

Semiannual Report to the Congress



**Office of Inspector General
National Science Foundation**

September 1999

Letter to the Congress of the United States

The National Science Foundation (NSF) invests approximately \$4 billion annually in a portfolio of programs supporting scientific and engineering research and education at over 2000 institutions. NSF funds about 10,000 awards each year that are selected from 30,000 proposals. In my opinion, based on the work of my office, my knowledge of agency operations and my interactions with the National Science Board and NSF management, the overall NSF investment portfolio is healthy.

This Semiannual Report describes specific reviews we conducted in the areas of efficiency and integrity in the most recent six months. Highlights of our efficiency efforts include reviews involving Science and Technology Centers ([page 4](#)), logistics support concerning the United States Antarctic Program ([page 7](#)) and two Mathematical Sciences Research Institutes ([page 7](#)). In the integrity area, we recommended that NSF's Deputy Director issue misconduct findings in three cases involving data fraud, plagiarism and breach of confidential peer review ([page 17](#)). We also closed several significant cases without making misconduct findings ([page 22](#)).

One of NSF's key strategic goals is to integrate research and education, and NSF's current regulation on misconduct in science appropriately applies to misconduct associated with either research or education. Most recently, the Office of Science and Technology Policy (OSTP) issued for public comment a proposed government-wide policy on misconduct associated with research. We worked closely with OSTP and other federal agencies to develop and refine the proposed policy. Overall, we are pleased with the policy because all federal agencies that have a research portfolio must now develop a uniform process designed to reinforce the importance of integrity in the conduct of research. In our view, at the time this policy is finalized, NSF should adopt the final policy as its own and also then implement a mechanism to deal with misconduct in its education portfolio ([page 16](#)).

In the letter accompanying previous Semiannual Reports, I explained our belief that NSF is best served by having an Office of Inspector General tailored to its mission and culture, and we recommended against a legislative proposal that would consolidate our Office with another Office of Inspector General. Along with the issue of consolidation, legislative proposals have now been introduced for the purpose of

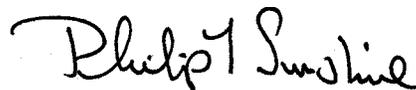




enhancing the independence of certain Offices of Inspectors General. One proposal would require that the President, rather than the National Science Board, appoint the NSF Inspector General, subject to confirmation by the Senate. When analyzing these proposals, it may be helpful to understand our current operating philosophy through which we develop partnerships with NSF management while meeting the standards for independence contemplated by the Inspector General Act ([page 1](#)).

This is the fourth and final Semiannual Report prepared under my leadership as Acting Inspector General; a new Inspector General will arrive in January 2000. This has been an invigorating time for our Office and for the Foundation. We developed and implemented the first strategic plan for our Office designed to ensure that we operate in a manner that is inclusive, innovative and flexible, and keeps issues in proportion; developed a meaningful outreach program to the agency and the community it serves; and focused our efficiency reviews on substantive efforts that add prospective value for NSF's programs. I do consider public service to be a privilege and greatly appreciate the opportunity I have had to serve as Acting Inspector General.

Sincerely,



Philip L. Sunshine
Acting Inspector General
November 18, 1999

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and Developing Partnerships**

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ACRONYMS

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|---------------|--|
| CFO | Chief Financial Officer |
| CIRT | Computer Incident Response Team |
| COI | Conflict of Interests |
| CPO | Division of Contracts, Policy, and Oversight |
| DOJ | Department of Justice |
| ERC | Engineering Research Center |
| GPRA | Government Performance and Results Act |
| HHS | Department of Health and Human Services |
| IG Act | Inspector General Act |
| ODP | Ocean Drilling Program |
| OHA | Office of Hearings and Appeals |
| OIA | Office Integrative Activities |
| OPP | Office of Polar Programs |
| OSTP | Office of Science and Technology Policy |
| SBA | Small Business Association |
| SBIR | Small Business Innovation Research |
| SBTT | Small Business Technology Transfer |
| SPSE | South Pole Safety and Environmental |
| SPSM | South Pole Station Modernization |
| STC | Science and Technology Center |
| STTR | Small Business Technology Transfer |
| USAP | U.S. Antarctic Program |

REPORTING REQUIREMENTS

Under the Inspector General Act, we report to the Congress every 6 months about what we have been doing. In particular, we must discuss:

| | |
|---|-----------------------------------|
| Reports issued, significant problems identified, the value of questioned costs and recommendations that funds be put to better use, and NSF's decision in response (or, if none, an explanation of why and a desired timetable for such a decision) | 3, 33 |
| Matters referred to prosecutors, and the resulting prosecutions and convictions | 15, 44 |
| With regard to previously reported recommendations: significant management decisions that were revised, and significant recommendations for which NSF has not completed its response | 42, 45 |
| Legislation and regulations that may affect the efficiency or integrity of NSF's programs | 16 |
| Whether we disagree with any significant decision by NSF management | None to Report This Period |
| Any matter in which the agency unreasonably refused to provide us with information or assistance | None to Report This Period |

Operating Independently and Developing Partnerships

The National Science Foundation is managed by a Director and a Deputy Director and the agency receives broad-policy guidance and oversight from the National Science Board (the Board). The Office of Inspector General is organizationally independent from management and is committed to maintaining the independence contemplated by the Inspector General Act (IG Act). As contemplated by the IG Act, the Board, through its Audit and Oversight Committee, serves as the general supervisor of the IG. The Board and our office are particularly careful to respect our different roles under the IG Act. In particular, the Board's Audit and Oversight Committee discusses overall policy with, and provides general guidance for our office, but the Board does not select, direct, or terminate any audits or investigations. This organizational independence from management allows our office to operate independently for the purpose of ensuring that our analyses are objective, our access to information is unfettered, and our sources of information remain confidential. We consider our organizational and operational independence to be sufficient to meet standards of independence that are required to issue audit opinions under Government Auditing Standards and to operate as an independent law enforcement office within the meaning of applicable legal precedent.

Our fundamental objective is to add value by identifying mechanisms that improve the efficiency and integrity of agency operations. To do so, we consider it essential to work cooperatively with NSF management and to focus on prospective change. For this reason, we are expending significant effort to nurture a culture that fosters open and constructive dialogue with NSF managers on issues relating to efficiency and integrity in NSF's portfolio of operations. As part of our long-range planning of office activities, we also continue to conduct risk assessments and brief surveys in order to prioritize our work, focusing on prospective, substantive issues.

In this period, we significantly expanded our outreach and liaison programs. Our liaisons meet regularly with NSF staff to discuss our activities and areas of mutual interest. Along with this informal exchange of information, our liaisons regularly brief NSF divisions about our mission and goals, and obtain perspectives from division staff about our activities. Since our initiation of the outreach and liaison program a year ago, we have met with most of the NSF divisions. Within our office, liaisons regularly share information with the rest of our staff to ensure that our entire office can learn and benefit from these individualized interactions.

In addition to building partnerships through the outreach and liaison program, we participate in a number of national and regional professional meetings to learn about high-priority issues and find better ways to promote awareness and understanding about our efficiency and integrity activities. For example, we were selected to participate in a best practices forum, during the Association of Government Accountants' annual meeting. Together with NSF's Chief Financial Officer, we described why we consider NSF's Audit Coordination

Committee to be an effective tool that can ensure that the auditing process is constructive. We now regularly participate in NSF's Regional Grant Conferences, and in this way, we exchange information with organizations that receive NSF funding. We participated in two panels, one on audit issues for the future and the other on allegations of research misconduct, at the annual conference of the Society for Research Administrators. Our office hosted a meeting of the Federal Scientific Misconduct Officials Network to discuss scientific misconduct and research integrity issues. We also worked closely with NSF and other federal officials in developing the final version of the recently released uniform Federal Research Misconduct Policy.

We continue to work with NSF committees that assess and respond to management issues. Accordingly, we participate in several task forces charged to develop and implement NSF's strategic and performance plans, evaluate certain aspects of NSF's personnel system, assess risks associated with the use of electronic signatures, coordinate electronic submission issues, and assess security issues. By invitation, we have participated in orientation programs for new program officers in two NSF directorates and we regularly participate in NSF-wide, new employee orientation programs, and in conflict of interests briefings for all employees.

We believe that our outreach efforts enable us to develop the best possible product that can more readily effect improvement on behalf of NSF. For the purpose of improving the timely and effective processing of misconduct cases, we now regularly visit university officials in connection with the deferral of investigations in specific cases. Our partnerships with these universities and the reports we now receive for specific cases have improved because of these conversations. Similarly, for the purpose of improving the quality and utility of our audit reports, we regularly share our audit plans with NSF program officials for comment and suggestions, and we provide NSF officials with the opportunity to request reviews of specific awardees. In this way, we are better able to undertake reviews that are more meaningful to NSF managers and have the greatest potential to generate improvements in the economy and efficiency of NSF operations. Ongoing dialogue with NSF management about our auditing program also serves to increase awareness and understanding about the importance of fiscal and management controls throughout the Foundation's portfolio.

This Semiannual Report highlights several reviews that arose, in part, through our outreach efforts and from requests for assistance from NSF management. These highlights include our review of NSF's Science and Technology Centers, NSF's Engineering Research Centers, and certain aspects of the U.S. Antarctic Program. These reviews are tangible evidence that our partnership activities are producing meaningful results. Through our outreach and liaison programs, we are developing practical ways to implement strategic goals that enable us to refine and strengthen the positive effect our work can have on the National Science Foundation and the communities it serves.

We review agency operations as well as grants, contracts, and cooperative agreements funded by NSF. We conduct financial audits to determine whether costs claimed by awardees are allowable, reasonable, and properly allocated. Our audits also seek to identify practices that may be modified so that funds can be used for other purposes that our customers consider more important. We are responsible for auditing NSF's financial statements, including evaluations of internal controls and data processing systems.

We conduct multidisciplinary reviews of financial, administrative, and programmatic operations to identify problems as well as highlight what works well. These reviews are designed to assist managers at NSF and funded organizations to improve operations and better achieve mutual research and education goals.

HIGHLIGHTS

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Efficiency

Reviews Involving Facilities and Research Centers

Science and Technology Centers Review

NSF developed the Science and Technology Center (STC) program to achieve objectives that are best pursued by large-scale, long-term efforts that bring together scientists with diverse skills. An inaugural competition held in 1989 established 11 centers, and 14 additional centers were established in 1991. During 1998 and 1999, NSF phased down funding for a number of the existing centers and held a competition that will result in the creation of five new centers representing a commitment of up to \$94 million over 5 years.

