

Office of Inspector General

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SEMIANNUAL  

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REPORT  

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TO THE  

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CONGRESS  

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National Science Foundation

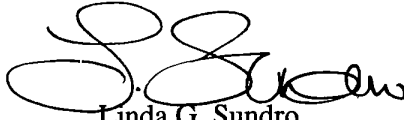
September 30, 1991

**TO THE NATIONAL SCIENCE BOARD  
AND THE CONGRESS**

This is our fifth Semiannual Report to the Congress, and it summarizes our major activities and accomplishments for the second half of fiscal year 1991. Section 5 of the Inspector General Act of 1978, as amended, requires that the National Science Board transmit this report to the Congress within 30 days of its receipt, along with any comments the Board may wish to make.

During this reporting period, we completed a major review of allegations concerning management and contracting practices in one of the agency's divisions. In response to national concerns, we prepared a report that provides information about and an analysis of indirect cost issues.

We appreciate the continued support provided to our office by the National Science Board and the Foundation's management. We especially would like to acknowledge the assistance and strong support of our efforts by the Director, who has made important contributions to our effectiveness during his brief tenure.



Linda G. Sundro  
Inspector General

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## EXECUTIVE SUMMARY

Our work during this reporting period was dominated by a review of allegations directed at the management and contracting practices of one of NSF's divisions. Some of these allegations would, if proven, have constituted criminal violations. Many of the allegations reflected deficiencies that had been previously identified by NSF management. In an attempt to resolve these concerns, we conducted a review that drew on audit, investigative, and legal resources. In-house expertise was supplemented by contract auditors as well as advice and assistance from other federal agencies. Our review did not develop any criminal findings, but did reveal a pattern of mismanagement and poor contracting practices that need to be corrected.

We also conducted a thorough review of a contract solicitation being processed by another NSF division. The findings developed as a result of this review paralleled those of the review described above. We concluded that NSF's communications with an interested party (though not a bidder) to this contract solicitation had violated procurement norms. In addition, we concluded that there had been a systemic failure to evaluate proposals properly and that the requests for proposals had not been written to encourage full competition or cost containment.

During this reporting period, we prepared a report providing information and analysis of many indirect cost issues recently discussed in

congressional hearings. Although NSF-cognizant grantees have problems with indirect cost concepts and applications, we concluded that their problems are different from those which recently resulted in substantial disallowances at some of the nation's largest educational and research institutions. The report also provides information about the development of indirect cost principles and the way indirect costs are calculated at large and small institutions.

We analyzed alternative models for handling misconduct cases. The importance of refining the procedures to process these cases is underscored by sustained growth in the number of allegations received. Two significant plagiarism cases were forwarded to NSF's Deputy Director with recommendations for sanctions. Other investigative work in this period contributed to a criminal conviction and an indictment for embezzlement and wrongful diversion of funds by two NSF grantees.

Our accomplishments have been made possible by the continued support of NSF management and the National Science Board. During his brief tenure, the Director's expressions of support and directives to his staff have substantially improved our ability to fulfill our responsibilities and assist in NSF's mission.

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# A MESSAGE FROM THE INSPECTOR GENERAL ON INDIRECT COSTS

In our last semiannual report, we noted that our review of museums, science centers, and botanical gardens had developed findings that indicated many grantees had an inadequate understanding of indirect cost principles and cost recovery procedures. Specifically, our findings indicated that grantees need to develop a better understanding of indirect cost terminology, pay more attention to the details of indirect cost portions of grant budgets, and learn more about why indirect costs are authorized.

We decided to address these concerns about indirect costs by preparing a report that provides information about NSF grantees and the federal grantee community overall. This recently issued report is entitled *Federally Sponsored Research: How Indirect Costs Are Charged by Educational and Other Research Institutions* (OIG 91-2). The report provides a brief history of the development of federal indirect cost policies, defines terms and concepts used when discussing overhead charges, and describes in simple terms the calculations used to develop indirect cost rates. In addition, our report analyzes why NSF's audit community encounters different problems from those found at major educational and research institutions. The following discussion highlights some of these problems. (Copies of the report are available upon request.)

About 90 percent of NSF's funds go to major research institutions. However, NSF does not have primary responsibility for auditing or negotiating indirect costs for most of these recipient institutions. NSF depends on the

cognizant audit agency (usually the Department of Defense or the Department of Health and Human Services) to negotiate and audit indirect cost rates for most NSF-funded institutions. (A cognizant agency is a federal agency that is responsible for negotiating and approving indirect cost rates for an organization on behalf of all federal agencies.) NSF is the cognizant audit agency for about 500 independent, nonprofit organizations and small businesses it funds. These organizations account for about 10 percent of NSF's funding. In FY 1990, about 1,800 of NSF's approximately 16,000 awards were to institutions other than colleges and universities. These 1,800 awards totaled approximately \$300 million compared to \$1.2 billion awarded to institutions over which NSF does not have cognizance. The average indirect cost rate for NSF cognizant institutions is 56 percent.

NSF encounters different indirect cost problems than agencies that are responsible for indirect cost issues at large research institutions. One of the most basic differences is that universities have multiple missions, while the missions of nonprofit organizations and small businesses are more focused. Large universities and research organizations incur costs for instruction, laboratories, medical and health care expenses, athletics, student activities, and libraries. However, small businesses and nonprofit organizations are usually supported by one or two major functional statements. Their functions and missions benefit more equally from indirect costs.

Another way NSF cognizant entities differ from large research institutions is in the level of skill and experience of their financial management. Universities generally have professional administrators to devise and manage accounting functions and to negotiate indirect cost rates. The primary area of expertise for many of the chief financial officers of NSF's cognizant audit entities is in science or education rather than in administration or accounting.

In general, NSF's cognizant organizations have different budgetary and financial perspectives and approaches from those of major research institutions. At many large colleges and universities, principal investigators do not perceive the direct effects or benefits from indirect costs associated with their individual awards. Often the university's scientists view indirect costs as a drain on their research effort. At NSF cognizant institutions, principal investigators are generally more aware of the uses to which the indirect cost portions of their budgets are applied and see the benefits of these expenses more clearly.

An overwhelming majority of NSF cognizant institutions have only two or three active NSF grants at any time. Generally, the larger the size of an individual grant, the fewer active awards. In most cases, at NSF indirect cost rates are reviewed when a new grant is awarded to an institution.

We are concerned that elements of risk exist in smaller institutions that may result in significant overcharges in the indirect cost area. NSF management will continue to address these potential problems by effectively negotiating and enforcing indirect cost rates for its community of nonprofit and small for-profit organizations, foundations, and associations. To minimize the risks associated with indirect cost reimbursement, NSF must keep the research community informed of concerns, practices, and policies regarding the development of indirect cost rates. In addition, NSF must provide guidelines for presenting and reviewing indirect costs on proposal budgets.

Although NSF's cognizant audit universe of grantees is limited, its interest in and commitment to fair, accurate, and well-documented recovery of indirect costs is not. NSF will be working with the Office of Management and Budget (OMB) and its grantees' cognizant audit agencies to develop revisions of the circulars that guide indirect cost recovery, provide better guidance to its cognizant grantee community, and work more closely with cognizant agencies for large research institutions to develop solutions for problems as they are identified.



## REPORTING REQUIREMENTS

The table below cross-references the reporting requirements prescribed by the Inspector General Act of 1978, as amended, to the specific pages in the report where they are addressed.

Requirement	Page
Section 4(a)(2)      Review of Legislation and Regulations	36
Section 5(a)(1)      Significant Problems, Abuses, and Deficiencies	Throughout
Section 5(a)(2)      Recommendations With Respect to Significant Problems, Abuses, and Deficiencies	Throughout
Section 5(a)(3)      Prior Significant Recommendations on Which Corrective Action Has Not Been Completed	42
Section 5(a)(4)      Matters Referred to Prosecutive Authorities	23
Section 5(a)(5)      Summary of Instances Where Information Was Refused	47
Section 5(a)(6)      List of Audit Reports	48
Section 5(a)(7)      Summary of Each Particularly Significant Report	Throughout
Section 5(a)(8)      Statistical Table Showing Number of Reports and Dollar Value of Questioned Costs	56
Section 5(a)(9)      Statistical Table Showing Number of Reports and Dollar Value of Recommendations That Funds Be Put To Better Use	48
Section 5(a)(10)      Summary of Each Audit Issued Before This Reporting Period for Which No Management Decision Was Made by End of the Reporting Period	42
Section 5(a)(11)      Significant Revised Management Decisions	47
Section 5(a)(12)      Significant Management Decisions With Which the Inspector General Disagrees	47

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# AUDITS

*The following section briefly describes a significant audit completed by our Offices of External and Internal Audit during this reporting period.*

## Review of Allegations Regarding Division's Operations

During this reporting period, we completed a major review of allegations directed at the operations of one of NSF's divisions. These diverse allegations raised questions about contracting practices, conflicts of interest between contractors and NSF employees, the use of federal personnel authority, expenditure of appropriated funds, and the quality of work produced both by contractors and NSF employees. The allegations pertaining to contracting practices and conflicts of interest would, if proven, constitute criminal violations.

