

Audits & Reviews

We are responsible for auditing grants, contracts, and cooperative agreements funded by NSF, and for reviewing agency operations to ensure that they are conducted effectively and efficiently. Many factors are used to determine what to audit or review, including requests by Congress, National Science Board members, NSF managers, and other government officials. In choosing our audits, we also consider NSF strategic goals and management challenges, award recipient's prior experience in managing Federal awards, and priorities set by Federal financial regulatory bodies and the OIG. We focus our audits and reviews on areas that present the most management and financial risk to NSF in accomplishing its scientific research and education goals effectively and efficiently.

Our financial and compliance audits of award recipients determine (1) whether costs claimed by these recipients are allowable, reasonable, and allocable to NSF's awards, and (2) if awardees had adequate procedures and controls to ensure compliance with Federal laws and regulations, NSF requirements, and the terms and conditions of the award. Performance audits and reviews evaluate the effectiveness and the efficiency of the administrative and programmatic aspects of NSF and awardee operations. In addition, by law we conduct the annual audit of NSF's fiscal year financial statements, including evaluations of internal controls and data processing systems.

Significant Reports

Financial Statement Audit & Review of Information Systems

Improving financial management and information security has been an important priority of the Federal Government for many years. *The President's Management Agenda* identified improved financial management as one of five government-wide initiatives the new administration would emphasize. The President's goal is to ensure that Federal financial management systems produce accurate and timely information to support operating, budget, and policy decisions.

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Audit Terms Defined

There are three levels at which deficiencies in internal controls identified during the financial statement audit of federal agencies are reported. The more significant findings (material weaknesses and reportable conditions) are reported by the auditor in the "Report on Internal Control" that is included in the Auditor's Report included in the Accountability Report. Findings not deemed to be as significant are reported to management in a Management Letter.

Material Weakness

is a type of reportable condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements of material amounts may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions.

Reportable Condition

a matter that in the auditor's judgement, represents a significant deficiency in the design or operation of internal control, that could adversely affect the organization's ability to record, process, summarize and report financial data consistent with assertions by management in the financial statements. (From OMB Bulletin 01-01 Audits of Federal Financial Statements)

Management Letter Comment

a finding or recommendation for improvement in internal controls and other management issues, identified during the audit, that does not reach the level of severity warranting a determination of reportable condition or material weakness by the auditors.

Since 1990, Congress has enacted several laws designed to improve Federal financial management and information systems security. The Chief Financial Officer's Act of 1990 (CFO Act), as amended, requires that Federal agencies prepare financial statements and the agency's OIG, or an independent public accounting firm selected by the OIG, audit these statements annually. The Government Information Security Reform Act (GISRA), enacted in October 2000, requires agencies to perform annual reviews and report on their information system security programs. In addition, Inspectors General are to provide independent evaluations of the information security program and practices of their agencies. We contracted with the auditing firm KPMG to perform these reviews.

During this semiannual period OIG issued the Fiscal Year 2001 Independent Auditor's Report which also reports the results of the information security review. NSF received its fourth consecutive unqualified opinion on the financial statements. However, in its Report on Internal Controls over Financial Reporting, the auditors identified two reportable conditions relating to (1) post-award grant and asset management, and (2) electronic data information systems. Award administration and data security were both identified as management and performance challenges in the Inspector General's January 30, 2002 letter to the Chair of the National Science Board and the Director of the National Science Foundation.

The audit revealed that although NSF has an adequate system of award management over its pre-award and award phases, the agency does not have a comprehensive risk-based internal grants management program to monitor its post-award phase. As a result, awardees' use of Federal funds may not be consistent with the financial, research or education objectives of the grant and leave resources unprotected from waste, fraud, and mismanagement. Federal agencies are required to develop and execute management strategies that ensure programs and operations account for results.

NSF grantee expenditures represent approximately 90 percent of total NSF expenditures for the year. Audits of these

expenditures continue to identify material instances of awardee non-compliance with Federal regulations and grant terms and conditions and material internal control weaknesses. Examples include: missing or insufficient documentation for costs claimed on the awards; inadequate accounting systems which do not properly record timekeeping, indirect costs, and cost-sharing; and inadequate monitoring of labor effort and subawards.

The audit report recommends that NSF improve its post-award monitoring by establishing written policies and procedures to ensure awardees' compliance with award terms and conditions. A comprehensive risk based internal grants management program would result in more in-depth reviews by NSF of both the administrative and financial management practices of an institution, and its compliance with Federal and NSF grant requirements.