We worked closely with the office that administers NSF's STC program, the Office of Integrative Activities (OIA), to develop procedures for reviewing the STC program during this transition period. The OIA asked that we provide assistance in formulating terms and conditions of the cooperative agreements through which NSF will fund the newest STCs. We familiarized ourselves with how the STC program operates by reviewing various reports about the STC program, studying NSF STC proposal and award files, interviewing NSF personnel, and conducting site visits to two existing STCs.

Based on our observations and suggestions, OIA incorporated provisions into the draft cooperative agreements that will enable NSF to more effectively monitor the new STCs during their start-up period. For example, NSF will require prior notice before significant changes can be effected concerning lead personnel or the amount of funds designated for undergraduate, graduate, and postdoctoral student support. OIA also incorporated provisions to improve the effectiveness of the STCs' external advisory committees.

OIA plans to discuss some of our observations for strategies with the new STC directors that the STCs can use to develop cohesion, such as developing a strategic plan through center-wide participation; focusing on common products that require widespread involvement across institutional lines and budgeting for communication and travel. OIA also plans to convey these ideas to NSF staff members in research programs outside of OIA who have significant responsibility for monitoring the new STCs.

Review of Engineering Research Centers

Engineering Research Centers (ERC) involve long-term collaboration between industry and higher education to facilitate the transfer of advanced technology to the marketplace. NSF expects ERCs to generate support from industry and other stakeholders during the time they receive NSF support and to become self-sustaining by the end of the NSF award period.

In 1998, NSF established five new ERCs, which represent a potential commitment of over \$60 million over a 5-year period. Each ERC is scheduled to receive more than \$2 million annually in NSF support during the initial, 5-year award period, and during this time, the new ERCs are expected to generate over \$120 million in support from other sources.

We conducted an audit survey at each of the five new ERCs. Our objective was to examine each ERC's financial and administrative systems to identify areas that can be strengthened during the early stage of center operations. Because accurate records of financial support from industry are important for NSF monitoring of ERC success, we recommended a number of methods to improve record-keeping policies and procedures while reducing administrative burdens. We recommended that ERCs combine industrial membership fees into a single account, maintain reserve funds in a dedicated account, and report reserve fund balances to NSF. We also recommended that the ERCs improve internal controls by separating responsibilities for preparing and maintaining records from responsibilities for handling cash payments.

The ERCs found our input, at this early stage of their operations, to be helpful and agreed to implement most of our recommendations.

Review of Proposal Results in Reduced Indirect Cost Rates

In our [March 1999 Semiannual Report \(page 5\)](#), we reported that a university agreed to reduce by \$2.4 million its proposed budget for management of a large research facility. At that time certain issues concerning overhead and fringe benefits were outstanding. NSF referred those issues for resolution to the Department of Health and Human Services (HHS), the cognizant agency responsible for negotiating indirect-cost rates with the university. HHS agreed with our recommendations and negotiated a reduction to the university's indirect-cost rate for the facility that will apply for the next three fiscal years. Based on the negotiated indirect-cost rate, the university's award will be further reduced by \$1.2 million. These funds will be available to the NSF program to allocate for other purposes.

Polar Program Reviews

NSF's Office of Polar Programs (OPP) is responsible for managing the U.S. Antarctic Program (USAP). OPP staff members oversee all aspects of the USAP, including a military unit that provides flight operations and a contractor selected through a competitive process that provides support. The USAP has been in a state of active transition for the past 3 years. Responsibility for support operations in Christchurch, New Zealand, was transferred from the Navy to the support contractor. During the same period, responsibility for flight operations was transferred to the Air National Guard (Guard). Also, the Foundation has been engaged in a multi-year effort to modernize and improve safety and environmental conditions at the South

Pole Station. More recently, because the contract for support services that has been in effect for the past 10 years is due to expire, significant efforts have been underway to re compete that contract.

As described in previous Semiannual Reports, during the past 3 years we reviewed many aspects of these transitions. During the current period, we continued this work by completing a follow-up study on supply and labor costs and a review of the USAP's calibration program. We also continued to monitor efforts to modernize the South Pole Station and assisted NSF's contracting office with activities related to the recompetition of the USAP support contract, worth approximately \$1 billion over the potential 10-year life of the award.

Allocating Aircraft Maintenance Supply and Labor Costs. When the Guard assumed responsibility for operation and maintenance of LC-130 aircraft used in the USAP, it also assumed responsibility for managing an OPP-owned inventory of aircraft parts and supply valued at approximately \$7 million. We recommended that OPP direct the Guard to implement a system for reporting usage of the inventory to ensure that OPP received proper credit when parts and supply were used. Although OPP agreed with our recommendation, the system had not yet been implemented by the Guard. Accordingly, we began to work with OPP, Guard, and contractor personnel to determine the value of the inventory that had been used. We expanded our review to include verifying whether supply and labor costs incurred for aircraft maintenance performed by a contractor had been correctly allocated between OPP and the Guard.

We identified nearly \$684,000 that OPP should recover from the Guard. We also made suggestions for improving the internal controls, for example the tracking and reporting of the inventory and allocating supply and labor costs. The Guard has already returned about \$300,000. OPP and the Guard are currently reviewing the rest of our findings.

Calibration Requirements and Options. With the Navy's departure from the USAP and closure of its calibration laboratory, it was necessary for OPP to determine whether and how to fulfill the USAP's calibration needs. We participated in a joint study of the USAP's calibration program - our office provided a program analyst for the cost/benefit portion of the study, and OPP provided a technical expert. The objectives of the study were to quantify the calibration services required by USAP organizations and to develop and review options for meeting those requirements.

The team concluded that the most efficient and cost-effective option was for OPP to contract for year-round, on-site calibration services, which would initially save OPP \$45,000 annually, or \$225,000 over 5 years, compared to current operating costs. OPP implemented the team's suggestion and also agreed to direct the USAP organizations to update their respective inventories to remove equipment that is no longer needed or does not require calibration. This process could lead to reduced labor costs and further savings of \$44,000 to \$88,000 annually.

South Pole Safety and Environmental and Station Modernization Projects. During the recently concluded austral winter, the largest winter-over construction crew continued on schedule for completing the interior of the garage and maintenance complex in November 1999. Documents reviewed during quarterly meetings show that both the SPSE and SPSM projects remain on schedule and within budget.

USAP Support Contract Recompensation. For all offerors on the USAP support contract recompetition, NSF's contracting office requested that we verify proposed indirect-cost rates and compliance with the Cost Accounting Standards. In addition, for those offerors whose proposals were determined to be within the competitive range, we field tested selected elements of business proposals including labor rates, other direct costs, premium pay plans, labor cost escalation estimates, and property tracking. We reviewed the proposed costs by analyzing the offerors' ability to accurately estimate costs based on historical direct and indirect-cost data. We also reviewed their actual costs and experience on similar awards. These comparisons and the information generated in our review helped the contracting office make an assessment of the competitiveness of the proposals.

Incumbent USAP Support Contractor. NSF's contracting office also asked that we conduct a financial and compliance audit of the incumbent contractor to determine whether charges to the contract were allowable and reasonable. Of the \$544 million in costs claimed over a 6-year period, we questioned only \$127,183, most of which related to a state tax penalty paid by the contractor. We also made recommendations designed to improve the contractor's cash management practices and the accuracy of contract documentation. The contractor agreed to implement these recommendations.

Issues Involving Research Project Support

Review of two Mathematical Sciences Research Institutes

We reviewed active awards and proposed budgets for two mathematical sciences institutes under the 1998-1999 recompetition of NSF's Mathematical Sciences Research Institutes program. The combined requests exceeded \$30 million. NSF plans to award up to five new mathematical sciences institutes under the program, with an initial 5-year award period and the possibility of a second 5-year award. Over the long term, NSF expects the mathematical sciences institutes to generate outside funding and decrease their dependence on NSF for support. Accordingly, we recommended that NSF require the mathematical sciences institutes to develop a written, long-term strategy to reduce NSF funding over the next 10 years and provide this strategy to NSF for its review and approval. We also suggested improvements in accounting policies and procedures at each institute.

In our review of one of the institutes, we recommended four actions that, if implemented, would reduce the amount of NSF funding required by \$659,000 over a 5-year period. Specifically, we recommended that the institute increase its revenue estimates based on recent actual experience and reduce the budget request to NSF by a comparable amount; reduce the amount requested from NSF to cover the cost of past and future inflation; reduce publication costs by electronically distributing its newsletter and slide presentations; and reduce the amounts charged to NSF for dinners and non-workshop coffee breaks. The institute generally agreed with most of our recommendations and has taken action to implement them.

In our review of the other institute, we recommended revised practices regarding hospitality costs that the institute agreed to adopt and as a result, will reduce needed NSF funding by \$100,000. We also found that this institute made arrangements with the University, on whose campus it was housed, that were inconsistent with what NSF expected when the grant was made. These arrangements concerned a 1987 building lease agreement between the institute and the University. They resulted in NSF having paid as much as \$581,000 more than it originally expected. Further, had the \$581,000 been used to reduce the debt on the building, the current outstanding debt balance would have been lowered by approximately \$692,000. The institute believes, based on its own analysis, that the cost sharing to be provided by the university is reasonable and makes up for any misunderstandings in the past.

To avoid future misunderstandings, we recommended that NSF document its understandings about significant funding arrangements in the award agreement. We also suggested that NSF use our analysis to evaluate the financial issues related to this award. NSF management is now in the process of negotiating a new award to the institution and will resolve this issue during the negotiation process.

Research Institute Agrees to Actions That Will Save \$499,920

We reviewed expenditures totaling \$5.7 million associated with current awards to a non-profit research institute. We also reviewed a pending \$1.6 million research proposal and an indirect-cost rate proposal that the institute submitted to NSF.

We made recommendations to improve compliance with government cost principles and regulations, enhance the institute's management of NSF funds, and reduce costs without eliminating essential research services, and also recommended changes to the institute's hospitality policies.

We found \$85,392 in unallowable or unreasonable costs that the institute agreed to reimburse to NSF. The institute also agreed to a reduced indirect-cost rate that we estimate will save the government \$499,920 over 5 years. NSF management is currently resolving several outstanding recommendations.