Many of the allegations reflected management deficiencies that had been identified and evaluated previously by NSF leadership. Because of the seriousness of some of the allegations and management's desire to have an independent and impartial analysis, we conducted a review that drew on audit, investigative, and legal resources. We expended a substantial portion of the office's resources to complete the review within this reporting period. In-house expertise was supplemented by contract auditors as well as advice and assistance from other federal agencies. This comprehensive review did not develop any criminal findings, but did reveal a pattern of

mismanagement and poor contracting practices that need to be corrected.

The most serious allegations involved contracting practices. Specific allegations involved conflicts of interest between NSF employees and long-time contractors as well as noncompliance with competitive procurement requirements. In response to these allegations we conducted cost and compliance audits of three of the division's largest for-profit contractors. We audited 11 contracts totaling about \$5.8 million spanning a 5-year period. These audits constituted a review of approximately 43 percent of the division's contracting over the last 5 years.

The audits did not result in any questioned costs for two contractors. A proportionally small amount of questioned costs resulted for the third. Records subpoenaed from all three contractors did not reveal payments of gratuities, kickbacks, bribes, or other financial inducements which might indicate that NSF's contracting or program staff had been compromised. In addition, all three contractors submitted sworn statements denying the existence of any such payments or inducements. Although we are concerned about excessive

increases in the amount of the contracts' technical support clauses, our external audits of these contractors developed a generally high level of confidence in their financial management, internal control, and compliance practices.

At the same time these external audits were being conducted, we also examined internal agency records pertaining to these contractors. Internal audit staff reviewed 18 contracts to the same three contractors totaling approximately \$10.9 million, or about 41 percent of the division's awards over the last 10 years. Program files and internal contracting records and related documents were examined and evaluated to determine the level of compliance with federal contracting standards and NSF directives. In addition, we reviewed these records for any indications of favoritism to particular bidders, evidence of bias on the part of technical evaluators or contracting staff, discrepancies between the work proposed and actually performed, and amendments to the contracts that could indicate preferential treatment or poor performance. We interviewed NSF program and contracting staff, the contractors, potential contractors, and unsuccessful bidders on past requests for proposals.

Our internal review did not result in actionable findings of bias or unacceptable contracting practices on the part of any individual, but did identify programmatic and contracting practices that have diminished competition for these awards. We found that the level of competition is unacceptably low as a result of requests for proposals and technical evaluations that give incumbents a significant advantage over new proposers. We did not find that sole-source contracting standards had been abused by this division.

Our internal review also included an in-depth evaluation of a conflict of interest that existed between an NSF employee and a contractor whose work he supervised. A member of the employee's immediate family is employed by the contractor. Our review did not find any criminal violations on the part of the contractor or the employee. However, we are critical of the way NSF responded to legitimate questions about the appearance of impropriety associated with such an arrangement and to requests for clarification by the employee and the employee's supervisors on the extent to which the employee could continue with activities involving the contractor. This portion of our review was coordinated with the U.S. Office of Government Ethics, which concurred with our findings.

Last, our evaluation of the working environment from which most of these problems evolved focused on the division's management for the last 3 years. We did not find that NSF had improperly used its personnel authority. However, we did find that personnel management in the division had been transient and inconsistent. This situation resulted in poor morale; the aggravation of personal and professional conflicts, which undermined professionalism and impeded achievement of programmatic goals; and an unusually high turnover of qualified scientific staff. We did not develop information that would support an investigation of any individual for violating NSF's regulations governing misconduct in science.

In summary, we believe poor management over a period of years created an unhealthy professional environment in which legitimate differences about the quality of work conducted and the conclusions that can be appropriately drawn from such work degenerated into an exchange of accusations. This environment has

not been conducive to resolving underlying questions about the quality of certain data used by NSF in planning its programs.

Our reviews of contracts resulted in a number of recommendations to NSF senior management for corrective action. Specific information about those audits and our recommended actions is contained in the sections which follow. We have also made recommendations regarding the organization and management structure of some of the divisions we reviewed. We are hopeful

that many of the management and administrative deficiencies we identified will be corrected by the reorganization currently being implemented by NSF management. However, both OIG and NSF's Office of Director are aware that deficiencies that developed over a period of years cannot be corrected immediately. We believe management is committed to rebuilding this segment of its operations and will devote the resources and effort necessary to achieving this goal over the next several years.

*The following sections describe audit efforts that resulted in significant findings in such areas as improving internal controls, questioned costs, and noncompliance with federal requirements.*

## External Audit

### Introduction

The Office of External Audit is responsible for audits of grants, contracts, and cooperative agreements funded by NSF's programs and operations. The office conducts financial audits that include a review of accounting records and other financial information for assisting NSF management in determining if amounts claimed or billed for direct and indirect costs are reasonable and allowable, and if the grantee or contractor has complied with laws and regulations under which funding was provided. These reviews are conducted at universities, commercial firms, and nonprofit organizations.

Audits are conducted by independent public accountants, state and federal agencies, and NSF's OIG staff. Reviews of NSF grants and contracts at most educational institutions are performed by public accountants or state auditors under the oversight of the Department of Health and Human Services' OIG. NSF's OIG staff, public accountants under contract directly with OIG, and the Defense Contract Audit Agency conduct audits in the nonprofit and commercial areas. All audit reports processed by the OIG are referred to NSF management for action or information. The Office of External Audit is also responsible for providing advice and assistance to NSF's Division of Grants and Contracts (DGC) in its resolution of the recommendations resulting from the audits.

In addition to the assistance provided for activities directly related to audits, External Audit also provides assistance to NSF by acting as a liaison between NSF and audit groups from the private sector and other federal agencies, arranging for special reviews, obtaining information, and providing technical advice.

## Recent Activities

Over the last 6 months, the Office of External Audit continued to conduct financial and compliance audits, prepared a comprehensive report on indirect costs, and increased its participation in support of other offices in NSF and OIG. These activities involved reviews of (1) two major universities; (2) a major nonprofit organization; (3) NSF programming, contracting, and project accounting at three selected contractors; and (4) the total business management system at a major contractor. The results of these reviews are reported later in this section.

In this reporting period, we processed 146 audit reports. Cognizant audit agencies conducted 100 of these audits. OIG staff conducted 17 audits and public accountants under contract to OIG conducted the remaining 29. The following table shows the total number of reports issued by OIG staff, public accountants, and cognizant auditors since April 1989.

Reporting Period	Cognizant Auditors	Public Auditors	OIG Auditors	Total Reports
04-01-91 to 09-30-91	100	29	17	146
10-01-90 to 03-31-91	99	29	18	146
04-01-90 to 09-30-90	89	28	18	135
10-01-89 to 03-31-90	144	42	6	192
04-01-89 to 09-30-89	87	28	1	116

## ***Closeout of National Computing Center***

In 1985, NSF established a national computing center in Princeton, New Jersey, to support a supercomputer. NSF's portion of the cost for this center was \$55.7 million. The center was supported by NSF and a consortium of major universities. The center's professional staff developed a computer network that connected the computers of the consortium, and they negotiated agreements with private companies to use the network. In 1989, the company that developed the supercomputer stopped manufacturing and supporting it. In 1991, NSF decided to discontinue funding the center.

Our review analyzed the distribution of assets when the center closed and developed financial statements to closeout the grants awarded to the center.

We found that NSF had provided appropriate guidance and approvals for (1) the transfer of the network and the associated equipment, staff, and network agreements to Princeton University; (2) the sale of other equipment; and (3) the sharing of proceeds from the sale of equipment between the center and NSF. We also analyzed and formed opinions about the distribution of proceeds and other funds in the center's investment accounts. We determined that \$3,373,246 belonged to NSF. On September 26, 1991, NSF received a check for that amount.

