office is planning to conduct a review of the COV process during the current fiscal year.

Cost Accounting Systems. At present, NSF's information systems do not readily provide the basic cost accounting information needed to effectively manage and report on agency operations, such as the cost of NSF's various grantmaking activities (e.g., proposal processing, peer review, post-award administration) or large infrastructure projects. NSF's ability to measure agency performance, link its costs to its results, and fully implement GPRA, is dependent on an effective financial and cost accounting system. Therefore, NSF should modify its accounting systems so they can capture total costs and readily supply total cost information useful to NSF management, the National Science Board, and Congress.

Management of U.S. Antarctic Program. The successful operation of the USAP requires unique management and administrative skills that are responsive to the special needs of Antarctic scientific research. Staff must not only know the science, but must also manage contractors engaged in delivering a broad range of services to the American scientific community located in a difficult and dangerous environment. Our audit work has focused on reviewing these support activities because of their many inherent risks. For example, we are currently reviewing USAP's safety and health program, regarded as a high-risk activity because of the difficulties of delivering medical services in such a remote location. Another challenge for the program is the tracking and accounting for items associated with the USAP's large and distant infrastructure, which includes equipment, planes, ships and buildings. Capturing the correct information requires close coordination among OPP, its contractors, and NSF financial staff.

Merit Review and its Role in Fostering Diversity. The effectiveness and integrity of the merit review system may be NSF's most valuable asset. During the past year the National Academy of Public Administration released a report on the agency's criteria for project selection, focusing in particular on the impact of Criterion 2, which is aimed at evaluating "broader impacts" of proposed projects, including potential societal effects. NAPA stated that NSF needed to develop clearer objectives for the new criterion, adopt quantitative measures and performance indicators to track those objectives, and conduct broader-based panel reviews with participants drawn from a wider range of institutions, disciplines, and underrepresented minorities. NSF has initiated several changes to the merit review process in the past year to

ensure that more attention is paid to Criterion 2, and we understand that further changes are being considered. NSF also states that it is adding new GPRA measures to track progress in encouraging participation in the merit review process by a broader range of institutions and underrepresented researchers.

The Math and Science Partnership Program. NSF has been designated the lead agency on a key element of the President's initiative, *No Child Left Behind*, aimed at strengthening and reforming K-12 education. The partnerships will provide \$160 million this year for state and local school districts to join with colleges and universities to improve math and science education at the pre K-12 level. Implementation of the program will pose several challenges to NSF. On a practical level, it requires NSF to articulate expectations clearly at the outset and make many awards within a short time frame; provide extensive coaching of projects in their formative stage to ensure that awardees do effective project planning; and assist project partners in building a shared sense of purpose and coordinating efforts. Therefore, the involvement of NSF on a continuing basis is essential.

Legislative Review

The Inspector General Act of 1978, as amended, mandates that our office monitor and review legislative and regulatory proposals for their impact on OIG and 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, the National Science Board and NSF management informed of problems and monitor legal issues that have a broad effect on the Inspector General community.

During this reporting period we paid particular attention to items that we believe may affect NSF's ability to meet the President's Management Agenda and the agency's management challenges identified by the OIG. We also focused on items that we believe have an impact on the IG community's efforts to assist agencies in meeting their management goals. Of the 16 bills, 1 Regulation, and 2 court cases we reviewed, the following items merit discussion in this section:

H.R. 3338 – Homestake Mine Conveyance Act of 2001

This legislation was enacted as law on January 10, 2002. The Homestake Mine was selected by the National Underground Science Laboratory Committee, an independent panel of distinguished scientists, as the preferred site for the construction of the National Underground Science laboratory. The laboratory would be used to conduct important scientific research.

The Mine's owner was unwilling to donate, and the State of South Dakota was unwilling to accept, the property at the Mine for the laboratory if the owners and the State of South Dakota would continue to have potential liability with respect to the transferred property. This legislation, which is contingent on the approval by the National Science Board and the making of an award by NSF for the establishment of the laboratory at the Mine, provides that the Federal government will assume a portion of any potential future liability.

H.R. 3338 and the NSF management challenge cited above as "Management of Large Infrastructure Projects" are related. The management challenge concerns the liability exposure associated with the Homestake Mine and whether NSF would be provided the necessary resources to properly manage this large project, assuming an award is ultimately made.