Other Significant Audits of NSF Research Awards

During this reporting period, in addition to the reports described above, we completed financial and compliance audits covering 14 research awards totaling more than \$200 million. These audits identified \$226,000 in questioned costs and suggested some improvements in the awardees' financial and accounting systems. Some of the more significant findings from these audits follow:

Networking Awards. We reviewed three awards involving communications and networking to two organizations. Of the over \$5.5 million costs claimed under these awards, we questioned \$62,821, primarily because the claims could not be adequately supported.

Ocean Drilling. We reviewed three institutions that receive support from a large NSF program to perform research at numerous locations around the world. Of the almost \$200 million audited, we questioned only \$57,066, most of which was related to the severance of a subcontractor employee.

Technological University. We reviewed four awards, with claimed costs of \$4.4 million, to a technological university in the northeast and we found only \$9,059 in questioned costs. We made recommendations to strengthen the university's cost-sharing accounting and ensure adequate university oversight of charges to Federal awards.

Research Institute. We audited a northeastern, non-profit organization working in partnership with three universities to retrain displaced defense engineers. We questioned \$113,694 out of \$625,950 in claimed costs primarily because funds were rebudgeted without NSF approval. We also found unallowable and inadequately supported costs.

Audits Involving Education and Human Resources Awards

PreAward Cost-Sharing Review

NSF management requested that we review the \$3.9 million cost-sharing component of a \$2 million proposed award to a Northeastern non-profit Center. The purpose of the proposed project is to create educational material to be licensed and sold commercially.

We found that the Center had adequate systems in place to track and account for cost sharing. However, of the \$3.9 million proposed as cost sharing, only \$1.9 million could actually be considered cost sharing under NSF policies and Federal regulations. The remainder was anticipated commercial revenue from the sales of products developed under the grant. We recommended to NSF management that this portion be classified as project income and that the cost-sharing commitment be reduced to \$1.9 million.

We found that the Center's cost-sharing and revenue projections were reasonable, but also that they were estimates and could not be guaranteed. To help meet its cost-sharing obligations, the Center had established a fundraising plan, completed market research, developed marketing strategies, and hired an experienced fundraiser, but it has yet to receive any firm commitments for cost sharing. We recommended that NSF establish a plan in order to monitor the Center's progress toward meeting its proposed cost-sharing goals.

We also found that the Center intends to generate income by selling internet banner advertising on its NSF-supported web site. NSF requires that material developed under a grant and published on the internet contain an acknowledgment of NSF support along with a disclaimer. We were concerned that commercial advertising in close proximity to the NSF name may give the impression that NSF is endorsing a particular advertiser. We recommended that the Center provide NSF with assurances that it ensure that the site would not associate NSF's name with any advertisers. NSF agreed with all of our recommendations and will monitor the Center's internet advertising as it relates to any association with NSF support.

Review of Awards to a For-Profit Company

We reviewed a northwestern for-profit company that received two NSF awards totaling \$2,555,004 to develop educational videodiscs that focus on the study of molecular and cell biology and genetics, and to design science-education software for the fifth through eighth grades.

We found that the company had inadequate cash management practices and that the financial position of the company had declined significantly during recent years. After the company reviewed our draft report, it hired a major accounting firm to install and help implement new procedures that should enable the company to improve its cash management. The company was then able to provide adequate documentation for most of the expenditures charged to the NSF. We questioned costs totaling \$198,666, most of which were incorrectly charged indirect costs. We also found \$115,898 of costs the company had incurred but not yet reported, which will partially offset questioned costs. Because the company retained excess NSF cash contrary to Federal policy, we also recommended that the company pay interest of \$11,983 to NSF. In addition, we found that the company may not be able to satisfy \$399,689 of its cost-sharing commitment. NSF management has been alerted to the decline in the financial position of the company and is considering our recommendations.

Audit of a Northwest Municipal School District

A local school district in the northwest received an award under the NSF *Local Systemic Change through Teacher Enhancement* award program for \$4.2 million and promised to contribute an additional \$3.2 million in cost sharing over 5 years. However, we found that the district had provided only 58 percent of its promised first year cost sharing. At that rate, we projected that the district was at-risk of not providing \$1,353,267 in required

cost sharing over the course of the award. We found that even though the district understated its actual cost sharing by not including \$138,538 in services donated by volunteer scientists, the district was significantly short of the required first year amount. The district agreed to make up the shortfall in the remaining years of the award. We recommended that NSF monitor the district's progress in satisfying its cost-sharing commitment.

Although we found that the school district's accounting system was generally satisfactory, we found a number of compliance issues and recommended appropriate corrective action. We questioned \$29,499 of participant support costs paid in excess of the amount allowable under the award conditions. We also estimated that unless existing practices were changed, the awardee would incur an additional \$30,000 for participant support that would also be unallowable. The school system and NSF management agreed with these findings.

Statewide Systemic Initiatives

We reviewed two Statewide Systemic Initiatives awards during the period. One was a \$9.8 million award to a midwestern board of regents to improve mathematics and science education for state middle school and high school students. Our audit questioned \$274,281 out of \$9.3 million in claimed costs for this award. Most of the costs questioned were salaries and fringe benefits that were improperly charged to the award (\$173,371), and other charges for indirect costs that exceeded the approved indirect cost rate (\$85,649). The awardee is contesting the questioned costs and our report has been referred to NSF's audit resolution officials for final action.

We also reviewed an award of \$6 million to a state department of education that NSF terminated early because of insufficient progress in meeting programmatic goals. We found that the department's accounting system cannot compare actual costs with budgeted amounts by category, making it difficult to ensure that funds are spent in support of the activities intended in the award. We recommended that NSF require the education department to correct several specific weaknesses in its accounting system before making new awards to the departments. NSF and the department are evaluating our report.

In our [March 1998 Semiannual Report \(page 8\)](#), we described our earlier audit of a \$9.9 million NSF Statewide Systemic Initiative award. As a result of our review and a subsequent site visit to the department by NSF officials, the department agreed to repay \$495,000, primarily for indirect costs that were incorrectly calculated. Our review also disclosed deficiencies in the reporting and recording of subcontract costs. The department found our recommendations useful in establishing procedures to more closely monitor the activities of its subcontractors.

Review of Draft Program Announcement

One of our liaisons noticed that a proposed new scholarships program might involve unusual student eligibility monitoring requirements for prospective awardees. We reviewed the draft program announcement and made several suggestions, including requiring that institutions describe how they will monitor eligibility for the program and clarifying that the program did not require awardees to provide any special cost-sharing contributions. Our suggestions should help ensure that funds are used in furtherance of the program's goals. NSF managers told us they found our suggestions helpful and made changes to the draft program announcement as a result.

NSF Disallows Municipal Board of Education's Claimed Costs

In our [March 1998 Semiannual Report \(page 9\)](#), we described our earlier audit of an award to the board of education of a northeastern city. As a result, NSF determined that the board of education must repay \$844,397 in unallowable and unsupported costs. Most of these questioned costs related to several material compliance and internal control problems. For example, the awardee did not use NSF approved budgets for internal tracking purposes, needlessly complicating its oversight of the grant. The staff was also generally unfamiliar with NSF grant requirements. The report also detailed deficiencies in the awardee's record retention and retrieval system and in its accounting system for NSF grants. In its response, the board acknowledged these problems and proposed corrective action to address them.

Issues Involving Administration and Management

Expansion of the FY 1999 CFO Audit to Include Penetration Tests

We are now in the process of conducting the fourth annual Chief Financial Officers (CFO) audit of NSF's agency-wide financial statements. This year we expanded the scope of our audit to include a more comprehensive review of NSF's data processing system and internal computer network. This review will identify and assess system controls that ensure financial data integrity, confidentiality, and availability. As part of this review, penetration tests will be performed, to identify and expose vulnerabilities in NSF's data processing system and to evaluate whether NSF's data processing environment and critical financial systems are vulnerable to unauthorized access and use. The review will be performed in accordance with the General Accounting Office's Federal Information Systems Control Manual.

We are also working with NSF's CFO to accelerate the preparation and audit of NSF's financial statements. This should result in providing audited financial statements in early January 2000, rather than by March 1, 2000.

Review of Financial Summary Reports for the Ocean Drilling Program

International contributions to fund operations of NSF's Ocean Drilling Program (ODP) are deposited into a commercial bank account prior to being transferred to NSF's Trust Fund account with the U.S. Department of Treasury. During our review of the FY 1998 ODP financial summary reports, we found that the commercial bank did not correctly carry out NSF's instructions to transfer funds to the U.S. Department of Treasury. Instead, the bank erroneously transferred approximately \$2.9 million from the NSF account to the NSF Credit Union. The error was corrected the next day, but interest for that day was not credited to NSF's account. As a result of our review, the commercial bank reimbursed NSF for the interest lost due to the error (about \$500). We reviewed NSF's and the commercial bank's fund transfer procedures to identify the cause of the error and ensure that adequate controls are now in place to prevent errors of this kind.

GPRA Monitoring

We are involved in several NSF-wide activities concerning the Government Performance and Results Act (GPRA). During the current reporting period, we participated in internal agency working groups tasked to revise its strategic plan, develop performance plans for future years, and develop its first annual performance report. Where appropriate, we have offered NSF management suggestions, primarily related to data and measurement issues, that may affect the success of its GPRA system. We have also participated in an NSF working group that is monitoring the activities of an outside contractor assessing the quality of NSF data.

We have also incorporated consideration of performance data systems in our ongoing efficiency reviews. During our recent review of a Centers program, for example, we examined the manner in which the program developed and maintained databases that may be used for GPRA reporting purposes and made appropriate suggestions. We also tested the validity of some data provided by NSF-supported researchers on a statistically valid sample of information that could be considered by NSF management in its assessment of program performance. We found that the information was generally accurate.

Review of Awardee A-133 Audit Reports

OMB Circular A-133, issued pursuant to the Single Audit Act of 1984, sets forth standards for obtaining 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 audit reports.

During the reporting period, our office reviewed 114 A-133 audit reports. The reports questioned costs at only 10 of the 114 institutions, and the total amount questioned was only \$82,850. In addition, one report identified \$875,104 of at-risk cost sharing and a cost-sharing shortfall of \$1,312,792. NSF management has resolved six of these reports and sustained \$62,649 of the costs questioned.