The center is now formally dissolved in accordance with the laws of New Jersey.

## ***SBIR Grantee Did Not Comply With Government Regulations***

NSF awarded a Small Business Innovative Research (SBIR) grant for \$211,620 to a commercial company that develops, manufactures, and sells products using proprietary membrane technology. The company has one of the world's largest interdisciplinary teams of scientists that work with bio-active membranes.

We questioned \$129,611 in costs because the company did not maintain time and effort records in accordance with government guidelines. In addition, the company could not demonstrate that it obtained the lowest price for purchases of goods and services. We found that

the company did not (1) submit progress and final project reports as required, (2) maintain records for the required length of time, (3) reconcile project costs on the general ledger with the Federal Cash Transactions Reports, (4) have adequately coded and classified source documentation, and (5) compare project costs to budgeted amounts.

We recommended that company officials resolve the questioned costs with NSF and amend the company's administrative and accounting procedures to comply with government guidelines.

## ***Nonprofit Organization Does Not Monitor Subcontracts***

NSF awarded a grant for \$403,058 to a nonprofit organization in California. The primary purpose of the organization is to improve educational programs, which will eventually help businesses obtain qualified young people.

The nonprofit organization awarded a major portion of the grant funds to subcontractors, but did not monitor the performance of the subcontractors.

We found that the nonprofit organization had not (1) monitored expenditures and reporting requirements for three of its subcontractors, (2) separated cash and payroll duties, or (3) supported salaries and wages with timesheets. In addition, funds expended for travel, indirect costs, materials, and supplies were not within the scope of the subcontractors' awards.

We questioned \$125,714 in costs to the subcontractors.

## ***A For-Profit Organization Charged Unsupported and Excessive Costs***

NSF awarded two contracts for an aggregate \$862,224 to a for-profit corporation in Bethesda, Maryland. The organization collected, processed, and analyzed data on federal funds spent at universities, colleges, and selected nonprofits. We questioned \$64,037 in costs because the contractor used estimated costs rather than actual costs; had no documentation to support the costs; and charged excessive costs for in-house reproduction, indirect costs, and fees.

Auditors found that costs were excessive because of inflated reproduction costs and duplicate payments for indirect costs and fees. Duplicate payments were made to a subcontractor because the prime contractor lost employees who were scheduled to complete the

NSF project. With the contracting officer's approval, the prime contractor and the subcontractor received indirect costs and fees for the same work. The indirect costs and fees paid to the subcontractor were not anticipated or identified when the prime contract was signed. The prime contractor did not meet its obligation to complete the contract with its personnel, and therefore, should not have received the full amount of indirect costs for administering the subcontract.

We also identified other internal control weaknesses:

- Duties involving control of assets and recordkeeping were not adequately segregated.

- Purchase orders were not used for the acquisition of equipment and supplies.
- The accounting system did not provide for a comparison of actual costs with budgeted amounts.

- A formal system of selecting, contracting, and evaluating consultants had not been established.

Our review was only recently completed and the organization has not formally responded to the questioned costs and other findings.

## ***Grantee Has Questioned Costs***

NSF awarded a grant for \$489,369 to a small business in Maryland. The grant was for developing and publishing a science and mathematics newsletter for elementary school teachers. We audited \$220,001 of claimed expenditures under the grant and questioned \$115,887.

We found the following questionable practices and internal control deficiencies:

- The grantee did not develop an indirect cost proposal and claimed indirect costs in excess of allowable amounts.
- The principal investigator's direct salary charges were not authorized.
- Consultant services were not supported by written agreements.

- Postage and telephone charges were allocated arbitrarily.
- Costs were claimed in excess of recorded costs.
- The grantee did not (1) remit interest income, (2) report purchases for equipment, and (3) return excess cash to NSF.
- Written policies and procedures were not maintained for accounting operations, employee benefits, travel, and procurement of supplies and equipment.
- Actual and budgeted costs could not be compared.
- Payroll functions were not segregated.
- Required audits were not performed.



## ***Connecticut Museum Claims Exceed Documented Support***

Since 1987, NSF awarded five grants for an aggregate \$1,296,589 to a museum that develops and disseminates science educational materials to teachers in secondary schools. The grantee claimed \$956,289 in costs, and we questioned \$97,420.

Auditors found that the grantee

- incorrectly charged payroll cost and inadvertently charged expenses for materials to the NSF grant;
- used funds for purposes other than intended without NSF's approval;

- did not comply with government procurement standards for \$82,522 in purchases and did not return interest income earned on federal advances to NSF; and
- did not follow the government guidelines for reporting project income, conducting audits, approving time cards, maintaining property records, and obtaining organizational approvals for expenditures.

We recommended that the grantee return \$97,420 to NSF and change its administrative procedures to comply with government guidelines.

## ***Inadequate Documentation To Support Reimbursement Claims***

NSF awarded three grants for an aggregate amount of \$197,088 to a nonprofit organization that provides science and technology educational programs to university and high school students. Our audit questioned \$71,303 in costs and \$3,949 of unremitted interest.

The audit disclosed that the grantee claimed costs not related to the grant, unallowable costs, and direct costs that were inadequately documented. Specifically, the grantee

- duplicated salary charges;
- charged small gifts to the NSF grant;

- did not remit the interest earned on NSF advances;
- claimed costs for magazine subscriptions and clothing;
- did not have adequate documentation to support payroll costs, fees paid to students, travel reimbursements, participant support costs, publication charges, telephone bills, petty cash reimbursement, and indirect costs; and
- violated federal standards by making advance payments, not preparing and submitting indirect cost rate proposals to NSF, and not performing required audits.

*Other audits of grantees conducted by External Audit.*

**CORPORATION FAILS TO CLAIM COSTS ACCORDING TO FEDERAL GUIDELINES:** We audited a commercial corporation in Massachusetts, which received a \$240,000 grant to research a method of cell disruption. The corporation claimed \$172,494 in costs, and our audit questioned \$38,265. Auditors found that the grantee claimed costs in excess of those incurred and did not comply with applicable federal regulations.

**MUSEUM DOES NOT PROVIDE DOCUMENTATION TO SUPPORT REIMBURSEMENT CLAIMS:** Since 1971, NSF awarded 23 grants to a museum in Arizona that conducts research for government and private industries. Our audit questioned \$50,503 in costs. We found that the grantee did not record claimed costs in its accounting system; could not support these unrecorded costs; and claimed salaries, wages, travel, material,

supplies, and indirect costs in excess of allowable amounts.

**NONPROFIT HAS INADEQUATE ACCOUNTING SYSTEM:** We audited a nonprofit organization, located in northeastern United States, which received 20 grants valued at \$443,327. Claimed costs under these awards were \$335,843. We questioned \$125,882 in costs. Many of the questioned costs resulted from the organization's noncompliance with government standards for financial systems and a lack of internal controls. Specifically, we found that the grantee claimed costs in excess of actual costs incurred; claimed indirect costs not approved in the grant's budget; lacked documentation to support costs; and failed to conduct audits as required by OMB Circular A-110, use American carriers for transportation, outside of the United States, and maintain completed time and attendance records.

# Audits Involving Possible Violations of Law

When conducting audits, we sometimes observe or are advised of possible violations of law involving the use of NSF funds. In this reporting period, we conducted three of these audits with the assistance of our legal, investigative, and scientific colleagues. The first summary involves alleged violations of conflict-of-interest rules, the second concerns possible diversion of grant funds, and the third involves embezzlement. The audits were completed in this reporting period and are described below.

## *Ivy League University Fails To Comply With Conflict-of-Interest Rules*

NSF awarded a \$1,671,216 grant to a major university to support the development of a pre-college program that teaches physical science by using astronomy. The university developed text books, videos, and astronomy kits, which were used to demonstrate astronomy concepts. Claimed costs under the grant were \$1,375,240.

It came to our attention that the university may have violated conflict-of-interest rules by awarding rights to manufacture and sell the astronomy kits to a company for which the university's program manager and spouse serve as officers. The university awarded the employee's company a contract to produce and sell the astronomy kits. The company's estimated annual sales of the kits ranged from \$4,050 in 1989 to \$254,024 in 1995.