The finding also discusses the need for improved monitoring and reporting of at least \$200 million of assets owned by NSF but held by awardees. In most cases the title to an asset purchased with grant funds transfers to the grantee, however in some cases NSF retains ownership of the asset. Where NSF retains title to the equipment, OMB Circular A-110 Section 33 requires grantees submit an annual inventory listing NSF-owned property in their custody. Although some procedures are in place to monitor these assets, there is no process within NSF either to check the accuracy of the inventories submitted by grantees or to assess the condition of these assets.

Inadequate tracking of NSF assets could result in potential loss, misuse, or theft, as well as misstatement of their value on NSF's financial records. Consequently the audit report recommends that NSF (1) develop procedures to ensure that all grantees report information on NSF-owned assets in their custody, (2) establish internal procedures for an annual review of the asset inventory listings submitted by grantees for accuracy and reasonableness, and (3) develop procedures to periodically confirm the existence and condition of these assets.

The audit also revealed certain vulnerabilities in NSF's electronic data information systems that increase the risk of loss, misuse, and unauthorized modification of information or disruption of essential services, accidentally or intentionally, by external or internal parties. These vulnerabilities may adversely affect NSF's ability to produce accurate data for decision-making and financial reporting, because they compromise the reliability and availability of data recorded in or transmitted by NSF's electronic data information systems.

Because of these vulnerabilities, the auditors determined that NSF was not in compliance with Federal financial management system requirements identified in the Federal Financial Management Improvement Act of 1996 (FFMIA) and OMB Circular A-130, *Management of Federal Information Resources*. The audit report recommends specific steps to improve access controls and NSF's intrusion detection

capabilities in order to address these information security vulnerabilities and ensure NSF's future compliance with this Act.

NSF management agreed to most of the auditors' recommendations with respect to post-award grant administration, asset management, and electronic data information systems. However, they disagreed with the categorization of the findings as reportable conditions and the non-compliance with laws and regulations. In the next semiannual reporting period, we will issue our FY 2001 management letter, which will address other matters involving NSF internal controls over financial reporting and award management. It will also identify any outstanding recommendations from the FY 2000 management letter.

Financial Management of Major Research Equipment Projects

Providing effective management and oversight of large infrastructure projects remains an important management challenge, as NSF has spent over \$600 million for major research equipment and facilities projects in FY 2001 alone. In prior reporting periods, our audits identified needed improvements in NSF's policies and procedures for overseeing large facility projects. In response to concerns raised by Congress, we have continued our audit work in this area during the current reporting period and are tracking corrective actions taken by the agency to address this issue.



Wayne Van Citters, Director, Division of Astronomical Sciences, escorts Tom Cooley, CFO, the Inspector General and other colleagues through an NSF infrastructure project.

New audit report issued. In an audit of a large facility project completed during this period, we reported that difficulties in managing its instrument development program resulted in the delay of delivery of sophisticated instruments critical to the project for at least two years. These difficulties affected the project's operations in several ways. First, the delay made it necessary for the project to borrow less-advanced "visitor" instruments to begin operations on schedule. But without the instruments

in the original plan, the full commissioning of the project was delayed, the project's efficiency rate was reduced, and the project may not be as competitive as hoped. Additionally, the delay cost the project \$4.2 million in unplanned expenditures: \$3.6 million for "restarting" instrumentation, and \$600,000 to adapt and redesign visitor instruments. Project managers developed a new management plan for the project that should help ensure that future instruments are delivered on time and within budget.

Audit in progress. In an audit currently underway, we are assessing the financial management and controls over several large facilities projects. The audit was requested by the Senate Subcommittee on VA, HUD and Independent Agencies of the Senate Appropriations Committee, who asked that we determine if NSF is solely using its Major Research Equipment appropriation to fund construction and acquisition costs for major research equipment and facilities. We have identified several issues regarding needed improvements in NSF's financial policies and management for these projects and provided NSF management with a discussion draft report to facilitate the management comment process on our findings and recommendations. We plan to issue this audit in May, 2002.

Status of NSF's New Project Management Policies. In the March 2001 Semiannual Report (pp. 6-7), we reported on our audit of the financial management of a large facility project. In that report, we recommended several actions to help NSF improve its large capital project administration, and to resolve financial issues related to the specific project we reviewed. As of the end of this reporting period, five of seven recommendations still have actions in progress. Completed actions include addressing the project's budget approval issues and issuing interim project management guidelines. Pending actions include creating and filling a new position that will report to the Chief Financial Officer, with responsibilities for developing and implementing guidelines and policies for managing and overseeing NSF's large facilities projects. They also include developing new facilities guidelines and manuals, and subsequently training NSF managers who are responsible for overseeing these large projects. At this time, the pending actions are not expected to be completed until the end of fiscal year 2002.