We are responsible for investigating possible wrongdoing involving organizations or individuals that receive awards from, conduct business with, or work for NSF. In investigating these allegations we assess their seriousness and recommend proportionate action. When possible, we work in partnership with agencies and awardees to resolve these issues. When appropriate, the results of these investigations are referred to the Department of Justice or other prosecutorial authorities for criminal prosecution or civil litigation, or to NSF for administrative resolution.

We focus our criminal and civil investigative resources on allegations of intentional diversion of NSF funds and material false statements in information submitted to NSF. Intentional diversion of NSF funds for personal use is a criminal act, which can be prosecuted under several statutes and investigating these allegations is a priority for our office. We encourage awardees to notify NSF of any significant problems relating to the misuse of NSF funds because it significantly increases our ability to investigate them and possibly recover funds for NSF.

Our administrative cases include those addressing allegations of misconduct in science, engineering, and education, such as falsification, fabrication, and plagiarism. Misconduct in science strikes at the core of NSF's mission, and it is a special concern for our office.

HIGHLIGHTS

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Integrity

Proposed New Uniform Federal Policy on Research Misconduct is Consistent With NSF's Procedures

At the close of this reporting period, the Office of Science and Technology Policy (OSTP) issued a new, proposed policy on research misconduct for public comment. For several years, we worked closely with OSTP and other federal agencies to develop and refine the policy. Once finalized, the policy will be implemented by all federal agencies supporting research. This policy will not become final until OSTP and all affected agencies consider public comments and then issue their final policy or rule. Until the new policy is finalized, we must rely on the definition and procedures established under NSF's current misconduct regulation.

Consistent with NSF's current practice, the proposed policy emphasizes the need to defer investigations, in most cases to awardee institutions, separates investigation from adjudication, ensures confidential treatment for both complainants and subjects as the allegations are being resolved, and develops corrective actions that are in proportion to the seriousness of the misconduct. In order for there to be a misconduct finding under the proposed policy, the conduct in question must be a "significant departure from accepted practices of the scientific community for maintaining the integrity of the research record." This is consonant with NSF's current approach and is based on the principle that allegations of misconduct should be evaluated by comparing the conduct in question to the ethical standards established by the relevant scientific community.

The uniform policy is limited to misconduct "in proposing, performing, or reviewing research, or in reporting research results." Because OSTP focused exclusively on misconduct affecting the research record, the proposed policy explicitly states that agencies may adopt supplemental definitions and procedures to cover misconduct not affecting the research record. This provision is important for NSF because the Foundation does not only support scientific research, but also has a large investment in science and engineering education. In our view, it will be appropriate for NSF to adopt the proposed policy when it becomes final so long as the NSF also takes specific action so that it can continue to address allegations of misconduct associated with its education and research portfolios consistently.

Overall, we are pleased with the proposed policy because all federal agencies that have a research portfolio will now have a uniform process designed to reinforce the importance of integrity in the conduct of research. We stand ready to share our experiences and insights with other agencies as they begin to implement a structure and process to carry out this new responsibility. At NSF, the responsibility rests with scientists within this Office of Inspector General. As other agencies consider an appropriate structure, we believe that the NSF model should be carefully evaluated. Having scientists lead investigations is desirable because scientists are familiar with the ethical standards of the scientific community and can use this

familiarity to evaluate misconduct allegations. Locating scientists in an Office of Inspector General is desirable because of the Office's inherent familiarity with the principles and practices of fair and effective investigation, including mechanisms to ensure confidentiality, availability of subpoena power, and clean separation between investigative and adjudicative functions.

Summary of Referrals to Agency Management for Adjudication

Recommendation to Conclude Subject Fabricated Publications and Data

As part of its inquiry, a large, public university on the east coast requested from NSF information related to an allegation that a biologist misrepresented his publication record in his funded NSF proposal by listing as "in press" manuscripts that did not exist. We responded to the university's request for information and deferred our inquiry to it. The university concluded there was sufficient substance for an investigation, and we deferred our investigation pending completion of its efforts. During the university's investigation, it learned the subject's progress report for his previously funded NSF proposal also contained false statements about "in press" publications. The university concluded the subject's multiple misrepresentations of his publication record were misconduct in science.

During the university's investigation, we received an allegation of data fabrication against the subject. The university was unable to investigate this allegation because the subject moved to another university and took his laboratory records with him. We conducted our own investigation and requested the relevant laboratory notebooks from the subject. He provided us with a laboratory notebook that recorded the data obtained by a visiting scientist who conducted the experiments in the subject's laboratory. We asked an independent scientist to evaluate the data. He said the data in the subject's NSF proposal were not supported by data in the notebook and, based on the descriptions of the experiment in the proposal and notebook, some of the proposal data simply could not exist. We interviewed the visiting scientist, who confirmed he did not do the experiment described in the proposal and agreed that other data listed in the subject's proposal could not exist, even in theory. In our interview with the subject, he said that the data were provided to him by the visiting scientist and were recorded in another laboratory notebook he did not have; he said the visiting scientist stole the other notebook. We determined there was no independent evidence to support this assertion. Based on the existing notebook, the testimony of the visiting scientist and the subject, and the analysis by the independent scientist, we concluded the subject's explanations were not credible and that he fabricated the data.

As part of our investigation, we also examined the allegation that the subject misrepresented his publication record. We found additional false publication claims in the subject's funded NSF proposals. We agreed with the university's conclusion that his multiple false claims of "in press" publications were misconduct in science.

We recommended that NSF's Deputy Director find the subject committed misconduct in science when he misrepresented his publications and fabricated data in his proposals to NSF. We recommended that he send the subject a letter of reprimand, debar him for 1 year, and impose certification and assurance requirements for any NSF-supported project for 2 years after the debarment.

Recommendation to Conclude PI Plagiarized in NSF Proposal

We received an allegation that a chemist at a mid-sized, northeast university plagiarized text from an NSF award into his proposal. In our inquiry, we determined that over 50 percent of the subject's proposal was identical to the award and concluded that there was sufficient substance to the allegation to warrant an investigation. We referred the matter to the subject's university, which told us its policy required that it conduct an inquiry first. The university's inquiry concluded there was enough evidence for an investigation. The university found the subject committed plagiarism egregious enough to constitute misconduct in science. The university denied the subject a raise and associated benefits, and it also required the subject to obtain assurances that any documents he submits to NSF are his original work or are otherwise properly cited.

Our review of the university's investigation report determined that it was fair, accurate, and thorough, and could be used in lieu of our own. We concurred with the university's finding. We recommended that NSF's Deputy Director: (1) find that the subject committed misconduct in science; (2) send him a letter of reprimand; (3) require for 3 years that he provide a certification that any documents he submits to NSF contain no plagiarized material; and (4) require a similar assurance from his department chair or dean. In response to our draft investigation report, the subject pointed out that his NSF awards were unusual in that they were used almost exclusively to support students or to buy equipment, and one of our recommendations would disproportionately hurt his students and his department. Instead of that recommendation, the subject proposed to teach a science ethics course at his university, and we recommended NSF work with the subject (and his chair) to refine and implement his plan.

Recommendation to Conclude PI Plagiarized and Breached Confidential Peer Review

We received allegations that an associate professor of chemistry from a large southern university submitted an NSF proposal containing text and ideas plagiarized from another scientist's NSF proposal, which the subject received for confidential peer review. In our inquiry, we found approximately 22 lines of substantially similar text, formulas, and references in the experimental design and methods section. When we contacted the subject, he said he did not see his actions as inappropriate, but admitted that he was "influenced" by the proposal. We concluded that there was sufficient substance to the allegations, and we referred the investigation to the subject's university.

The university's investigation committee determined that essentially the same material appearing in the NSF proposal was used in several versions of a proposal that NIH eventually funded. The investigation committee reported that the subject acknowledged that he used material from the reviewed proposal, believing that the author would review his proposal, and he wanted to ensure that he presented the author's work correctly. The subject admitted paraphrasing parts of the reviewed proposal, but contended that the equations and the references were general knowledge in the field and therefore copying them did not constitute plagiarism. However, he was unable to provide an example in which anyone else in his field used this same material.

The investigation committee disagreed with the subject, and found that he committed misconduct in science. It recommended that the university prohibit the subject from submitting any proposals for a period of 1 year and for an additional year the subject and his department head should certify that all of the subject's proposals are "misconduct-free." In addition, it recommended the subject be prohibited from participating in peer review for 2 years and that he actively educate himself about misconduct in science.

The adjudicator for the university accepted the committee's recommendations and also decided to terminate the subject's NIH award and return the expended funds to NIH. The subject appealed the decision to impose the additional actions. The president of the university denied the subject's appeal.

After reviewing the university's investigation report, we agreed with the university's conclusion that the subject knowingly plagiarized from the reviewed proposal into his NIH proposal, and subsequently submitted the same plagiarized material in proposals to NSF and NIH. We also agreed that the subject's plagiarism was more serious because he misused confidential information he acquired by participating in NSF's peer review system. We recommended that NSF's Deputy Director: (1) find that the subject committed misconduct in science; (2) send him a letter of reprimand; (3) require for a period of 2 years that he provide a certification that any documents he submits to NSF contain no plagiarized material; (4) require a similar assurance from his Department Chair or Dean; and (5) prohibit him from participating as an NSF reviewer for the same period. We recommended that NSF coordinate its actions with the other affected federal funding agencies.

Recommendations Concerning Ineffective Oversight of Biohazardous Materials

We were informed by officials at a mid-size, midwestern university that they had initiated an investigation against a faculty member with regard to his biohazardous research. The university concluded that the subject committed misconduct in science when he failed to (1) obtain proper authorization to receive biohazardous materials, (2) adhere to guidelines for their use, and (3) respond to university officials' requests for information or provide them with accurate information. Among the disciplinary actions it took against him were suspending him without pay and prohibiting him from conducting research or applying for

research funding. The subject disputed these conclusions and actions. After a full, factual hearing, an independent arbitrator decided that (1) the evidence did not support the first finding, and (2) the second act was not professional misconduct, but (3) he failed to provide prompt and clear information about his research. The arbitrator ordered the university to rescind the discipline and compensate the subject for pay and other benefits. He said that the university could issue the subject a written reprimand for his failure to provide information.

After reviewing the university's investigation report and the documents associated with the arbitrator's decision, as well as additional records we requested, we determined that an investigation by our office was necessary. We questioned actions by both the university and the subject.