Our review disclosed that the university had not followed its standard procedures in awarding the contract to the employee's company and had not formally solicited competition for the contract. The contract was awarded after the university made an informal canvass of a few other possible suppliers. We believe that the

university violated federal conflict-of-interest rules when it awarded the program manager's company a contract to sell kits that were developed and promoted with grant funds.

Auditors also found that the university violated other federal guidelines:

- Personnel activity reports were not prepared on a timely basis.
- Program income was not reported to NSF.
- Procurements were not documented.
- Audits of the university's grant activities were not performed.
- Audits of subcontractors were neither performed nor monitored by the university.

We recommended that NSF suspend the grant for the convenience of the government until such time as the conflict-of-interest issue is resolved. Our findings were sent to the university too late in this reporting period to permit officials to respond fully.

## ***University Fails To Inform NSF That Grant Funds Were Misapplied***

NSF awarded two grants to a university to determine the feasibility of developing and making an electronic database of stock market transactions available to the public. Under the terms of the grants, the principal investigator (1) developed the database from information received through the American Stock Exchange and the New York Stock Exchange and (2) agreed to lease the data to academic institutions at the lowest possible price. The income generated from the leasing of the data was intended to fund the cost of maintaining the database after the grants had expired.

We received an allegation that the grant's principal investigator paid employees to perform private consulting work with NSF grant funds. The university received the same allegation and conducted a detailed review. The university's auditors found that the principal investigator misapplied NSF funds by using NSF-funded employees to conduct work related to the principal investigator's personal consulting business and academic duties.

The university auditors recommended that the principal investigator reimburse the university \$35,981. Of this amount, \$32,022 was for NSF funds that were misapplied to salaries and other

expenses for work performed not in support of the NSF project. After extensive negotiations, the principal investigator agreed to reimburse the university \$11,842 from his personal funds. The university credited the entire reimbursement, plus indirect costs, to the second NSF grant. The principal investigator has since relocated to another university.

The university did not inform NSF of the results of its audit, but requested that the remaining grant funds (\$29,473—which includes the reimbursement from the principal investigator) be transferred to the principal investigator's new university.

Our review questioned an additional \$11,217 in costs because the principal investigator charged NSF for unrelated work and the university did not fully credit indirect costs related to funds reimbursed to the grant. The unrelated work was not disclosed in the university audit, even though university officials were knowledgeable about unrelated work being charged to the NSF grant.

We concluded that the university failed to maintain proper control of the subject grants.

## ***Funds Embezzled From Nonprofit***

NSF awarded three contracts for \$4,623,495 to a nonprofit organization in Washington, D.C., to develop an international exchange program for scientists. These funds supported the program for a 5-year period, beginning in 1986.

The nonprofit discovered that one of its employees had embezzled over \$100,000 of federal funds. The employee pleaded guilty to embezzlement charges. The nonprofit has returned \$120,140 to NSF for the embezzled funds and related indirect costs.

After the nonprofit's review and disclosure of the embezzlement, we conducted a financial and compliance audit of the three contracts. Our audit focused on determining: the adequacy of internal controls related to the scientific exchange program, the accuracy and thoroughness of the nonprofit's review, whether costs were accounted for and incurred according to government guidelines, and whether administration of contract funds complied with government guidelines.

Since this incident occurred, the nonprofit has improved internal controls related to the

exchange program. Although the nonprofit conducted an extensive review, we developed an additional \$60,672 in questioned costs. Auditors found

- additional embezzled funds and associated indirect costs,
- inadequate or no documentation to support expenditures,
- travel costs that were neither approved by NSF nor the nonprofit, and
- computer and maintenance costs that were based on estimates rather than actual costs.

We also found that interest earned on federal funds had not been remitted to NSF, program activity reports had not been completed within prescribed due dates, and employees had not received authorization to travel. We completed this review recently, and the nonprofit has not formally responded to our findings. (The investigation of this case is discussed on page 25.)

# **Audit Conducted With NSF's Grants, Program, and Contracting Offices**

In this reporting period, we assisted NSF in conducting a comprehensive review of a contractor that provides logistics and operational support to the U.S. Antarctic Research Program.

## ***Contractor Needs To Improve Financial Policies and Procedures***

We assisted NSF's program and contracting offices in a review of administrative activities (such as property, procurement, financial, and personnel support) conducted by the contractor. NSF oversees \$175 million of expenditures for research, logistics, and operational support for the U.S. government program in the Antarctic. The program aims to increase understanding of the Antarctic region and its relationship to the rest of the planet. The program supports a year-round inland research station at the South Pole, two year-round coastal research stations, and required summer camps for research. In addition, a research vessel is used to assist the scientists in their experiments and air transportation is provided several times per week in the austral summer from early October to the end of February.

NSF has an annual contract for over \$50 million to provide support of day-to-day operations for the Antarctic program. The contractor is responsible for building, operating, and maintaining buildings (personnel housing, research facilities, and other general purpose buildings); scientific support and general purpose equipment; roads; vehicles; and power and water plants. The contractor supplies personnel, materials, and equipment necessary to support the scientific research. The contractor

also administers the leasing of a research vessel, a 219-foot ship built for working in heavy ice. In administering the subcontract for the research vessel, the contractor provides logistics and instrumentation support to research projects using the vessel.

On October 1, 1989, a new contractor began work. NSF conducted a comprehensive review of the contractor's policies and procedures to determine whether the contractor is operating in accordance with government guidelines and good business practices. This review was different from our typical audits because it included a comprehensive analysis of the contractor's policies and procedures for financial and business management. NSF's review determined the contractor's compliance with applicable federal statutes, cost principles, procurement regulations, OMB directives, and sound business practices, and prospectively, the efficiency and effectiveness of the contractor's management policies, procedures, other written operating controls, and their implementation. OIG's portion of the review focused on the financial aspects of the contractor.

The review disclosed a number of conditions at the contractor that require correction to ensure compliance with the terms and conditions of the

contract, applicable federal guidelines, and good business practices. Specifically, the contractor should:

- Arrange for a yearly independent financial audit of its operations.
- Ensure that labor reporting systems are accurate.
- Account properly for "entertainment" on the employees' travel vouchers and liquidate travel advances in a timely manner.
- Perform timely reconciliations on its bank account statements.

- Take advantage of cash discounts on purchases when available.
- Assign different individuals the duties of initiating, preparing, and approving journal entries.
- Bond employees who hold fiduciary duties within the finance and administrative office.
- Complete the accounting manual for policy and procedural duties for employees.

NSF officials and the contractor agreed with our recommendations.

## Internal Audit

### Introduction

Internal Audit is one of two operational components in the Office of Internal Audit and Investigations. Internal Audit is responsible for reviewing and evaluating the financial, administrative, and programmatic aspects of NSF activities. These responsibilities also include evaluating internal controls, reviewing data processing systems, examining allegations of improper actions by NSF staff, performing inspections, and following up on the implementation of recommendations included in both NSF and General Accounting Office audit reports.

### ***Allegations on NSF Division's Contracting Practices***

One of NSF's divisions is responsible for collecting, maintaining, and disseminating information on: comprehensive statistical data concerning the size and scope of federal agency funding in research and development, nationally representative data for research facilities and equipment in higher educational institutions, and characteristics of graduate science and engineering enrollment. The division performs

a great deal of this work through contractual agreements with commercial firms and large nonprofit institutions. From October 1980 to May 1991, the division awarded 53 contracts to commercial firms for \$27 million.

We received serious allegations of improprieties in the way the division awarded and administered contracts. Specifically, it was

alleged that (1) the division did not compete contracts in compliance with federal procurement laws and regulations, (2) requests for proposals and technical evaluations were written to favor incumbents, and (3) technical service clauses were misused in some contracts.

We reviewed a sample of 18 contracts awarded to three commercial firms totaling \$10.9 million, or 40.6 percent of the total contract awards. We examined all of the contracting and program records in both the division's and contracting officers' files, questioned successful and unsuccessful bidders about the division's contracts to obtain their views of NSF's contracting practices and procedures, and interviewed personnel in the division and in DGC who participated in various aspects of the contracts in our sample.

We found no criminal violations of procurement laws or regulations. However, our audit did disclose that:

- There is a perception among some potential bidders that the division's contracts are not competitive.
- Some requests for proposals (RFP) may give the incumbent an advantage over other bidders.