H.R. 3844 – Federal Information Security Management Act of 2002

H.R. 3844 was designed to strengthen Federal Government information security, including establishing the requirement for the development of mandatory information security risk management standards. The bill, if enacted, will require each Federal agency to develop, document, and implement a agency-wide information security program that supports the operations and assets of the agency. This includes procedures for detecting, reporting, and responding to security incidents, and notifying and consulting with appropriate law enforcement agencies and Offices of Inspectors General.

The Act also requires that each Inspector General appointed under the Inspector General Act of 1978 perform an annual IT security evaluation or arrange for an independent external auditor to perform it. The Act provides that in those agencies that do not have an Inspector General appointed under the 1978 Act, the head of the agency shall engage an independent external auditor to perform the evaluation. The legislation requires that the results of this evaluation be submitted to the agency head no later than March 1, each year, starting in 2003.

In light of the fact that H.R. 3844 specifically states that the evaluation provision applies to Inspectors General appointed under the Inspector General Act of 1978, this provision, in its current form, appears not to apply to "Designated Federal Entity" (DFE) Inspectors General offices. By omitting the phrase "as amended," this legislation appears to exclude the 28 DFE agencies, including NSF, added to the Inspector General Act in 1988. In these cases, the head of each agency may be responsible for engaging an independent auditor to perform the evaluation described above, rather than the OIG.

Recently, our office raised the above issue with the Congressional sponsor of H.R. 3844's legislative staff. We were informed that the intent of Congress is to

include both “establishment” and “DFE” agencies under the agency evaluation provision contained in H.R. 3844. The legislative staff agreed with our office that the bill, as presently constructed, appears ambiguous. We were advised that to eliminate any potential ambiguity, the legislation will be amended to incorporate the words “as amended”, in accordance with our recommendation.

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

A legislative priority that we support is amending PFCRA under the Act’s enforcement provisions. We have raised this issue in several prior semiannual reports.

PFCRA sets forth administrative procedures that address allegations of program fraud when the claims are less than \$150,000. Currently, the executive departments, military departments, and “establishments” as defined under the Inspector General Act of 1978, are the only agencies permitted to proceed under PFCRA. NSF and other DFE agencies with Inspectors General appointed by agency heads are not included.

We believe that the enforcement provisions of PFCRA would increase NSF and other DFE agency recoveries in instances of fraud that fall below PFCRA’s jurisdictional threshold of \$150,000. For example, if the Department of Justice declines to prosecute these cases under the False Claims Act, NSF would be able to use PFCRA’s administrative procedures to recover double damages and monetary penalties, when applicable, as an alternative. In short, including NSF and other DFE agencies under PFCRA will support the OIG community’s statutory mission to deter fraud, waste and abuse.

We ask that Congress consider amending PFCRA to allow agencies with Inspectors General appointed under the Inspector General Act of 1978, as amended, to use PFCRA’s administrative procedures to recover double damages and monetary penalties provided for under the Act.

Outreach / Prevention Activities

We began this period with an office-wide retreat to discuss strategies for meeting the goals identified in our Outreach plan (September 2001 Semiannual Report, p. 49):

1. Ensure the integrity of financial, administrative, and research systems;
2. Detect fraud, waste, abuse, and research misconduct;

3. Obtain and maintain current knowledge about the communities we serve so as to focus on matters of substantive concern;
4. Make it easy for the communities we serve to contact and interact with us.

At the retreat, we agreed to combine our efforts more with those of NSF, and to focus on activities that reach a broader audience than just a single university. We determined that our primary audiences should be NSF program officers, other NSF employees, awardee sponsored research offices, and professional societies. We also identified a need for internal activities designed to improve our knowledge of NSF programs and operations.

Opening Our Doors to NSF

OIG Open House. Our second annual OIG Open House, held in February, was an opportunity to talk with NSF employees in an informal and congenial atmosphere. The home-cooked food vanished rapidly as we were joined by a large number of NSF program officers, staff, and senior managers. We provided attendees with copies of new outreach materials and brochures and sought their advice on a conflict of interest poster we developed to facilitate our outreach efforts.

The Open House also helped to revitalize our liaison program, in which OIG staff are assigned to serve as liaisons to NSF directorates. These activities facilitate open and frequent communication between the OIG and agency units and increase our understanding of agency programs and operations. Our liaisons serve as points of contact for NSF staff to discuss allegations or concerns and to seek feedback on OIG semi-annual reports and the audit plan.