For example, we learned that, while the subject had indicated on the internal university approval forms for his external proposals that the research involved recombinant DNA, approving officials did not ensure biosafety review of the proposals, despite being members of, or responsible for, the biosafety committee. Instead, an administrative employee arbitrarily filled in the required dates of approval on the forms—with dates that predated the subject's employment at the university.

Over the years, the subject submitted internal requests for funding that involved biohazardous materials. The committee chairman reviewing and funding these requests, who was a member of the biosafety committee, neither discussed these requests with the biosafety committee nor spoke with the subject about their content.

To obtain biohazardous materials, the subject made explicit promises and commitments to suppliers assuring them that university officials would exercise oversight over his research, even though he knew there was no functioning biosafety committee and therefore no effective oversight was possible at the university. He proceeded with his research without such oversight—indeed, although he accepted personal responsibility for the safe conduct of his research, he was out of the country while many of these biohazardous experiments were conducted.

University officials knew of their responsibility for providing informed approval and oversight regarding the use of biohazardous materials, but they neither took reasonable action to ensure it occurred nor did they take significant corrective action after these issues arose. The subject knew of his own responsibilities and also did not take reasonable action. However, because we found that there were no standards of practice at the university against which its or the subject's actions could be measured, we concluded these actions were not misconduct in science. If there had been reasonable, informed administrative controls that were intentionally ignored, we would have considered recommending findings of misconduct in science against the subject.

We recommended that NSF take significant action to ensure that the university not receive NSF awards involving the use of biohazardous materials until it demonstrates its

ability to provide responsible oversight. With regard to the subject, we recommended that NSF require that for all future NSF awards he provide information about his commitments and declare in each progress report to NSF that he has taken the necessary steps to ensure proper oversight of his research.

Deputy Director Concludes PI Plagiarized in Two NSF Proposals

In our [March 1999 Semiannual Report \(page 17\)](#), we discussed our investigation into allegations that a professor of biology plagiarized over 90 percent of the text in two NSF proposals he submitted to different NSF directorates. The university investigation found that the subject's use of verbatim material from another scientist's NSF award in his two proposals constituted plagiarism. The university reprimanded the subject and required that he: (1) not submit federal or state proposals and not serve as a PI on federal or state awards for 3 years; (2) withdraw his pending NSF proposal; (3) certify to the originality of any external proposals for an additional 2 years; and (4) read materials and attend workshops/meetings on the topic of integrity in research. In light of the university's actions, we recommended that the Deputy Director affirm that the subject committed misconduct in science and send him a letter of reprimand, but take no further action. The Deputy Director took action consistent with our recommendations.

Deputy Director Concludes Plagiarism in Education Proposal is Misconduct

In our [September 1998 Semiannual Report \(pages 16-17\)](#), we described a case in which a university found that an experienced PI and co-PI committed misconduct by plagiarizing the text of a proposal written by educators whose project they proposed to replicate. NSF agreed with our recommendation to find that the subjects committed misconduct in science and reprimand them. It rejected an appeal from one of the subjects, who argued that the other subject alone was responsible for the plagiarism.

PI Appeals Deputy Director's Misconduct Finding

In our [March 1999 Semiannual Report \(page 19\)](#), we described the Deputy Director's decision that a biology professor's misrepresentations in his proposal were misconduct in science. NSF determined that the subject falsified his proposal by misrepresenting his research capabilities and the status of his research. The Deputy Director concluded his actions were misconduct in science and proposed significant action to protect the federal government's interests.

Consistent with NSF's misconduct-in-science regulation, the subject appealed the Deputy Director's decision to the Director. The Director said the subject's misrepresentations "materially affected NSF's decision to award [him] the substantial renewal grant he received."

She concluded that his appeal did not “raise new issues or provide additional information that was not previously addressed” and that his issues were “considered and addressed by the University, by the OIG, and by the Deputy Director.” She therefore “affirmed the finding of misconduct in science.” She did not modify the actions NSF proposed.

Summary of Significant Cases Closed Without Recommendations for Findings of Misconduct

Science Issues Intertwined with Allegation of Data Fabrication

We were informed of an allegation that a geographer at a large, public university in the southwest falsified data by adding material to his samples to pre-determine the results that would be obtained when independent testing facilities analyzed his samples. The subject’s university also learned of the allegation and asked two scientists to attempt to duplicate the subject’s results. We discussed the matter with the subject’s university, agreed it would conduct an inquiry, and agreed to defer action pending completion of its inquiry. The university’s adjudicator concluded there was sufficient substance to proceed to an investigation. We deferred our investigation to allow the university to complete its investigation.

The university’s investigation committee commissioned independent tests on some of the subject’s samples. The results of these tests indicated that some samples contained material that was anomalous because it is not known to be naturally occurring in the location where the samples were collected. The subject raised concerns about the chain of custody of the samples and suggested that some samples may have been inadvertently contaminated.

A scientist provided the committee with a comparison of the subject’s results with known “control” data. This scientist’s analysis showed remarkable agreement between the two sets of data, and he argued that such close agreement suggested that the subject inappropriately manipulated his samples so that those data would match the “control” data. In response to the committee’s questions, the subject provided an analysis that showed substantially less agreement, and he suggested that the lack of uniformity was indicative of honest research efforts. The subject also provided the committee with scientific reasons why some of his data should show good agreement with the “control” data and others would not. The committee concluded that both the scientist’s and the subject’s representations of the data were inaccurate and there was ambiguity associated with the “control” data themselves. Ultimately, it concluded that there existed convincing scientific explanations for the agreements between the subject’s data and the “control” data.

Although the committee concluded that some samples seemed likely to have been altered by the subject, it found no evidence that the samples were altered to achieve a pre-determined result—which in our view, consistent with the committee’s conclusions, precludes a finding of culpable action necessary to conclude that any such alterations constituted a serious deviation from accepted practices. We found the committee’s report to be objective and thorough, and we concur with its conclusion that the subject did not commit misconduct in science.

The subject’s actions need to be assessed in light of the uncertainties about how best to analyze data and report results in an emerging area of science, and many of the committee’s efforts reflected those that a scientist carrying out research in this field would take to verify the subject’s reported results. This case exemplifies the importance of allowing the relevant scientific community to determine whether misconduct in science occurred and the importance of separating misconduct issues from issues of scientific judgement. Central to this case were issues of replicability, methodology, reliability of control data, and the amount and depth of scientific detail in publications. Such matters are at the heart of the scientific enterprise and are—as they should be—addressed by the scientific community in the ordinary practice of research.

Investigation Finds Researchers’ Conclusion was Reached Independently

A complainant alleged that a chemical engineering research group (the subjects’ group) at a large, eastern university incorporated ideas and conclusions from a manuscript that another research group (the other group) had submitted for publication into a paper of their own without giving the other group proper credit. The two groups were engaged in a scientific dispute over the interpretation of certain observations. Two hypotheses had been proposed to explain the observations, with each group favoring a different hypothesis. The other group’s manuscript purported to settle the dispute in favor of the other group’s preferred interpretation. The subjects’ paper reached essentially the same conclusion as the other group’s manuscript, but did so using the subjects’ own data, much of it previously published, and the subjects’ own analytical approach.

The subjects appended a note to their paper that characterized the other group’s paper as containing similar experimental results and appearing in print while the subjects’ paper was under review. The note gave no indication that the subjects had seen the other group’s manuscript while the subjects’ paper was in preparation or that the subjects made use of the other group’s manuscript in preparing their own.

We determined that an investigation into the allegation was warranted and referred the case to the subjects’ university. On the basis of the evidence the university collected, we concluded that:

- before the subjects received the other group’s manuscript, the subjects had done the experimental work that, in their view, was essential to interpreting the observations whose significance was in dispute;

- the only significant analytical work done after receipt of the other group's manuscript was a logical outgrowth of the subjects' prior experimental work and caused the subjects to move away from the specific interpretive schema proposed by the other group;
- the subjects' own experimental and analytical work, and not the evidence or conclusions in the other group's manuscript, caused the subjects to revise their conclusions about the hypotheses in dispute; and
- the subjects' paper was written after they received the other group's manuscript.

We concluded that the subjects did not use the other group's manuscript except as a spur prompting them to finish analyzing their findings and preparing them for publication. Although the subjects might have indicated that their paper was written after they had read the other group's manuscript, their failure to do so could not be considered misconduct in science. This case illustrates the care that should be taken to acknowledge the contributions of others and that making informed distinctions among different kinds of unacknowledged "uses" of other scientists' work can be important in resolving misconduct cases.

Further Investigation of Alleged Plagiarism Not Warranted

We received an allegation that a social scientist at a large southwestern university committed plagiarism by incorporating language from a published article into her declined NSF proposals without appropriate attribution. The complainant informed us that the subject's university had conducted an investigation into the allegation and closed its case without a finding of misconduct. We were also informed of numerous plagiarism allegations against the subject that did not involve NSF proposals and awards.

At our request, the university sent us a copy of its investigation report and supporting evidence. In our letter, we noted that NSF expects awardees to notify us when, as in this case, a misconduct inquiry determines that an investigation is warranted. The university told us that it mistakenly believed that alleged misconduct in declined proposals was not covered by NSF's misconduct regulation and intends to keep us appropriately informed in the future.

We reviewed the records of the university's investigation and its subsequent inquiries into related allegations. While our review was in progress, we learned that a professional association in the subject's discipline had examined the plagiarism allegation involving the subject's NSF proposal and concluded that there was insufficient evidence to warrant a formal investigation.

The amount of allegedly plagiarized material comprised less than one page of background material from the published article. Although the passages in the published article and the subject's proposal were substantially similar, there were numerous small differences in wording. We concluded that the similarities between these passages were more extensive than would occur if two researchers independently summarized the ideas of a third scholar.

However, we decided that it was questionable whether the subject's alleged misappropriation, given the amount and character of the material involved, was sufficiently serious to be misconduct in science. We concluded that to further investigate this allegation, which had already been considered in proceedings in two different and independent forums, would be disproportionate to the seriousness of the alleged misconduct, and we closed the case on that basis. This case once again illustrates the importance of acknowledging the work of others, and our commitment to keeping matters in proportion when we do investigative work.