## ***Program Library Security of NSF-Automated Systems***

We conducted a review on the security of NSF computer programs stored in program libraries. Program libraries are storage areas on a computer where the source and executable computer programs and all their required supporting programs are kept. NSF employees use these computer programs to perform such

- Technical evaluation criteria and results of panel assessments on certain RFPs favor the incumbent.
- Technical service clauses designed to allow additional work have been misused in some cases.

Generally, our report's recommendations are aimed at correcting problems related to the allegations. We recommended that:

- a presolicitation conference be held for RFPs from this division;
- proposal evaluation criteria be less specific to allow potential contractors credit for related experience and increase competition; and
- under certain circumstances, technical service clauses should require contract amendments or a competitive process.

Management is currently evaluating our findings and recommendations. Our review was completed too late in this reporting period to permit management to respond fully.

tasks as payroll processing, proposal and award processing, and time and attendance recordkeeping. It is very important to have adequate security for program libraries that contain computer programs for these tasks. Program libraries must be protected against both



accidental and planned attempts to alter or destroy system programs.

NSF's Office of Information Systems (OIS) developed the central application systems that contain the majority of data the agency uses to manage program and administrative functions. OIS personnel designed, wrote, tested, and installed the computer programs to make the services available to NSF employees who are authorized to use them. Newly automated systems and changes to existing systems are frequently requested by the user community, and OIS provides the necessary services to upgrade or replace these systems. Security measures for the applications of program libraries vary because of differences in the types of physical hardware and systems software provided by different manufacturers.

Our audit objectives were to describe the various computer program libraries and evaluate the controls that limit access for program development, testing, and user execution. Our review focused on the vulnerability of the libraries to unauthorized modification or destruction. We also reviewed how management monitors changes to the production versions of programs as well as the security of backup and storage of current application programs.

We concluded that each of the current security systems have been effective in preventing unauthorized access to the application program libraries. We projected that if the number of user systems and software programs on the IBM mainframe continues to grow at its current rate, NSF may need to acquire software that monitors all library changes and provides tracking reports to management. OIS has already recognized this possibility and has begun to evaluate software packages that can provide this capability.

## ***NSF's Distributed Salaries and Expenses Activity Funds***

The Salaries and Expenses (S&E) activity (formerly named Program Development and Management Activity Funds) is responsible for maintaining all funds for staff salaries, travel, rent, equipment, administrative contractual services, and other expenses for the operation and management of NSF. Our audit included travel and general administrative expenses financed by the S&E funds allocated to individual NSF divisions and offices. In FY 1990, these S&E fund elements had obligations of \$2.7 million and \$3.6 million, respectively.

Our review focused on determining whether NSF's S&E funds were managed in accordance with established policies and procedures. We

reviewed procedures, interviewed responsible officials, and tested S&E's fund records for 17 (about 30 percent) of NSF's divisions and offices.

Our review disclosed that many divisions and offices did not comply with established procedures for credit card purchases. We also concluded that NSF should take greater advantage of hotel and motel room tax exemptions.

We recommended that NSF management (1) ensure that divisions and offices are informed about NSF procedures on credit card purchases and (2) encourage NSF travelers to apply for

hotel and motel room tax exemptions where applicable. NSF management agreed with and acted upon these recommendations.

## ***Summary of Other Internal Audit Efforts***

**PREMIUM-CLASS AIR TRAVEL:** We reviewed the frequency of premium-class travel to determine whether such travel was properly authorized. We found that 11 NSF employees were issued premium-class travel tickets from July to December 1990. We found that the special authorizations required for these tickets had either not been obtained or were inadequate. We recommended that NSF management establish procedures that require specific justification for premium-class service be stated on the travel form and ensure that cognizant NSF officials are aware of the agency's policy on authorizing premium-class travel. NSF management agreed with our recommendations.

**FOLLOW-UP REVIEW OF NSF'S THIRD-PARTY DRAFT INVENTORY AND INTERNAL CONTROLS:** We conducted a follow-up review of NSF's third-party draft system, which focused on determining whether weaknesses identified in our initial review were corrected and whether the system's internal controls were properly functioning to safeguard, control, and distribute drafts. We made recommendations to improve

the system by increasing internal controls and ensuring compliance with existing policies. The Assistant Director for Administration concurred with the recommendations and indicated that they have been implemented.

**NSF'S TRAVELERS CHECKS INVENTORY AND CONTROLS:** We reviewed NSF's travelers check operation, which provides travelers checks to NSF employees to pay for their travel expenses. Our review disclosed that: (1) the balance of the travelers check inventory was \$103,900, which was \$600 more than the amount shown on the inventory and disbursement records, and (2) the existing internal controls did not ensure that travelers checks were properly accounted for or safeguarded against errors, omissions, and other irregularities. Various other internal control procedures were not followed. Management agreed with and acted upon all the recommendations made to improve the travelers check operation by increasing the adequacy of internal controls and complying with existing policy and procedures.

**NSF's VOUCHERS PAYABLE SYSTEM:** In our last issue, we reported on the results of our audit on NSF's vouchers payable system. We disclosed that this system did not comply with the Prompt Payment Act. As a result, (1) a quality control system was not established to monitor the performance of the vouchers payable system; (2) a prompt payment report had not been submitted to OMB in 2 years; (3)

discounts were not taken; and (4) payments were made before the payment due date, which cost the government additional interest expense. We made 24 recommendations aimed at improving internal controls and compliance with existing policies and regulations. As of this date, NSF management has agreed to take appropriate action on all recommendations.

## ***AWARENESS MESSAGE***

We issue Awareness Messages to educate employees on their responsibilities for the prevention of fraud, waste, and abuse. These messages explain ways to report suspected instances of wrongdoing and provide contacts for additional guidance or information. During this reporting period, we issued an Awareness Message to all NSF staff. The message discussed the current rules and regulations on the acceptance of gratuities, such as gifts, favors, entertainment, meals, and discounts.

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# INVESTIGATIONS

## Introduction

The Investigations Unit is the second operational component within the Office of Internal Audit and Investigations. It is responsible for investigating violations of criminal statutes as well as regulations involving NSF employees, grantees, contractors, and other individuals conducting business with NSF. The results of these investigations are referred to federal, state, or local prosecutors for criminal or civil prosecution, or to NSF's Office of the Director to initiate administrative sanctions or penalties.

## Summary of Investigative Activities

The Investigations Unit makes a preliminary assessment of the allegations it receives to determine if they should be investigated. Allegations that do not fall within OIG's investigative purview or which are too ambiguous to follow up effectively with our

limited resources are closed. Cases closed after a preliminary assessment may be reopened if additional information warrants such action. The following is a synopsis of our investigative activity.

Active Cases From Prior Reporting Periods	10
New Allegations Received	11
Total Cases	<u>21</u>
Cases Closed After Preliminary Assessment	2
Cases Closed After Inquiry/Investigation	7
Total Cases Closed	<u>9</u>
<b>ACTIVE CASES</b>	<u><u>12</u></u>

Referrals for Criminal Prosecution Pending From Previous Period	2
New Referrals	1
Total	<u>3</u>
Prosecutorial Declinations	0
Indictments	1
Criminal Convictions/Pleas	2
Total	<u>3</u>
<b>REFERRALS PENDING</b>	<b>0</b>
<b>INVESTIGATIVE RECOVERIES</b>	<b>\$125,140</b>
<b>ADMINISTRATIVE ACTIONS</b>	<b>0</b>

## Summary of Significant Cases During This Reporting Period

### *Procurement Action Is Deficient*

In March 1991, we received allegations of impropriety regarding a request for proposals (RFP) to manage an NSF program. According to the RFP, a new contractor was sought to replace the National Academy of Sciences (NAS), which had managed the program since 1952.

Our investigation disclosed that NSF had informally communicated with NAS and had sent a formal letter requesting that it reconsider operating the program. Based on this letter, NAS had every reason to believe that it would continue with the program, and consequently stated so publicly. We concluded that this letter (sent during the competitive procurement stage) violated procurement and ethical norms.