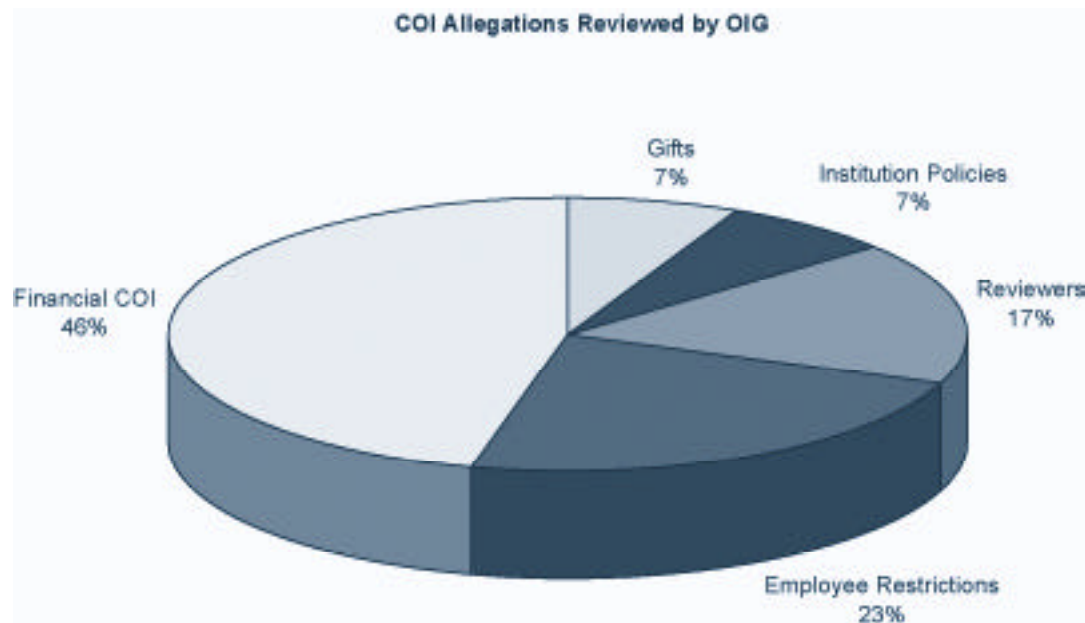


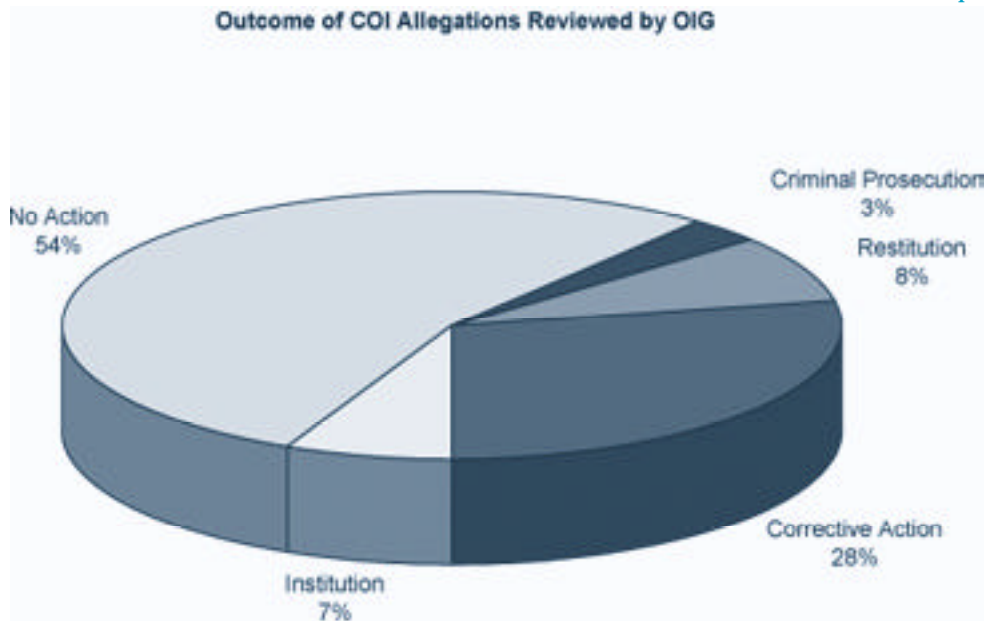
Gloria vanKan (right) meets and greets NSF colleagues.

Educational Materials. We continue to develop and improve the handout materials we provide about our office and its activities. In this period, we developed two new brochures. The first informs NSF staff of the requirement to bring to our attention any evidence or allegations of misconduct, research misconduct, accounting irregularities, fraud, waste, abuse or corruption involving NSF staff, programs or operations. The brochure explains the requirement that NSF awardees report substantial management problems and describes our methods for handling allegations and ensuring confidentiality. The second brochure alerts NSF employees, awardee institutions and PIs to the seriousness of conflict of interest allegations, how they should be handled, and the consequences of failing to resolve such situations in a timely manner.