Failure to Communicate Leads to Allegations of Misconduct

Our Office received an allegation from a large northeastern university that the subject failed to give appropriate credit to a graduate student who supplied ideas that were used in the development of software under an NSF grant on which the subject was co-PI. The student, at the suggestion of the subject, began attending project meetings, and gave a presentation of software that he developed. Before the student's involvement ceased a short time later, the PI and co-PI submitted a letter to NSF regarding their pending proposal. The letter explained their plans for the project, and mentioned the student's software, describing it as "remarkable" and "revolutionary." From his knowledge of the letter, the student believed that his software contributed substantially to the development of the final product, and that his contribution should have been acknowledged.

To assess whether the student should have been credited for a contribution to the project, the university's investigation committee analyzed the development of the software. The major features of the final product were developed about a year before the student presented his ideas to the group, and the final version did not utilize the special features demonstrated by the student. In the committee's view, the PI's notes, the statements of other witnesses, and the final version of the software, substantially corroborated the subject's account of the development of the software. Thus, the committee concluded that the student's ideas did not contribute to the development of the final version of the software.

However, because the project team did not inform the student how the software was developed, the committee reached the conclusion that the student had reason to believe that he had contributed substantially to the final version of the software, and to file his complaint. In addition, the committee thought that the student's clinical experience and new ideas stimulated the thinking of the project team and strengthened its NSF proposal. Nonetheless, the committee concluded that although it would have been appropriate to acknowledge the student in the documentation that was published with the software, the student's contributions did not warrant co-authorship.

While a majority of the committee believed that the failure to acknowledge the student was undesirable, the committee unanimously concluded that the lack of acknowledgment by the subject was not misconduct in science. We concurred with the committee's assessment, and note that this situation could have been avoided if the subject had communicated better with the student.

Failure to Reference Pending Proposal at Foreign Funding Agency

We received a plagiarism allegation after a scientist received a proposal from NSF and a nearly identical proposal from a foreign funding agency for review. A foreign scientist (the foreign subject) and a resident scientist (the resident subject), a biologist at a large northeastern university, submitted nearly identical proposals to a foreign funding agency and to NSF, respectively. Each subject identified himself as the sole PI on his proposal. Although the NSF proposal identified the foreign subject as a consultant and requested consultant fees and foreign travel expenses, it did not refer to the foreign subject's proposal at any point. The foreign subject's proposal did not list the resident subject as a collaborator or reference the resident subject's NSF proposal. We were concerned that these nearly identical proposals might constitute an attempt to secure duplicate funding for a single research project.

The subjects explained that they collaborated on drafting the proposal, but the resident subject stated that NSF's FastLane application did not provide a place "to explain the nature of my collaboration with [the foreign subject] and whether or not he is applying for funding on the same project."

The NSF *Grant Proposal Guide* instructions for the *Current and Pending Support* form state that "This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals All current project support from whatever source (e.g. Federal, State or local agencies, private foundations, industrial or other commercial organizations) must be listed" for each Principal Investigator and other Senior Personnel. We spoke with NSF staff who explained that such information, from any funding source was important for the proper evaluation and administration of NSF proposals.

After considering the subject's response, we suggested the resident subject amend his most recent NSF proposal to explain the nature of his research collaboration with the foreign subject and what portions of the project would be supported by NSF. The subject responded to our suggestion by sending an amendment to the appropriate program officer. We considered this an adequate resolution to this matter and believe that it underscores the importance of providing accurate information to NSF.

NSF Proposals and Progress Reports Containing Inconsistent Publication Citations

A scientist alleged misrepresentation of the publication status of several manuscripts in a pending NSF proposal submitted by a biology professor at a large western public university. We reviewed the claims in the pending proposal, two past proposals, and two progress reports submitted by the subject and found several significant inconsistencies involving authorship, titles, and publication status within particular submissions.

The subject told us that while preparing his proposals he received requests for changes to some of the manuscripts, but he failed to reflect those changes uniformly in all sections of his proposals and progress reports.

According to the *NSF Grant Proposal Guide*, an NSF proposal “should present the merits of the proposed project clearly and should be prepared with the care and thoroughness of a paper submitted for publication.” This language applies to every aspect of NSF proposals, including publication citations, and is important for their fair and efficient evaluation. At our suggestion, the subject corrected the citations causing the apparent misinterpretations in his most recent NSF proposal. In closing this case, we noted that inaccuracy in citations can lead to allegations of misconduct in science as well as hampering efficient evaluation of proposals.

Summary of Other Administrative Investigative Activity

We reviewed 55 matters this period, 18 of which were either concerns best suited for resolution by NSF management, or misconduct allegations lacking sufficient information to allow us to proceed. We closed 37 misconduct cases this period, see [page 45](#). Twenty-seven of these cases were closed at the inquiry stage and ten were closed after an investigation. Of these investigations, four were cases in which awardee institutions concluded that no misconduct occurred and we did not recommend a finding of misconduct in science. In six cases, institutions concluded that actions were misconduct and we ultimately forwarded reports on them to the Deputy Director, who took action consistent with our recommendations. During this period, we referred the inquiry or investigation of three cases to awardee institutions. We currently have eight cases under review by institutions.

We closed 31 cases with no finding of misconduct in science. Twenty-one cases were from colleges and universities, four from government agencies or laboratories, four from private industry, and two others. These institutions were located in the northeast, southeast, midwest, southwest, and west, and the subjects worked in various fields including biology, chemistry, computer science, engineering, geosciences, mathematics, physics, and sociology.

Of the 27 cases closed without an investigation, each can be described by a single primary allegation, even though some contained multiple allegations. The primary allegations include eight plagiarism cases, six false certifications or other misrepresentations, three breach of the confidentiality of peer review, two biased review of an NSF proposal, two fabrication/falsification, and six others such as abuse of colleague, duplicate submission of a proposal, and retaliation. Ten of the 27 cases were closed after we obtained information from the subject, and in two we requested information from experts.

During this reporting period we considered several issues related to internal processes at NSF. We reviewed a complaint from an engineer whose full proposal was declined after a successful pre-proposal evaluation. He asked his program officer if either of the two pre-proposal reviewers, who ranked the pre-proposal as excellent, were used to review the full proposal. He interpreted NSF's initial response to this question as affirmative, but a subsequent NSF reply informed him that neither reviewer provided a review for the full proposal. The difference in the two responses from NSF caused the complainant to suspect that the review process was manipulated to deny him funding. Although we could not resolve the discrepancy between the statements, our review provided no evidence that the program officer selected the reviewers to obtain a particular result, or that the project leader influenced the program officer's selection of reviewers. NSF guidelines for choosing reviewers afford program officers latitude and flexibility in their choice of individual reviewers, and we found no evidence that the program officer's actions were inconsistent with the guidelines.

In another matter, we were informed that an employee of another federal agency, who represented his agency in the management of an interagency review panel, allegedly failed to disclose his potential conflict of interests (COI) with a PI on one of the proposals under review. As a management representative of the other agency, the employee was not a member of the panel and could not vote. In our review, we learned that the employee's comments during the panel review discussion were interpreted as his inappropriate advocacy of the PI's proposal. His comments would be inappropriate according to NSF's COI regulations. However, the employee was representing the other agency, and because that agency's COI regulation did not address this particular issue as a conflict, we concluded, in consultation with NSF's designated agency ethics official, that he did nothing wrong. We encouraged the program manager to request greater disclosure of potentially biasing affiliations from other agency representatives when they participate in panel reviews affecting how NSF funds are used.

Summary of Issues Involving Civil and Criminal Investigations

Development of Computer Incident Response Team

During this reporting period, we were notified of three separate incidents involving alleged computer crimes and unauthorized intrusions into NSF computer systems. In consultation with NSF and other agencies, we are developing a Computer Incident Response Team (CIRT). This team, like other CIRT teams in the federal government, will be able to rapidly respond to computer intrusions to protect NSF's systems and carefully gather the evidence necessary for possible civil or criminal prosecutions. The NSF CIRT team will be multidisciplinary, incorporating management and law enforcement capabilities, and possessing technical and forensic skills.

Among the three incidents, one involved a computer network administered by an NSF contractor that provides information and support for a government-wide program administered by NSF. The second involved the intrusion into an NSF-administered network. This incident was one in a series of similar incidents involving multiple government agencies. In both cases, we are working with other agencies to investigate these incidents. The third incident involved a former systems administrator for an executive policy office that shares NSF office space. After the policy office terminated the subject's employment, he lied to gain physical entry into his former office. Once in the office, the subject obtained unauthorized access to the computer system, copying and rewriting computer files he developed as part of his past duties.

The U.S. Attorney's Office declined to prosecute this matter because there was no injury by the unauthorized intrusion and no financial gain. As a result of this matter, NSF is reviewing and updating its physical and information security procedures for handling former employees and contractors. We believe the establishment of a CIRT team will allow us to investigate cases of this kind more effectively and provide additional security for NSF's systems.

Continued Review of False Claims to SBIR Program

In our [March 1999 Semiannual Report \(page 23\)](#), we discussed our referral to the Small Business Administration (SBA) for a formal size determination on a company that may have exceeded the maximum of 500 employees permitted to participate in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. In this reporting period, SBA determined that this company was affiliated with an international pharmaceutical firm with over 49,000 employees.

The company appealed SBA's size determination to SBA's Office of Hearings and Appeals (OHA). OHA found minor technical errors in the size determination and remanded the case to SBA. Because of SBA's determination and OHA's opinion, the company declined to accept an NSF Phase II award in the amount of \$400,000. Thus, our referral of this issue resulted in NSF's SBIR program being able to use the \$400,000 to fund other projects.

Many of our Semiannual Reports have highlighted cases involving small businesses that fraudulently received duplicate funding for identical projects from different federal agencies. Currently, we are coordinating with the Department of Justice (DOJ) to resolve two SBIR cases involving duplicate funding that were referred in previous reporting periods. We expect that these cases will be resolved in the next reporting period.

Government Contractor to Pay Civil Settlement

We worked with DOJ and another federal agency's IG office on an investigation of a government contractor which resulted in a \$1.9 million civil settlement. These funds will go to the U.S. Department of Treasury. It was alleged that the contractor billed 17 federal agencies for subcontractor and consultant charges that it had not yet paid, a violation of the Federal Acquisition Regulation. The investigation determined that over a 10-year period the contractor prematurely billed the government about 75 percent of the time, on average by 37 days, prior to payment of funds, thereby depriving the government of the use of these funds for this period of time. We estimate that the loss attributed to NSF exceeded \$200,000.