We also learned that the technical evaluation panel that evaluated the proposals submitted in response to the RFP had been chaired by a former NAS employee. While at NAS, this

employee directed the NSF-funded program, and served as the principal investigator of the existing grant with NSF. NSF's regulations on conflicts require employees to obtain a conflicts ruling from appropriate officials when they are involved with a matter that potentially involves their former employer or former colleagues with whom they collaborated closely. The employee obtained such a ruling, which allowed the individual to participate in this matter as long as NAS did not become involved. We concluded that this conflicts ruling was faulty because it became clear that the incumbent remained an interested party. The conflicts ruling did, however, protect the employee from sanctions as long as the terms of the ruling were followed. We concluded, however, that the employee (with the approbation of the division director) violated the conflicts ruling, and thereby violated conflict-of-interest rules, after the individual became aware that NAS had become an interested party.

During deliberations within NSF on proposals submitted in response to the RFP, contracting officials from DGC eliminated the lowest cost proposal from consideration because the price was, in their opinion, unreasonably low. This decision was contrary to the best interest of NSF to minimize its costs and was contrary to the requirements of federal procurement law that lowest cost bids receive favored review, and its inference of the offeror's lack of understanding was belied by that offeror's experience in managing similar programs for other federal agencies.

In addition to the incorrect evaluation of the lowest, reasonable bidder, we concluded that there was a systemic failure to properly evaluate the proposals submitted in response to the RFP. The law requires NSF to evaluate proposals based solely on the factors specified in the solicitation. In our opinion, NSF made decisions about the procurement based on the availability of NAS and not based on price and other factors specified by the RFP. This violation was pervasive and included officials from various NSF components, including program and administrative support staff responsible for contracting.

We also concluded that the RFP was too restrictive because it required a new contractor to replicate the procedures employed by NAS and gave insufficient freedom to offerors to suggest alternative ways to meet NSF's needs. This minimized the chance that an acceptable alternative to NAS could be selected.

Based on our findings, NSF is evaluating whether to take disciplinary action. In addition, based on our concerns, NSF's Director decided

to cancel the RFP and recompet the program. We agreed with this decision. We also recommended that the former NAS employee be recused from participating in the preparation or resolution of a new RFP. Given the events that transpired, we believe this is the only way to protect the employee and NSF from assertions that a potential conflict will influence the resolution of the new RFP.

We also recommended that NSF take the following actions before issuing a new RFP:

- Encourage maximum flexibility and creativity for the bidders.
- Assess the feasibility of dividing the program into functional components for which separate contractors may be sought.
- Give serious consideration to transferring performance of at least parts of the program to NSF.

In addition, we recommended that NSF act to ensure that contracting officers develop a better understanding of the proper procedures to be followed in requesting and obtaining a procurement. We recommended that NSF develop written procedures, which should include detailed and understandable instructions to members of the technical evaluation committees. Finally, we recommended that the Director instruct his staff to give more attention to a reasonable lowest bidder on any competitive procurement to ensure that taxpayers' funds are expended as efficiently as possible. The Director accepted all of these recommendations.

## ***Theft of NSF Funds From Scientific Exchange Program***

About 30 years ago, NSF contracted with NAS to manage an international exchange program for scientists. In April 1991, NAS' internal auditors discovered that NSF funds from this program had been embezzled by a program specialist. NAS contacted the FBI and our office. Our investigation and audit revealed that the program specialist had embezzled over \$100,000. NAS immediately fired the individual. (A more detailed discussion appears on page 15.)

On September 2, 1991, the former program specialist pleaded guilty to violating 18 USC

666, *Theft From a Federally Funded Program*. The program specialist admitted to obtaining and cashing checks for \$105,067 from 1987 to 1991. The defendant had submitted fraudulent living, travel, and housing allowance vouchers for visiting foreign scientists. The program specialist faces a maximum penalty of imprisonment for not more than 10 years and a fine of \$250,000. NAS has instituted internal controls to protect future program funds and has received an insurance settlement. NAS returned \$120,140 (includes embezzled funds and associated general and administrative costs) to NSF.

## ***Fraudulent Use of Grant Funds***

On August 14, 1991, a professor of electrical engineering at the University of California at Los Angeles (UCLA) and four of his relatives were indicted on 23 counts of filing false statements, mail fraud, and conspiracy to defraud the U.S. government. The indictment alleges that the professor used his position as principal and co-principal researcher on government research grants and contracts to hire his relatives to work as his professional assistants without informing UCLA. The relatives allegedly submitted fraudulent monthly timesheets for work performed on the grants and contracts. After the relatives received their monthly paychecks from UCLA, they wrote "kickback" checks to the professor based on a fixed percentage of the gross amount of the UCLA monthly payroll checks. The UCLA

professor has been a principal investigator on various NSF engineering grants from 1975 through 1987 totaling \$1,112,950.

The indictment further alleges that the professor used federal and state funds to purchase scientific equipment from a company he owned. The professor used government funding to purchase readily obtainable equipment from his company at substantially inflated prices by submitting fraudulent invoices to UCLA.

We assisted a joint investigation conducted by the FBI, the Defense Criminal Investigative Service (part of DOD-OIG), the Los Angeles District Attorney's office, and the UCLA Internal Audit Division. Investigators concluded that the defendants fraudulently received

approximately \$1 million by inflating and overstating costs and expenses of various federal, state, and private research contracts and grants. The investigation disclosed that over

\$297,000 in NSF grant funds were fraudulently diverted by the defendants. A trial date has been set for March 3, 1992.

## ***Other Investigative Activities***

**MISUSE OF GRANT FUNDS:** We received allegations that a principal investigator on NSF grants to a major university had diverted grant funds. Deliberate diversion of grant funds from their intended use is a criminal violation and can be prosecuted under several statutes. Our investigation found no criminal actions, but concluded that NSF grant funds were misused. We recommended that the university return unused grant funds and any additional questioned costs to NSF. (This case is discussed in further detail on page 14.)

**CONVERSION AND FORGERY OF NSF LETTERHEAD:** In Semiannual Report No. 2, we reported on assisting a National Aeronautics and Space Administration (NASA) investigation involving a contractor's employee who forged a letter on NSF letterhead for use by his firm in a contract negotiation with NASA. On May 2, 1991, the defendant pleaded guilty to a misdemeanor count of 18 USC 641, *Conversion of Government Property Less Than \$90*. On August 2, 1991, the defendant was sentenced to 2 years supervised probation, ordered to complete 200 hours of community service, and fined \$5,000.



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# OVERSIGHT ACTIVITIES

## Introduction

The Office of Oversight focuses on the science-engineering-education-related aspects of NSF operations and programs. The office conducts and supervises compliance, operations, and performance audits as well as investigations of NSF's programs and operations. It handles all allegations of nonfinancial misconduct in science, engineering, and education and is beginning studies on the general problem of misconduct. It oversees the operations and technical management of approximately 200

NSF programs, undertakes inspections, and performs special audits and studies.

During this reporting period, the Oversight Office continued its outreach activities by speaking at meetings convened by professional organizations, such as the American Association for the Advancement of Science, the Association of College and University Offices, and the American Political Science Association.

## Misconduct in Science and Engineering

### Revised NSF Regulations on Misconduct

During the reporting period, NSF regulations on misconduct in science and engineering were revised. Misconduct is now defined as (1) fabrication, falsification, plagiarism, or other serious deviation from accepted practices in proposing, carrying out, or reporting results from activities funded by NSF; or (2) 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.

In our last semiannual report, we noted NSF's proposed amendments to its regulations on misconduct in science and engineering. The revision was issued by the NSF Director and coordinated with the President's Office of Science and Technology Policy and the Public

Health Service. On May 14, 1991, the amended regulations (45 CFR 689) were published as final and made available to the public in 56 Fed. Reg. 22285. The revisions to NSF's misconduct regulations (1) proscribe misconduct in any science, engineering, and education activity funded by NSF; (2) protect any good faith whistleblower reporting possible misconduct

related to an NSF proposal or award; (3) clarify the definition of an *inquiry* to make clear that a formal investigation must be initiated whenever an inquiry determines that the allegation of misconduct has substance; and (4) make clear the procedures for suspension and debarment of an individual or institution from participation in government programs for a specified period.

**SUMMARY DATA ON MISCONDUCT CASES**

<b>Year</b>	<b>Allegations Received</b>
FY 1989	6
FY 1990	41
FY 1991	52

We have noticed substantial growth in the number of allegations received from FY 1989 to FY 1991, nearly a 9-fold increase.