Cost Sharing

Issues related to cost sharing commitments comprise one of the top ten management challenges facing NSF. Recently we undertook two audit initiatives to gauge the extent of the problem. In our September 2000 Semiannual Report (pp. 9-10) and our March 2001 Semiannual Report (p. 8), we reported overvalued and unsupported cost sharing respectively at two campuses of a western state university system. The first initiative focused on five additional campuses within the university in order to determine whether cost-sharing problems were systemic. In our September

2001 Semiannual Report we reported on three of the audits at this system (pp. 23-25), and we now report on the last two.

The second cost-sharing audit initiative focused on eight geographically dispersed educational institutions that had promised \$500,000 or more of cost sharing. The sample included both large research universities with hundreds of NSF awards, and small colleges with only one award. We reported our progress on four audits in our September 2001 Semiannual Report (pp. 25-26); in this semiannual report we report on two more. In the next semiannual report we plan to present a summary of our two cost-sharing initiatives.

During this reporting period NSF management also resolved six audits involving cost sharing/industrial contributions, five of which were reported in our September 2001 Semiannual Report (pp. 23-28). For the sixth, we are both reporting on the audit and NSF management's resolution in this semiannual report.

The table below shows that of \$16.5 million of promised cost sharing promised by five educational institutions, \$1.5 million of claimed cost sharing was not supported in accordance with Federal cost principles:

Common Cost Sharing Problems

Awardee	Promised Cost Sharing \$	Questioned or At-Risk Cost Sharing \$	Inadequate Accounting For Cost-Sharing	Time And Effort Problem	Cost-Sharing Certification Problem	Audited Award (s) Not Reported In A-133 Audit
Western State University	7,478,961	417,887		X	X	X
South Central University	3,250,839	375			X	X
Northeastern University*	2,966,526	48,408	X	X	X	
Western State University	2,333,098	601,439	X	X	X	
Central U.S. College	515,500	461,740	X	X	X	
Total	16,544,924	1,529,849				

**This university commingled cost sharing with NSF costs, which contributed to an excess claim of \$48,408 of costs NSF reimbursed to the University.*

Questioned and Unsupported Costs. Federal guidelines state that cost sharing must be verifiable from the recipient's records, not included as contributions for any other Federally-assisted project, and necessary and reasonable for the accomplishment of project objectives. When audits question the allowability or underlying support of a recipient's claims for cost sharing, the recipient's ability to meet its cost-sharing obligation may be jeopardized. In these circumstances, either the intended scope of a project may be compromised or NSF may pay more than its share of the costs, thus reducing its opportunities to fund alternative projects. The most common reason for unallowable costs in the above audits was lack of documentation due to inadequate accounting for cost sharing and time-and-effort reporting problems.

Inadequate Accounting For Cost-Sharing. Federal requirements state that awardees shall have financial management systems that provide an accurate, current, and complete disclosure of the financial results of Federally-sponsored programs. In our reviews, we have found that many major institutions have determined that the most effective way to ensure compliance with Federal requirements and the integrity of claimed cost sharing is to establish a financial accounting system that can separately track the cost-sharing expenditures for each NSF award. However, three of the institutions in the above table did not have systems that could separately track cost sharing, and either a) commingled costs charged to NSF for reimbursement with costs the awardee contributed in the form of cost sharing or b) commingled cost-sharing expenses, reimbursable costs, and unrelated expenses in departmental accounts. As a result of both kinds of commingling, it was difficult to determine the cost-sharing amounts institutions contributed for individual NSF awards. Specific examples follow:

- A northeast university commingled reimbursable and cost shared expenses in one account, and did not identify cost sharing expenses when incurred, resulting in inaccurate cost-sharing records, frequent revisions, and a \$48,408 overcharge of direct costs to NSF. The university subsequently installed an accounting system that segregated the reimbursable portion of costs from those the university contributed as cost sharing. However, its new software did not correctly calculate cost sharing and overhead on subcontracts, and the university was trying to obtain modifications from the software vendor.
- A campus in the western state university system commingled cost-sharing expenses with other non-project costs in departmental accounts, did not know until the time of our audit whether it had met its cost-sharing obligations on 30 NSF awards, and had to reconstruct six years of cost-sharing data. We recommended that prior to making any new awards to this organization, NSF require the university to develop written policies and procedures to ensure that the cost sharing from all sources for each award is separately identified and that the campus implements adequate controls to track and document cost sharing.