In return for the monetary settlement, the government agreed not to initiate additional administrative sanctions against the contractor. NSF and the other affected agencies accepted the settlement because (1) the contractor provided the services it contracted for; (2) the contractor agreed to discontinue the unacceptable billing practices; and (3) a new financial management team has taken steps to reduce the risk that the billing practices will occur again.

Professor Agrees to Pay \$65,000 Civil Settlement

A chemistry professor at a large, west coast university who allowed a large number of personal telephone calls to be charged to his NSF grants, agreed with the U.S. Attorney's Office to pay \$65,000 in a civil settlement resolving this matter. The subject's university identified the questionable telephone charges during a university audit. In an investigation coordinated with the university's internal audit department, we found that the subject directed that all charges for use of his university-issued calling card be charged to his NSF grants and that his wife used the calling card to make personal telephone calls. The subject claimed that he was unaware of most of his wife's telephone charges. However, after he learned about the calls, he continued to allow telephone billings to be charged to the grant. He claimed he had been tracking the expenses with the intention of reimbursing the grant.

As part of the civil settlement, the subject and his university agreed to restrict the subject's authority to administer research funds for 3 years. The subject also agreed to pay the university \$3,400 for other questionable expenditures charged to his research accounts. In addition, a university disciplinary committee suspended the subject without pay for 6 months.

Other Cases Involving Alleged Misuse of NSF Funds

During this period, we referred two diversion cases to prosecutorial authorities. In the first case, the awardee institution notified us of false travel receipts that were submitted by a co-PI on an NSF grant, and we coordinated our subsequent investigative efforts with the institution. We are currently working with a state prosecutor to resolve this case. In the

second case, we concluded a PI misused NSF grant funds awarded for student support and supplies. We are coordinating with the Civil Division of the appropriate U.S. Attorney's Office to resolve this case.

We also resolved two small cases which had been opened because the subjects appeared to have inappropriately received duplicate travel reimbursements. However, we learned that the subjects returned the duplicate payments to their institutions but the institutions failed to credit \$1,128 in funds to the appropriate NSF grant account. We informed the institutions, which credited the funds to the NSF grant accounts.

Finally, we assisted NSF's Division of Contracts, Policy and Oversight (CPO) in its assessment of an unauthorized purchase order. CPO requested that we review this incident to assess whether the procurement process was subverted. We found that an untrained individual assisting the procurement process had mishandled the purchase order. However, because the purchase order was not authorized, NSF funds were not obligated and payment was stopped. NSF agreed with our recommendation to initiate a program to ensure that personnel involved in the procurement process are properly trained.

High School Science Teacher Pleads Guilty to Criminal Charges

We assisted local law enforcement authorities in a southeastern state in investigating a complaint that a high school teacher invited students to participate in a research project and then sexually assaulted them during the project. The subject told the students his project was sponsored by NSF, but in fact the subject never received any research funds from NSF and had no connection with NSF or any NSF-funded research. The subject was arrested and subsequently pled guilty to state charges of sexual assault.

| | |
|--|----|
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Statistical Data

AUDIT REPORTS ISSUED WITH RECOMMENDATIONS FOR BETTER USE OF FUNDS

| | <u>Dollar Value</u> |
|--|---------------------|
| A. For which no management decision has been made by the commencement of the reporting period | 3,558,357 |
| B. Recommendations that were issued during the reporting period (these were issued in 5 reports) | 1,734,390 |
| C. Adjustments related to prior recommendations | 1,172,670 |
| Subtotal of A+B+C | 6,465,417 |
| D. For which a management decision was made during the reporting period | 1,969,527 |
| (i) dollar value of management decisions that were consistent with OIG recommendations | 1,904,670 |
| (ii) dollar value of recommendations that were not agreed to by management | 64,857 |
| E. For which no management decision had been made by the end of the reporting period | 4,495,890 |
| For which no management decision was made within 6 months of issuance | 3,206,500 |

AUDIT REPORTS ISSUED WITH QUESTIONED COSTS

| | Number | Questioned Costs | Unsupported Costs |
|--|-----------|------------------|-------------------|
| A. For which no management decision has been made by the commencement of the reporting period | 25 | 8,908,037 | 3,483,419 |
| B. That were issued during the reporting period | 22 | 1,081,676 | 267,305 |
| C. Adjustment related to prior recommendations | 0 | 0 | 0 |
| Subtotal of A+B+C | 47 | 9,989,713 | 3,750,724 |
| D. For which a management decision was made during the reporting period | 20 | 4,942,658 | 2,554,356 |
| (i) dollar value of disallowed costs | N/A | 1,594,213 | N/A |
| (ii) dollar value of costs not disallowed | N/A | 3,348,445 | N/A |
| E. For which no management decision had been made by the end of the reporting period | 27 | 5,047,055 | 1,196,368 |
| For which no management decision was made within 6 months of issuance | 8 | 3,991,797 | 929,063 |

ADDITIONAL PERFORMANCE MEASURES

As required by the Inspector General Act of 1978, we provide tables in each Semiannual Report to the Congress that give statistical information on work conducted by our audit and investigation units.

Tables that provide statistics concerning these required performance measures are on pages 44 and 45. The General Accounting Office and OMB suggested that Offices of Inspector General develop additional performance measures that provide information about their activities. As a result, we developed two additional performance measures to provide additional insights about the work of our office. The two additional measures are “Cost-Sharing Shortfalls” and “Systemic Recommendations.”

COST-SHARING SHORTFALLS—NSF seeks to leverage its resources by acting as a catalyst, promoting partnerships, and, in some cases, obligating grantees to contribute substantial non-federal resources to a project. When NSF award documents require substantial cost sharing, we seek to determine whether grantees are in fact providing promised resources from non-federal sources.

We divide cost-sharing shortfalls into two categories. Shortfalls occurring during the life of a project indicate that the grantee may not be able to provide all promised resources from non-federal sources before completing the project. Shortfalls that remain when a project is complete demonstrate that a grantee has in fact not met cost-sharing obligations; these findings result in formal questioned costs. The table on page 37 provides statistical information about shortfalls occurring during the course of a project and at the completion of the project.

Auditors who conduct financial statement audits at grantee organizations may identify a general deficiency concerning cost sharing (which we classify as a “compliance finding”) but often do not identify the amount of a cost-sharing shortfall (which we classify as a “monetary finding”) because it is not material in the context of the organization’s overall financial statement presentation. We track both monetary and compliance findings that involve cost sharing.

SYSTEMIC RECOMMENDATIONS—OIG staff members regularly review NSF’s internal operations. These reviews often result in systemic recommendations that are designed to improve the economy and efficiency of NSF operations.

We routinely track these systemic recommendations and report to NSF’s Director and Deputy Director quarterly about the status of our recommendations. The table on page 38 provides statistical information about the status of all systemic recommendations that involve NSF’s internal operations.

AUDIT REPORTS INVOLVING COST-SHARING SHORTFALLS

| | Number of Reports | Cost-Sharing Promised | At Risk of Cost-Sharing Shortfall/ (Ongoing Project) | Cost-Sharing Shortfalls at Completion of the Project |
|---|-------------------|-----------------------|--|--|
| A. For which no management decision has been made by the beginning of the reporting period | | | | |
| 1. Reports with monetary findings | 13 | 24,168,673 | 18,552,627 | 1,597,310 |
| 2. Reports with compliance findings | 2 | N/A | N/A | N/A |
| B. That were issued during the reporting period | | | | |
| 1. Reports with monetary findings | 3 | 5,851,162 | 2,628,060 | 0 |
| 2. Reports with compliance findings | 2 | N/A | N/A | N/A |
| C. Adjustments related to prior recommendations | | | | |
| | | 0 | (4,600) | 0 |
| Total of Reports With Cost-Sharing Findings (A1+A2+B1+B2+C) | 20 | 30,019,835 | 21,176,087 | 1,597,310 |
| D. For which a management decision was made during the reporting period | | | | |
| 1. Dollar value of cost-sharing shortfall that grantee agrees to provide | 4 | 9,955,636 | 5,356,881 | 1,587 |
| 2. Dollar value of cost-sharing shortfall that management waives | 5 | 0 | 0 | 811,760 |
| 3. Compliance recommendations with which management agreed | 0 | N/A | N/A | N/A |
| 4. Compliance recommendation with which management disagreed | 0 | N/A | N/A | N/A |
| E. For which no management decision has been made by the end of the reporting period | | | | |
| 1. Reports with monetary findings | 7 | 20,064,199 | 15,819,206 | 783,963 |
| 2. Reports with compliance findings | 4 | N/A | N/A | N/A |

STATUS OF SYSTEMIC RECOMMENDATIONS THAT INVOLVE INTERNAL NSF MANAGEMENT

Open Recommendations

Recommendations Open at the Beginning
of the Reporting Period

23

New Recommendations Made During
Reporting Period

13

Total Recommendations to be Addressed

36

Management Resolution of Recommendations¹

Awaiting Resolution

1

Resolved Consistent With OIG Recommendations

35

Management Decision That No Action is Required

0

Final Action on OIG Recommendations

Final Action Completed

35

Recommendations Open at End of Period

1

Aging of Open Recommendations

Awaiting Management Resolution:

0 through 6 Months

0

7 through 12 Months

1

more than 12 Months

0

Awaiting Final Action After Resolution²

0 through 6 Months

0

7 through 12 Months

0

13 through 18 Months

0

¹ "Management Resolution" occurs when management completes its evaluation of an OIG recommendation and issues its official response identifying the specific action that will be implemented in response to the recommendation.

² "Final Action" occurs when management has completed all actions it had decided are appropriate to address an OIG recommendation.