Conflict of Interest Issues

The increasing awareness within the bio-medical community of conflict of interest issues prompted us to review past conflict of interest cases for significant trends. Our analysis of the cases investigated from 1998-2001 showed that approximately 7 percent of all closed cases relate to COI and contain either allegations of financial COI, violations of employee restrictions, undeclared reviewer conflicts, or failures in institution policies. In resolving these cases, we found that 28 percent required corrective actions, 8 percent produced some form of restitution, and 3 percent resulted in criminal prosecutions. 54 percent ended in no action by our office because the allegation was found to be groundless, or a disclosure was made that resolved the issue. The following charts display the results of our review:





We believe that conflict of interest is an area in which increased outreach and education can help prevent future improprieties from occurring. Toward that goal, OIG and the Office of General Counsel prepared a conflict-of-interest poster that we plan to use in outreach presentations to enhance our educational efforts about institutional and personal conflict of interest.

Presentations at Conferences

During this period, we participated in several professional society meetings and other types of outreach activities. Many were conducted jointly with NSF staff. Among these activities were meetings at Small Business Innovation Research (SBIR) conferences, the Society of Ethics across the Curriculum, the conference of Southern Graduate Schools, Association of Medical and Graduate Departments of Biochemistry, and the American Association for the Advancement of Science. Through these meetings we were able to:

- learn about the latest trends in science.
- educate attendees about the function of an IG's office.
- describe the investigative process, present statistics on case resolution, and discuss compliance issues and techniques through our participation on panels and workshops.
- inform the community about assessing "intent" in research misconduct cases
- communicate the status of the OSTP Research Misconduct policy and specific agency implementation plans.
- facilitate contacts between agency and OIG staff and attendees.

We continue to respond to invitations from individual colleges and universities, but encourage the inclusion of other institutions. Our presentation at Georgia Tech included attendees from Emory and several local Historically Black Colleges. At the

University of Colorado, where we presented on research misconduct and compliance issues, our session was teleconferenced to Colorado State University. We also gave presentations to students and/or faculty at the University of Delaware, the University of Maryland, and Georgetown University.

In our capacity as a leader on the subject of research misconduct (see p. 35), we also participated in panel discussions with other government agency representatives at the October meeting of Society for Research Administrators in Vancouver, British Columbia. The panels focused on policy implementation, compliance issues, and quality procedures for inquiries and investigations, with an emphasis on best practices for compliance with Federal regulations. The IG's presentation on Federal compliance was so well attended, that a second impromptu presentation was scheduled the next morning to meet the demand for this information.

External Requests for OIG Comments

During the last six months, the OIG responded to several inquiries and requests from other Federal organizations, including the General Accounting Office (GAO), Office of Management and Budget (OMB), and President's Council on Integrity and Efficiency (PCIE):

- In October, NSF and the OIG responded to a GAO A-133 survey to obtain information about how the 24 Federal agencies subject to the Chief Financial Officers Act are using audit reports prepared under the Single Audit Act. We expressed our opinion that for NSF, the value of the A-133 audits are diminished because awards from smaller agencies are frequently not selected for testing in the audit process.
- In January, the OIG responded to a PCIE request for comments on the draft Orange Book, delineates the responsibilities of the cognizant and oversight agency for audit.
- Our office provided comments to OMB on the draft *2002 OMB Circular A-133 Compliance Supplement*. The guidance is used by A-133 auditors in identifying compliance requirements that should be tested for A-133 audits.

Cooperative Work

We continue to assist other Federal agencies in the implementation of various government-wide programs:

- *The President's Management Agenda* discusses a governmentwide initiative for improving financial performance and establishing a baseline of erroneous

payments to serve as a benchmark for monitoring progress. The OIG is participating in a joint working group of members of the PCIE and Chief Financial Officer Council to address improper and erroneous payments. The work group will develop and benchmark methods to reduce improper payments made by Federal government agencies.

- We met with representatives from the U.S. Department of Commerce OIG to share our experience in contracting external audits to independent accounting firms.
- We provided information to the U.S. Treasury Department OIG about how we review and track audit resolutions for OMB A-133 audit reports.



Distinguished OIG retirees Helen Norris and Roy Jones pose with Carol Taylor, Investigative Specialist.