- A college in the central U.S. also commingled NSF reimbursable charges, cost-sharing expenses for the NSF award, and other unrelated expenses in departmental accounts. We considered this lack of internal controls to be a material weakness, and we recommended that prior to making any new awards to the college, NSF ensure that the college has a system that complies with Federal requirements.

Time and Effort Reporting Problems. Federal guidelines state that recipients of Federal funds shall have payroll-distribution systems that verify, after-the-fact, the time that professors and professional staff spend on specific Federal awards. In most cases, labor costs are the single largest line item in an NSF award budget. Our audits this period found that four award recipients did not comply with Federal requirements for labor effort accounting and reporting, because of inexperience with or lack of understanding of the applicable cost principles. Payroll-distribution-system inadequacies reduce assurance that claimed labor costs are allocable to the NSF awards, and they can result in unallowable, questioned, or disallowed costs.

- A western state university foundation did not confirm faculty release time claimed as cost sharing on 10 of 28 NSF audited awards for up to six years after the fact. We recommended that NSF require the foundation to revise its policies and procedures to ensure that faculty release time is properly identified in the proposal and monitored throughout the award period.
- A second western state university campus also did not have an adequate system to track, document, or certify faculty release time, which constituted 22 percent of the total cost sharing contributed to 30 audited NSF awards; and it had to reconstruct and certify six years of records. Because of the questionable reliability of these records, we were unable to substantiate \$522,025 of faculty release time. We recommended that prior to making any new awards to the campus, NSF should require it to provide written policies and procedures that comply with Federal requirements for verification of faculty release time.
- At a northeastern university the official responsible for confirming after-the-fact time spent on the NSF audited award was not always required to complete the confirmation. We recommended that NSF work with the university's oversight agency to ensure compliance with applicable Federal cost principles.
- A small college in the central U.S. also did not have a system to certify time and effort, although we did not question costs, because the employees who worked on the grant worked on it exclusively. However, we considered the lack of a labor-distribution system that complies with Federal requirements a material internal control weakness because of the possibility that employees could have worked on other projects. We recommended that prior to making

another award to the college, NSF ensure that it has established a payroll-distribution system that complies with Federal after-the-fact certification requirements.

Cost-Sharing Certification Problems. NSF requires that in all cases where grantee cost-sharing commitments are \$500,000 or more, an Authorized Organizational Representative (AOR) report and certify the amount of cost sharing as part of the annual progress and final project reports. When award recipients do not comply with these certification requirements, NSF has less assurance that cost sharing is being met.

Of the audits reported in the above table, we found that two of the award recipients did not file any cost sharing certifications because they were unaware of NSF reporting requirements or did not have written policies and procedures requiring compliance. We recommended that NSF ensure that the award recipient establishes written policies and procedures requiring certification; or that the institution understands and complies with NSF's certification requirements.

In two other cases, the amount of cost sharing reported was inaccurate, and in a third case the cost-sharing certifications were not signed by an AOR:

- In the first instance of inaccurate cost-sharing reporting we recommended that NSF ensure that the western state university campus develop written policies and procedures requiring cost-sharing certification.
- In the second instance, we recommended that NSF ensure that a northeastern university certify only to actual cost sharing, not to actual, estimated, and obligated amounts in one sum.
- Finally, one western state university foundation submitted cost-sharing reports, but they were not signed by an employee at a management level sufficient to commit the foundation to the conduct of a project or to ensure its adherence to NSF's requirements. We recommended that NSF require the foundation to revise its policies to ensure that its AOR has sufficient authority, management position, and independence to certify the annual cost-sharing reports.

A-133 Audit Limitations. Federal guidelines require that non-Federal entities that expend \$300,000 or more in a year in Federal awards shall have a single audit (the A-133 Audit) performed by independent auditors, such as CPA firms or state auditors. Based on a review of the awardee-prepared Schedule of Federal Award Expenditures, the A-133 auditors decide which Federal programs to audit each year. Selection criteria include expenditure thresholds, risk analyses, and whether programs administered by the awardee are part of a "cluster," defined as a grouping of closely

related programs that share common compliance requirements. One of the clusters relevant to NSF is the Research and Development (R&D) cluster. Inclusion of smaller NSF R&D awards in this cluster increases the chance that NSF awards may be reviewed as part of the A-133 audit.

For the awards we audited, we wanted to determine whether the A-133 auditors had reviewed NSF awards, and in particular whether the audit reviewed for cost-sharing compliance. In one case, the university erroneously did not include eight NSF R&D awards in its R&D cluster; as a result, the awards were not reflected in the listing provided to the A-133 auditors. Therefore none of these awards were subject to testing under the A-133 audit. In another case, the awardee did not list the NSF grant on its Schedule of Federal Award Expenditures, and the A-133 auditors were not aware of it. When award recipients do not properly cluster or list NSF awards for A-133 auditors to review prior to their selection of audit samples, the awards are unlikely to be tested in the A-133 audit process.