LIST OF REPORTS

NSF and CPA Performed Reviews

| Report Number | Subject | Questioned Costs | Unsupported Costs | Better Use of Funds | Cost Sharing At-Risk |
|---------------|--------------------------------|------------------|-------------------|---------------------|----------------------|
| 99-1003 | Board of Regents | 274,281 | 182,311 | 0 | 0 |
| 99-1009 | For-Profit Company | 198,666 | 20,463 | 0 | 399,689 |
| 99-1017 | Research Institute | 113,694 | 6,135 | 0 | 0 |
| 99-1025 | Municipal School District | 29,499 | 0 | 30,265 | 1,353,267 |
| 99-1026 | Networking Organization | 12,745 | 7,933 | 0 | 0 |
| 99-1027 | Networking Organization | 50,076 | 47,978 | 0 | 0 |
| 99-1028 | Oceanographic Institute | 53,047 | 0 | 0 | 0 |
| 99-1029 | Oceanographic Institute | 4,019 | 0 | 0 | 0 |
| 99-1030 | Research Foundation | 41,165 | 0 | 0 | 0 |
| 99-1031 | Support Contractor | 127,183 | 0 | 0 | 0 |
| 99-1032 | Math Institute | 0 | 0 | 659,205 | 0 |
| 99-1033 | Math Institute | 0 | 0 | 100,000 | 0 |
| 99-2007 | Calibration Laboratory | 0 | 0 | 445,000 | 0 |
| 99-2008 | Oceanographic Project | 0 | 0 | 0 | 0 |
| 99-2009 | Oceanographic Project | 0 | 0 | 0 | 0 |
| 99-2010 | Science and Technology Centers | 0 | 0 | 0 | 0 |
| 99-2011 | Support Contractor | 0 | 0 | 0 | 0 |
| 99-6007 | Technological University | 9,059 | 2,485 | 0 | 0 |
| 99-6008 | State Dept. of Education | 0 | 0 | 0 | 0 |
| 99-6009 | Engineering Research Ctr. | 0 | 0 | 0 | 0 |
| 99-6010 | Engineering Research Ctr. | 0 | 0 | 0 | 0 |
| 99-6011 | Engineering Research Ctr. | 0 | 0 | 0 | 0 |
| 99-6012 | Engineering Research Ctr. | 0 | 0 | 0 | 0 |
| 99-6013 | Engineering Research Ctr. | 0 | 0 | 0 | 0 |
| 99-6014 | Non-Profit Center | 0 | 0 | 0 | 0 |
| 99-6015 | Research Institute | 85,392 | 0 | 499,920 | 0 |
| | Total | 998,826 | 267,305 | 1,734,390 | 1,752,956 |

LIST OF REPORTS

NSF-Cognizant Reports

| Report Number | Subject | Questioned Costs | Unsupported Costs | Cost Sharing At-Risk |
|---------------|---------------------------|------------------|-------------------|----------------------|
| 99-4008 | Museum | 0 | 0 | 0 |
| 99-4010 | Botanical Garden | 0 | 0 | 0 |
| 99-4011 | Science Academy | 0 | 0 | 0 |
| 99-4012 | Research Station | 3,231 | 0 | 0 |
| 99-4013 | School Association | 0 | 0 | 0 |
| 99-4014 | Technical Institute | 6,308 | 0 | 0 |
| 99-4015 | Communications Institute | 0 | 0 | 0 |
| 99-4016 | Automotive Society | 0 | 0 | 0 |
| 99-4017 | Science Society | 33,000 | 0 | 0 |
| 99-4018 | Astronomical Society | 0 | 0 | 0 |
| 99-4019 | Chemical Society | 5,366 | 0 | 0 |
| 99-4020 | Ocean Sciences Laboratory | 0 | 0 | 0 |
| 99-4021 | Physiological Society | 0 | 0 | 0 |
| 99-4022 | Science Center | 0 | 0 | 875,104 |
| 99-4023 | Corporation | 0 | 0 | 0 |
| 99-4024 | Math Institute | 0 | 0 | 0 |
| 99-4025 | Science Institute | 0 | 0 | 0 |
| 99-4026 | School Association | 0 | 0 | 0 |
| 99-4027 | Math and Science Alliance | 0 | 0 | 0 |
| 99-4028 | Geological Society | 0 | 0 | 0 |
| 99-4029 | Museum | 0 | 0 | 0 |
| 99-4030 | Museum | 0 | 0 | 0 |
| 99-4031 | Ecological Institute | 0 | 0 | 0 |
| 99-4033 | Educational Non-Profit | 0 | 0 | 0 |
| 99-4034 | Telecommunications Co. | 12,053 | 0 | 0 |
| 99-4035 | Center | 0 | 0 | 0 |
| 99-4036 | Center | 0 | 0 | 0 |
| Total | | 59,958 | 0 | 875,104 |

LIST OF REPORTS

Other Federal Audits

| Report Number | Subject | Questioned Costs | Unsupported Costs |
|---------------|-------------------------|------------------|-------------------|
| 99-5059 | University | 785 | 0 |
| 99-5060 | Unified School District | 633 | 0 |
| 99-5070 | State Government | 1,997 | 0 |
| 99-5076 | University | 11,302 | 0 |
| 99-5078 | Institute of Technology | 8,175 | 0 |
| | Total | 22,892 | 0 |

AUDIT REPORTS WITH OUTSTANDING MANAGEMENT DECISIONS

This section identifies audit reports involving questioned costs, funds put to better use, and cost sharing at risk where management had not made a final decision on the corrective action necessary for report resolution within 6 months of the report's issue date. At the end of the reporting period, there were 9 audit reports with questioned costs, 1 report with recommendations for funds to be put to better use, and 4 items involving cost sharing at risk. The status of systemic recommendations that involve internal NSF management are described on page 38.

| Report Number | Title | Date Report Issued | Dollar Value | Status |
|--|-----------------------------|--------------------|------------------|--------|
| Items Involving Questioned Costs | | | | |
| 97-2105 | FFRDC Contracts | 03/31/97 | 641,129 | 1 |
| 98-1018 | Company | 03/31/98 | 705,125 | 1 |
| 99-1002 | University | 10/13/98 | 176,475 | 1 |
| 99-1007 | State University | 11/17/98 | 700,337 | 1 |
| 99-1015 | State Dept. of Education | 03/22/99 | 863,027 | 1 |
| 99-1016 | Museum | 01/26/99 | 332,737 | 1 |
| 99-1021 | College | 03/12/99 | 80,280 | 1 |
| 99-1022 | State Dept. of Education | 03/23/99 | 40,068 | 1 |
| 99-1024 | University | 03/25/99 | 452,619 | 1 |
| | Total | | 3,991,797 | |
| Items Involving Funds Put to Better Use | | | | |
| 98-2107 | Antarctic Flight Operations | 09/30/98 | 3,206,500 | 1 |
| | Total | | 3,206,500 | |

Status Code

1 = Resolution is progressing with final action expected in next reporting period.

AUDIT REPORTS WITH OUTSTANDING MANAGEMENT DECISIONS

| Report Number | Title | Date Report Issued | Dollar Value | Status |
|---|------------------|--------------------|-------------------|--------|
| Items Involving Cost Sharing at Risk | | | | |
| 98-1018 | Company | 03/31/98 | 8,987,733 | 1 |
| 99-1002 | University | 10/13/98 | 1,301,728 | 1 |
| 99-1007 | State University | 11/17/98 | 2,275,162 | 1 |
| 99-1016 | Museum | 01/26/99 | 626,523 | 1 |
| | Total | | 13,191,146 | |

Status Code

1 = Resolution is progressing with final action expected in next reporting period.

INVESTIGATIVE ACTIVITY AND STATISTICS

Investigative Activity

| | |
|---|-----------|
| Active Cases From Previous Reporting Period | 31 |
| New Allegations | 31 |
| Total Cases | 62 |
| Cases Closed After Preliminary Assessments | 2 |
| Cases Closed After Inquiry/Investigation | 21 |
| Total Cases Closed | 23 |
| Active Cases | 39 |

Investigative Statistics

| | |
|---|-----------|
| New Referrals | 3 |
| Referrals From Previous Reporting Period | 6 |
| Prosecutorial Declinations | 2 |
| Indictments (including criminal complaints) | 0 |
| Criminal Convictions/Pleas | 1 |
| Civil Settlements | 2 |
| Civil Complaints | 0 |
| Administrative Actions | 4 |
| Investigative Recoveries* | \$666,148 |

*Investigative recoveries comprise civil penalties and criminal fines and restitutions as well as specific cost savings for the government.

MISCONDUCT CASE ACTIVITY AND ASSURANCE/CERTIFICATIONS RECEIVED

Misconduct Case Activity

| | <u>FY 1999 First Half</u> | <u>FY 1999 Last Half</u> |
|--|-------------------------------|------------------------------|
| Active Cases From Prior Period | 53 | 55 |
| Received During Period | 35 | 31 |
| Closed Out During Period | 33 | 37 |
| In-Process at End of Period | 55 | 49 |
| | | |
| Cases Forwarded to the Office of the Director During Period for Adjudication | 2 | 4 |
| | | |
| Cases Reported in Prior Periods With No Adjudication by the Office of the Director | 1* | 1** |

*This case is described in our [September 1998 Semiannual Report, pages 16 and 17](#).

**This case is described in our [March 1999 Semiannual Report, page 18](#).

Assurances and Certifications Received*

| | |
|---|---|
| Number of Cases Requiring Assurances at End of Period | 3 |
| Number of Cases Requiring Certifications at End of Period | 4 |
| Assurances Received During This Period | 1 |
| Certifications Received During This Period | 1 |
| Number of Debarments in Effect at the End of Period | 3 |

*NSF accompanies some findings of misconduct in science with a certification and/or assurance requirement. For a specified period, the subject must confidentially submit to the Associate Inspector General for Scientific Integrity a personal certification and/or institutional assurance that any newly submitted NSF proposal does not contain anything that violates NSF's regulation on misconduct in science and engineering. These certifications and assurances remain in OIG and are not known to, or available to, NSF program officials.

GLOSSARY

Funds to be Put to Better Use

Funds the Office of Inspector General has identified in an audit recommendation that could be used more efficiently by reducing outlays, deobligating funds, avoiding unnecessary expenditures, or taking other efficiency measures.

Questioned Cost

A cost resulting from an alleged violation of law, regulation, or the terms and conditions of the grant, cooperative agreement, or other document governing the expenditure of funds. A cost can also be “questioned” because it is not supported by adequate documentation or because funds have been used for a purpose that appears to be unnecessary or unreasonable.

NSF’s Definition of Misconduct in Science and Engineering

Fabrication, falsification, plagiarism, or other serious deviation from accepted practices in proposing, carrying out, or reporting results from activities funded by NSF; or retaliation of any kind against a person who reported or provided information about suspected or alleged misconduct and who has not acted in bad faith.

For additional copies or information write

Office of Inspector General
National Science Foundation
4201 Wilson Boulevard, Suite 1135
Arlington, VA 22230

call

(703) 306-2100

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www.nsf.gov/cgi-bin/getpub?oigseptember1999

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Semiannual Report to the Congress



**Office of Inspector General
National Science Foundation**

September 1999