	<b>FY 1991 First Half</b>	<b>FY 1991 Last Half</b>
Active Cases From Prior Period	26	40
Received During Period	32	20
Closed Out During Period	18	11
In Process at End of Period	40	49

The number of cases in process increased from 3 at the close of FY 1989 to 49 at the close of FY 1991. During this time period, we have increased the number of equivalent staff working exclusively on misconduct from about 1.5 to 2.5.

In the following sections, we report on a revision to OIG's letter to the research community, our observations on some current models used to describe the process of handling allegations of misconduct, our recommendations to NSF's Deputy Director that findings of serious misconduct be issued and sanctions be imposed in two significant cases of plagiarism, and certain findings from our work on conflicts of interest and oversight of NSF's proposal and award system.

# OIG's "Dear Colleague" Letter Revised

After publication of NSF's final rule on misconduct, we revised our "Dear Colleague" Letter to incorporate the May 1991 changes in NSF's misconduct regulations and to clarify certain sections. The revised letter was published in August 1991. It explains to the

research community what happens under NSF regulations when someone makes an allegation of misconduct involving any NSF activities. (Copies of the revised "Dear Colleague" Letter, OIG 91-1, are available upon request.)

## Analysis of Models for the Processing of Misconduct Cases

In recent publications, we have noted two competing models for the way federal offices like ours might handle misconduct cases: a *legal adversary* model and a *scientific dialogue* model. We appreciate this contribution to a difficult and important subject, but we would like to suggest some clarifications and corrections.

As usually presented, the legal adversary model is applied to the whole misconduct case, without distinguishing the investigation stage from the adjudication stage. The processing of a misconduct case would be a court-like process dominated by lawyers. The scientists involved would probably see their role minimized to that of expert witnesses. Issues would be resolved on the basis of the law, rather than on the basis of scientific evidence. This model emphasizes the due process protection of those involved, including the right of the accused to examine witnesses and documents throughout the proceeding. However, because of its confrontational way of proceeding it does not provide anonymity for whistleblowers or confidentiality for the accused party. This model seems artificial to us as a description of

how someone would do an inquiry or investigation; in any case, we do not follow it in this office.

The scientific dialogue model, by contrast, would put misconduct cases in the hands of scientists and would use modes of discussion with which scientists are familiar. The standard illustration of this is a journal editor demanding that the author of a scientific paper present data to back up a disputed claim before the paper can be published. A professional challenge is being made rather than a legal accusation. In general, in the scientific dialogue model the emphasis is on scientific evidence, rather than the law. Due process rights are guaranteed just as in the other model, except that there is no direct confrontation or cross-examination of witnesses by the accused, in order to protect anonymity and confidentiality for both parties.

We believe that it would be a great oversimplification to apply either of these models to a misconduct inquiry or investigation. An inquiry or investigation by a federal enforcement office is not a scientific dialogue because a federal agency is trying to determine

whether wrongdoing occurred. This may lead to the imposition of a serious penalty. In these circumstances, the rights of the parties involved and the legal obligations of the agency are prominent, and the law must constantly be considered. Therefore, it is not possible to exclude lawyers from the process. Moreover, investigative techniques are used, such as taking sworn testimony and securing a subject's laboratory notebooks, that do not occur in scientific dialogues with journal editors.

However, a misconduct inquiry or investigation is also not a courtroom proceeding. The models discussed above fail to make the needed distinction between investigation and adjudication. An investigation by our office is a fact-finding and analytic effort that results in an investigative report. If we wish to recommend a finding of misconduct, we sent the report to the Office of the Director. The Director's Office makes the adjudication as to whether misconduct occurred and whether NSF will impose a sanction. This adjudication involves an adversarial proceeding, and some sort of legal adversary model would be applicable to this stage of the case. However, since our office does not conduct the adjudication, we also do not conduct any adversarial proceedings. We

act as investigators, and when we interview witnesses we deal with them one at a time. We do not hold trials, just as we do not conduct scientific dialogues.

Since an investigation has to be conducted by persons who know how science works, in our office scientists, rather than lawyers, are in charge of misconduct cases. An attorney is assigned to each case in a supporting role, and professional investigators are assigned as needed. Thus, we use a multidisciplinary investigative model based on the contributions of different kinds of professionals. In general, we believe that scientific standards and legal requirements must be met at the same time, and that no choice is possible between them. We provide the procedural rights that are appropriate in an investigation. We go to great lengths to preserve the anonymity of whistleblowers and the confidentiality of the subjects of our investigations. In addition, during the adjudication stage in the Director's Office, NSF provides full due process rights, including the right to examine witnesses and review all documentary evidence. We believe that our approach combines the positive aspects of the legal adversary and scientific dialogue models and goes beyond them.

## Significant Cases of Plagiarism

### Large Midwestern University Finds Extensive Plagiarism

While reviewing proposals for research in electrical engineering, a panelist reported that a proposal from a principal investigator at a midwestern university extensively plagiarized the work of another researcher in the same field.

Following our usual practice, we wrote to the subject asking for his views, comments, or an explanation of the alleged plagiarism. The subject responded that (1) he was "under a lot of pressure to write grant proposals"; (2) he had only a very short time to prepare his proposal

due to teaching and departmental responsibilities as well as preparing a tenure dossier; (3) he had no idea of the "mistake" he had made in referencing due to haste and failure to proofread his proposal; (4) he regretted being so careless in the preparation of his proposal; and (5) he told us "You can rest assured that this has not happened before and that it will never happen again."

Based on our earlier comparison of texts, we were not persuaded by the subject's explanation and asked the subject's university to accept deferral of this case. In February 1991, the university accepted responsibility for conducting the necessary inquiry and investigation into this matter and forwarded a copy of its policies and procedures for handling allegations of misconduct in research. The university assigned the case to its Committee on Research Misconduct, which kept us informed as it proceeded. The following June the Vice President for Academic Affairs and Research transmitted the university's final investigative report. After a thorough review, we accepted the report of the investigation as fair, accurate, and complete.

The university's investigative committee concluded that:

(1) The subject not only plagiarized from the source identified in NSF's allegation, but also plagiarized a second publication. In the investigative committee's judgment the subject "did not take the normal steps or procedures to avoid plagiarism." The committee found that the subject "had reason to believe that his audience would take another's work to be his own and failed to take precautions (by proofreading, proper use of quotations, etc.) to correct any misimpression that might occur."

(2) Plagiarized material from the two sources appears not only in the subject's proposal to NSF, but also in an earlier proposal to the Defense Advanced Research Projects Agency (DARPA) and in a brief Institute of Electrical and Electronics Engineers (IEEE) conference paper; and therefore, the plagiarism of the two sources was a repeated rather than a single, isolated event.

(3) The subject did propose a different method of solution than that used in the publication that he most extensively plagiarized in his proposal to NSF. His proposed solution was based on a method discussed in the second plagiarized source. The principal investigator's unique contribution was linking one source's introduction and definition of the problem to another source's presentation of the method of solution.

(4) The subject's NSF proposal, by extensive copying and paraphrasing, misrepresented as his own the introductory material and the definition of the problem. He did not reference or give proper credit to the researcher whose work was principally plagiarized. The subject also misrepresented as his own both words and some ideas about the method of solution from a publication co-authored by two other engineers.

The investigative committee also addressed the subject's voluntary response to the allegations OIG sent him and found that the subject's various claims of pressure and of time constraints were not truthful. The committee found that the subject sent his proposal to NSF 2 weeks after sending it to DARPA and concluded that he had sufficient opportunity both to proofread his NSF proposal and to eliminate copied material. The investigative committee also rejected the subject's explanation that he intended to reference one of his plagiarized sources, but due to a typing error

he included the wrong reference in his NSF proposal. The committee found that the only sentence in the subject's NSF proposal referring to the plagiarized researcher was taken directly from that researcher's publication. As such, the reference was made by the original researcher who was citing some of his earlier work.

In addition, the investigative committee concluded the subject's statement that this was an isolated incident, which had not occurred before, and would not happen again was false. The subject had submitted the proposal to DARPA 2 weeks before he sent his proposal to NSF, and sometime later, he submitted his conference paper containing the same plagiarized material.

Based on these findings, the university imposed its own sanctions. It sent a letter of reprimand to the subject and made the letter a permanent part of the subject's personnel file at the university. Further, the chairman of the Department of Electrical Engineering was directed to withhold three annual merit salary increases to the subject. Also, for 2 years the subject must

submit to the chairman of his department copies of any proposals he intends to send off-campus. The complete proposal must be accompanied by a transmittal letter, which states that the subject has recently reviewed university policies and procedures for research misconduct and that his proposal is free of misconduct as described in those policies and procedures. Copies of the transmittal letter and the proposal must also be sent to the Deans of the college of engineering and the graduate school. Last, the subject was directed to delete the paper he published in the IEEE proceedings from his university curriculum vitae.