Six Cost Sharing Audits Resolved. Four of the six audits that were resolved during this reporting period were of campuses in the western state university system, one was of a southwestern university in the geographically diverse audit initiative, and the last was a northeastern university that provided industrial contributions.

- We have reported above on the inadequate time and effort confirmation, the improperly signed cost-sharing certifications submitted to NSF, and the A-133 finding for one campus of a western state university, which received 28 NSF awards requiring \$7.5 million of cost sharing. During audit resolution, NSF found that the campus had implemented adequate policy and procedural changes to document and certify faculty release time, to ensure that a representative with sufficient authority signs the cost-sharing certifications to NSF, and to cluster R&D awards.
- At the second western state university campus, NSF funded 32 awards totaling \$11.3 million, requiring \$5.5 million in cost sharing. During audit resolution NSF sustained \$6,759 of questioned cost-sharing costs incurred after the expiration of four awards, for which the campus agreed to make repayment or adjust its NSF account. Regarding the findings that the campus had not certified its cost sharing, and that some NSF R&D awards were not included in the R&D cluster, NSF found that the campus' modifications of its cost-sharing tracking system and its agreement to cluster awards correctly satisfied our recommendations.
- The third western state university campus met its cost-sharing obligations on three awards for which NSF provided \$363,771, and the campus promised to provide \$112,141 of additional cost sharing. During audit resolution, NSF

found that the campus had satisfied two recommendations by agreeing to classify R&D awards properly, and to clarify in its policies and procedures that the university, not the principal investigator has primary responsibility for adherence to award conditions. Regarding our recommendation that the campus update its cost-sharing policies and procedures, NSF flagged the campus for review of its revised procedures before making another award to this university.

- At the fourth western state university campus, NSF provided \$1.3 million and required \$2.5 million on an award to develop a high-performance statewide computer network. We found \$1.2 million of the cost sharing was unallowable because the campus incurred \$1.1 million after the expiration date of the award, and could not provide time-and-effort reports to support \$131,915 in claimed faculty release time. During audit resolution, NSF received additional documentation for the faculty time and accepted the \$1.1 million of post-award cost sharing, which had indisputably been provided. NSF also determined that the campus adequately addressed our recommendation to establish written policies for financial management, subrecipient monitoring, and cost-sharing certifications.
- NSF resolved a cost-sharing audit of a western state university, which had received \$3.1 million for three awards and required \$1.9 of cost sharing. The agency (1) sustained \$96,764 of questioned costs relating to inadequate documentation, but offset them with other allowable cost-sharing the university provided during audit resolution; (2) determined that the university had adequately responded to our recommendation to maintain records for three years after final reports are filed; and (3) flagged the university in NSF's system to review its final changes in written policies and procedures for monitoring department-level cost sharing.
- During this reporting period NSF resolved our findings and recommendations for a northeast engineering research center (ERC) that overstated industry support. We did not question any costs, but recommended that NSF (1) require the university to develop policies and procedures to adequately account for and document in-kind contributions, (2) independently verify the accuracy of the ERC's annual report, and (3) ensure that all reported industrial members are members as defined by written membership agreements. NSF management determined that the university adequately responded to all three recommendations.

We also made recommendations to NSF for internal improvements in its management of ERCs overall. NSF submitted a corrective action plan that included increased scrutiny of ERC annual reports and interactive web-based training for Center

staffs. We determined that the plan satisfied most of our recommendations, but postponed final action until we can review NSF's proposed written protocol for the review of performance data.

Other Reports

During this semiannual period, we completed two contract audits that were requested by NSF's Division of Contracts, Policy and Oversight and one audit of two cooperative agreements that was considered "high risk" to determine whether costs claimed were reasonable, allocable, and allowable. We also reviewed findings related to NSF grants contained in numerous A-133 audit reports.

In general, we found that these awardees needed to strengthen internal controls and improve compliance with NSF award requirements and Federal regulations. Weaknesses were found in the areas of labor reporting, indirect costs, and subrecipient monitoring. In addition, we found a lack of adequate documentation, approvals, required audits, and compliance with funding restrictions and program income reporting requirements. These audits indicate the need for NSF to continue to 1) focus on post-award administration as a management challenge and 2) improve monitoring and oversight of its awards to ensure compliance with NSF award requirements and Federal regulations.

A summary of the results for these audits is provided below. All audit matters have been forwarded to NSF's Division of Contracts Policy, and Oversight for audit resolution.

Eastern Non-Profit Needs to Improve Controls and Compliance Procedures

We audited two NSF cooperative agreements issued to an eastern not-for-profit organization for \$104.6 million whose purpose is to promote and conduct geophysical investigations of the earth's interior and engage other organizations into exchanging information and knowledge in the earth sciences. We were unable to issue a clean opinion on the allowability of \$98.5 million in total claimed costs, because the organization did not:

- maintain records to support \$7.9 million in claimed costs for one full year under one NSF award;
- segregate and allocate direct and indirect costs properly as required by Federal cost principles; and
- maintain an adequate labor reporting system.

In addition, we also found that the organization did not: (1) have proper procedures in place to ensure adequate monitoring over \$48.3 million in funding provided to subrecipients; (2) account for program income properly or report this income to NSF as required; and (3) obtain NSF's prior approval for changes in its President's fringe benefit plan.

Subsequent to the audit, the organization reported to NSF that corrective actions had been taken to address our recommendation to (1) maintain documentation to support all claimed costs, (2) improve labor reporting procedures, and (3) revise accounting procedures to segregate and allocate direct and indirect costs as prescribed by Federal cost principles. The organization also stated that its new cooperative agreement with NSF does not consider the dues collected as program income. NSF's Office of Contract, Policy and Oversight will resolve all of these recommendations with the grantee.

Southern Consortium Claims \$313,978 Excessive Indirect Costs

NSF awarded a contract to a southern consortium to provide facilities and personnel for support and operation of the Graduate Research Fellowship Program. The contractor claimed costs and fees totaling \$12,406,857 under the contract. Our audit questioned \$313,978, or 20 percent, of the contractor's claimed indirect costs. We found that the contractor used provisional rates in the contract to bill NSF for indirect costs without adjusting its claim based on final indirect cost rates as required by Federal regulations and the contract agreement. We also found that the contractor failed to obtain audits for fiscal years 1993, 1994, 1999, and 2000, as required by OMB Circular A-133. We recommended that NSF direct the contractor to comply with the Federal audit requirements and to limit its claimed costs to just those that are allowed by contract terms and conditions. The contractor agreed with our finding for obtaining audits but disagreed with the amount of costs questioned.

Contractor Erroneously Uses Major Research Equipment Funds

To support its research work in Antarctica, NSF contracts with an outside company to provide the logistics, operations, engineering, and construction support for its United States Antarctic Program. In an audit of the former contractor, we found that the company had improperly used approximately \$11.9 million in Major Research Equipment (MRE) funds, restricted by NSF for capital construction expenditures, to pay for operations and contract closeout costs. The problem occurred because the contractor placed the MRE and operating funds in a single bank account, thereby losing its ability to observe the restriction on the MRE funds. NSF identified the problem during its contract closeout discussions.

To correct the error, the company returned to NSF \$15.4 million of MRE funds and other unspent funds remaining on the contract. Our audit subsequently found that the \$11.9 million the company spent for operations and contract closeout costs were valid and allowable costs under the contract. Based on this finding, NSF issued a contract modification to the company authorizing full NSF reimbursement to the company for these costs. To prevent future problems, we recommended that NSF direct the current contractor to maintain separate bank accounts for operations and MRE activity and develop procedures to ensure that funds are properly identified when withdrawn from NSF accounts. We also recommended that NSF establish internal control and oversight procedures to monitor contractor use of MRE and other types of funds obligated during the performance of the contract.

A-133 Related Reviews

OMB Circular A-133, issued pursuant to the Single Audit Act of 1984, as amended, sets forth standards for attaining consistency and uniformity among Federal agencies for the audit of state and local governments, educational institutions, and nonprofit organizations that receive Federal awards. Reports prepared by independent auditors in accordance with this circular are referred to as A-133 audits.

During this reporting period, we reviewed 90 A-133 audit reports with NSF expenditures totaling \$438 million dollars for fiscal years 1997 through 2001. The majority of reports were for fiscal years ending in 2000 or 2001. Of the 90 reports, 41 identified questioned costs, internal control weaknesses, and/or non-compliance with Federal laws and regulations. In two reports, the auditors questioned \$128,463 of NSF-funded costs related to possible fraudulent travel claims and improperly transferred labor and tuition costs.

Our office also examined 43 Management Letters, which report internal control weaknesses that are generally less significant than those reported in the A-133 report. These letters discussed issues related to the adequacy of grantees' financial management systems, policies and procedures, as well as business continuity plans, information technology security and other IT issues.

Corrective Action Prompted by Previous Audit Findings

NSF Grant Terms Enforced by Courts in Two Separate Cases

In two recent court decisions, grantees that sued NSF to avoid reimbursing the government for costs improperly claimed were ordered to repay the disputed amounts.

The Office of General Counsel, the OIG and the Office of Budget, Finance and Award Management worked closely with the Department of Justice in the successful litigation of these cases, thereby ensuring that the grantees fulfilled their obligations under the grant agreement.

Court Orders Payment by University of \$139,152 in Questioned Cost Sharing.

In our March 1999 Semiannual Report (pp. 24-25), we reported on an audit of a University Foundation that found that the auditee could support only \$218,382 of the \$527,240 of claimed cost sharing. In April 1999, NSF sustained the audit finding and requested the Foundation repay \$145,622 of excess NSF funding it had received. The Foundation appealed the agency's decision through the NSF appeal process, where the repayment amount was reduced to \$139,152. Soon after NSF's appeal decision was issued, the Foundation sued NSF in the U.S. District Court.

The Court affirmed NSF's decision that the Foundation had failed to comply with the terms of its NSF grant and the Foundation was directed to refund \$139,152 to NSF. The District Court's decision was appealed by the Foundation. In January of this year, the Court of Appeals affirmed in a per curium opinion the District Court's conclusions of law:

"Like the district court, we are unable to find support for the Foundation's argument ... [The statutory standard advocated by the Foundation] simply does not speak to the fact that the Foundation contractually agreed to share costs in the amount of \$583,507, an amount that represented just over half of the estimated costs of the project. Nor does the Foundation argue that it satisfied its obligation in that regard. As a result of the Foundation's breach of its obligation to share costs in the amount of \$583,507, the agency sought a partial refund of the money it provided to the Foundation so that the final amounts expended by each party approximated the party's pro rata share as reflected in the award letter. As we see it, NSF was well within its contractual rights to seek that relief ... when the award letter unequivocally stated that as a condition of receiving the grant, the Foundation had to "agree to share in the costs of the project." ... [W]e affirm the district court's order granting summary judgment to NSF."

NSF Wins 8 Year Old Case to Force Repayment of Unsupported Costs. An audit of a grantee performed over a decade ago finally resulted in a decision by the U.S. Court of Federal Claims that the grantee must repay nearly \$50,000 to the Federal government. During the audit of a research grant awarded to a for-profit company, we reviewed \$146,761 in claimed costs, and questioned \$112,065 for lack of support. After the company provided some additional documentation, NSF issued a final notice to the company to repay \$46,171. However, in December 1994, the company filed a breach of contract complaint against NSF in the Court of Federal

Claims, to which NSF filed a counterclaim. As a result of the court's decision in January 2002, the company must repay \$46,902 to the government.

NSF Implements Most Past CFO Audit Recommendations

The FY 2001 financial statement audit reviewed the status of all open recommendations from management letters of prior years. NSF management implemented corrective actions that resulted in closing twenty of the twenty-three findings that were reported in the FY 2000 Management Letter, leaving only three recommendations open. While two are considered relatively minor, the third concerns the property management system maintained by NSF's United States Antarctic Program, which does not have a fully defined, tested and implemented information security program. NSF management has indicated that they have developed milestones to address the auditor's recommendations.

Midwestern Contractor Agrees to Repay \$229,627

In our September 2001 Semiannual Report (p. 18), we reported on an audit of a midwestern for-profit contractor that received three contracts to conduct surveys of scientific and engineering research facilities for NSF's Division of Science Resources Studies. We questioned \$337,589 or approximately 10 percent of the \$3.3 million in claimed costs because the contractor could not support expenses included in the indirect cost pool. This caused the final indirect cost rates to be overstated. In addition, we found an instance of material noncompliance with Federal regulations and material deficiencies in the contractor's internal control structure. NSF sustained \$229,627 of costs questioned in the audit report. The contractor agreed to repay the full amount.

International Grantee Strengthens Controls Over NSF Funds

In the September 2001 Semiannual Report (pp.7-8), we reported on our audit of an international research institute that for several years has received annual grants from NSF to support its research programs. We found that the institute's financial controls and oversight, by both its own governing council and the U.S. member organization, were inadequate to effectively safeguard NSF funds which were invested in

Audit staff visit international research institute.



speculative stocks. We recommended that NSF suspend funding to the institute until it had significantly strengthened those controls and management oversight. According to NSF, the institute has made operational improvements which are responsive to the audit recommendations. Continued funding for the institute is currently under review.

Southern College Must Reimburse NSF for Overpayment of \$387,471

In our September 2001 Semiannual Report (pp. 10-11), we reported the results of our review of \$2.6 million of costs claimed by a southern state university that received three Directorate for Education and Human Resources awards. The awardee promised to contribute a total of over \$15 million in cost sharing on its three NSF awards. We questioned costs totaling \$387,471 of which \$363,560 related to overpayment by the awardee to its subcontractors on the NSF award. We also reported several instances of material non-compliance with NSF award and Federal regulations. In audit resolution, NSF sustained the entire amount of \$387,471. The awardee has already initiated corrective action to ensure compliance with NSF award and Federal regulations in the areas of effort reporting, cost sharing, subcontract approvals, and monitoring and meeting funding targets specified in NSF awards.

Work in Progress

The following are a list of projects currently being performed or supervised by members of our audit staff. Upon completion, the results will be reported in future semiannuals:

Workforce Planning Activities

The Senate Subcommittee on VA, HUD, and Independent Agencies requested that the OIG analyze the adequacy of the agency's staffing and management plans in light of the efforts to expand NSF over the next five years. Our review will determine (1) to what extent NSF conducts workforce planning activities, (2) whether the agency's process is consistent with guidance provided for government agencies, and (3) what actions NSF is taking to improve its workforce planning activities and prepare for possibly significant increases in its budget. The results will be reported in our next Semiannual.

Antarctic Safety and Health Program

An audit of the Antarctic Safety and Health Program was initiated in the fall of 2001. The audit was prompted by our assessment of this activity as high-risk due

mainly to the harshness and remoteness of the environment. The effectiveness of the program will be evaluated primarily by checking compliance with the safety and health policies of the contractor as well as those of NSF. In addition, an expert in the field of remote medicine has been retained to advise our staff on the appropriateness of the current policies.

Award Administration Best Practices

Assessing scientific progress and ensuring effective financial and administrative management are critical elements in managing NSF's grant programs. To assist NSF in its efforts to address this management challenge, we are conducting a best practices review during this reporting period. We are surveying 6 to 10 grant-making organizations, both Federal and private, to document their management and oversight policies and practices. From this information, we will suggest best practices for NSF to consider for improving its award administration practices.

Urban School District Reviews

One of the primary efforts of the Directorate for Education and Human Resources through its Division of Educational System Reform (ESR) is to manage large-scale programs designed to strengthen the science, mathematics, and technology education infrastructure of urban centers. In fiscal year 1999, ESR established its Urban Systemic Program (USP) in science, mathematics, and technology education through the merger of two of ESR's existing efforts: the Urban Systemic Initiative (USI) Program and the Comprehensive Partnerships for Science and Mathematics Achievement. Through this combined effort, NSF seeks to stimulate interest, increase participation, improve achievement, and accelerate career advancement and success of all students of the participating urban school districts. In August 2000, ESR had 24 active USP/USI awards ranging in value from \$1.2 million to \$15.1 million. The estimated total value of the 24 active awards was approximately \$248.9 million. The annual NSF funding of USP/USI awards ranged from \$400,000 to \$3,000,000, with the awards' duration limited to five years.

Prior OIG audits of USI awards disclosed significant questioned costs, compliance problems, and internal control weaknesses. Specifically, from our analysis of seven USI awards audited in fiscal years 1997 through 2000, we found that the audits identified significant questioned costs in the areas of salaries and fringe benefits, subawards, and other costs. In addition, we identified problems related to the awardees meeting their cost sharing requirements and other compliance and internal control problems in each of the audits.

We believe that the USP/USI program continues to pose administrative risks for NSF given the large dollar value of each award and the significance of the problems we identified in our past audits. Therefore, we have initiated audits of six USI/USP awards that represent \$58.3 million of the \$248.9 million (23 percent) active USP/USI awards in August 2000. The objectives of the audits are to determine whether USP/USI awardees (1) have adequate systems to safeguard NSF funds, (2) properly account for expenditures under the award agreements, and (3) are in compliance with NSF and Federal rules and regulations and the terms and conditions of the award documents.

Audits of Community College Awardees

Community colleges historically have received approximately \$30 million to \$40 million in NSF funding. During past surveys and audits of community colleges, we identified higher than average questioned costs charged to the awards and improvements needed to ensure compliance with NSF and Federal requirements and internal controls.

In fiscal year 2001, we initiated audits of 13 community college awardees that had received 75 NSF awards totaling \$44.8 million. These audits include 17 NSF awards for various programs totaling \$29.7 million with proposed cost sharing of \$15 million. The community colleges received NSF awards from various NSF programs. The purpose of the audits is to determine whether the community colleges have adequate systems to safeguard NSF funds, account for payments and expenditures under the awards properly, and comply with NSF policies and the terms and conditions of the NSF awards.