We noted the extensive plagiarism found, the pattern of activity exhibited in the three uses of plagiarized material, and that two government agencies (DARPA and NSF) received proposals containing plagiarized material. Therefore, in forwarding both the university investigative report and the subject's rebuttal for adjudication, we have recently recommended to NSF's Deputy Director that the subject be debarred for a 3-year period.

## **Plagiarism Found in Proposal Submitted From Small Southern University**

We determined that the head of an agricultural research laboratory in a small southern university committed plagiarism in a proposal submitted to NSF. The section on research methods in the proposal was essentially copied verbatim, without acknowledgment, from a paper published by other authors.

In accordance with NSF misconduct regulations, we conducted our own inquiry and then asked

the institution to conduct an investigation. Allegations of plagiarism are very common among the misconduct cases we receive, and this case, as it developed, showed many characteristics that we have seen in other cases. For example, the subject made a defense similar to others we have seen based on carelessness and unintentional oversight. According to the subject, he had a great deal of work, and the plagiarized material was inserted into the

proposal by a typist whose work was not carefully supervised or checked.

The subject's "carelessness defense" was part of an attempt to show that he did not intend to deceive NSF, and that since no one could prove he had such an intent there could not be any finding that he had plagiarized. The university investigating committee accepted this argument. We have found that questions about the subject's intent frequently arise in inquiries and investigations performed at institutions, and often introduce confusion. Many university panels do not show any clear idea of what would be needed to prove intent. They often announce after long, inconclusive discussion that they have not found such evidence, and that therefore plagiarism, or whatever is at issue, cannot be proven.

Our position on this matter is that the evidence for the subject's overt behavior is ordinarily enough to answer any questions about his or her intent. For example, when researchers sign proposals and send them to NSF they take responsibility for any plagiarism that is found in those proposals. Further inquiries into the state of mind of those researchers are beside the point in situations where express certifications are provided.

In this case, the subject also claimed that there could not have been plagiarism because research proposals contain no claim to originality. There was no statement, explicit or implicit, in the proposal saying that the research steps were the original work of the principal investigator. Our office, as well as NSF policy, rejects this position. Proposals do claim originality, unless otherwise stated, and it is important for those

submitting proposals to indicate the sources of any text or research methods that have been borrowed from other authors.

We have also observed that university inquiry and investigation panels tend to compromise by finding that the subject committed some offense less serious than the original allegation. Then a token penalty is imposed by the institution in place of the full sanction that would be appropriate for the offense originally alleged.

All these things happened in this case. The institution found that the subject was guilty of blatant carelessness that constitutes a serious deviation from accepted practices within the scientific community. This was considered to be a significantly lesser degree of misconduct than plagiarism. By way of sanctions, the institution decided to withdraw the proposal, which had already been declined by NSF, and to send the subject a letter of reprimand.

In accordance with NSF's misconduct regulations, we have decided to accept the institution's findings only in part. We accepted the finding that the subject was guilty of misconduct for seriously deviating from accepted practices within the scientific community. However, we also found that this deviation amounted to plagiarism. We have prepared an investigative report supplementing and correcting the report we received from the institution. Our report has recently been forwarded to the Deputy Director of NSF with a recommendation that the subject be debarred from receiving all federal funds for a 2-year period.

**RESOLUTION OF ALLEGATION INVOLVING INTRAMURAL RESEARCH:** During this reporting period, we received an allegation about an NSF employee who conducts research and analysis in support of the agency's policy initiatives. We opened an inquiry to determine whether the evidence would support initiation of an investigation under NSF's regulations governing misconduct in science. We applied the same standards to the intramural investigator that apply to extramural investigators. We concluded that, although misconduct had been alleged, the matter is really a technical dispute that the relevant community of scientists can resolve. Therefore, there was no basis for proceeding with a misconduct investigation.

## Conflict-of-Interest Matters

### Conflict-of-Interest Procedures Revised for the National Science Board

In this reporting period, several difficulties arose in processing conflict-of-interest issues involving individual Board members both prior to and during meetings of the National Science Board. In several instances, Board members who had identified areas of potential conflicts were not appropriately reminded to recuse themselves from actions prior to or during Board meetings. In other instances the Director, an *ex officio* member of the Board, signed documents that involved organizations about which he had advised NSF staff that he had potential conflicts. After these latter errors were recognized, attempts were made to remedy specific problems

by having another official sign a replacement form. Although the particular conflicts problems that arose were not serious, the systemic failures were significant. Accordingly, the Chairman of the Board and the NSF Director both promptly ordered corrective action. The Office of General Counsel (OGC) has been directed to examine conflicts issues involving Board members, review documents that will be presented to the Board at least 30 days before each Board meeting, and issue necessary recusal memoranda to affected Board members. We are hopeful that this review by OGC will prevent similar problems from arising in the future.

### NSB Member Has Noncertifiable Financial Disclosure Report for 1990 and Fails to File for 1991

We reviewed *Executive Personnel Financial Disclosure Reports* (Form SF 278) filed at NSF in 1990. We found that OGC did not certify that one Board member's report disclosed no conflicts of interest. This inability to certify resulted from the Board member's failure to provide all necessary information on SF-278. For 1991, the same Board member did not

submit a financial disclosure report as required. NSF's OGC has requested payment of the \$200 late filing fee and has notified the Department of Justice, and the Office of Government Ethics. On August 2, 1991, for personal reasons the member submitted his resignation to the President.



## **Committee of Visitors Review Misunderstands NSF Process for Resolving Conflicts of Interest**

A Committee of Visitors report on the Design and Computer Integrated Engineering Program recommended that NSF's legal counsel review grants awarded to former NSF program directors. The report also alleged that NSF's conflicts counsellor encouraged alteration of proposal documentation in order to cover up

such a conflict-of-interest in one proposal file. We investigated the committee's allegation, but did not confirm it, and we determined that the allegation against the conflicts counsellor was based on the committee's misunderstanding of NSF rules and procedures concerning the resolution of conflicts of interest.

## **Cost Sharing on NSF Instrument Award on Way to Resolution**

NSF awarded an engineering research equipment grant to a private, eastern university for the purchase of an attenuated total reflectance/Fourier transform infrared spectrometer system. Grant provisions stated that NSF would provide \$70,000 for the purchase of the instrument with the understanding that the university would share the cost by providing an additional \$39,000. The program manager on the project contacted us when the principal investigator expressed disappointment that the purchase of this instrument was delayed because his university failed to share the cost. The principal investigator obtained \$25,000, from a source outside his university, to support his research and applied it to the purchase of a scaled-down instrument. The researcher further claimed that his project was delayed because he had only a scaled-down instrument.

We asked NSF's Division of Grants and Contracts (DGC) whether the outside funds obtained by the principal investigator 1 year later to buy the scaled-down spectrometer package fulfilled the obligation on the university's part to share the cost. Initially, DGC advised the program officer incorrectly because it did not realize that the award in question was an equipment grant and therefore the university was responsible for one-third of the total cost. Because NSF had not yet exhausted its management actions, we directed this matter back to the cognizant NSF program officer and DGC. We asked them to resolve the potentially serious problem of the university's failure to meet the terms and conditions of NSF's equipment awards and to inform us of the final resolution.

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# LEGAL ISSUES

## Introduction

The Counsel to the Inspector General reports directly to the IG and provides legal advice on all OIG activities, including investigations, audits, and oversight of NSF's functions and programs. Under section 4(a)(2) of the Inspector General Act, the Counsel is responsible for making recommendations in OIG's Semiannual Report to the Congress on legislation and regulations that affect NSF-financed programs.

During this reporting period, OIG attorneys supported many of the activities that are described in other sections in this report. OIG attorneys, as part of their duties, have focused on OIG's oversight responsibilities for NSF's legal activities. In this capacity, the Counsel to the IG has commented upon actions taken by OGC and other organizations within NSF in various legal fields. Our relationship with the General Counsel and his principal staff remains cordial and effective. Throughout this reporting period our legal recommendations have been generally accepted by NSF.

## Progress in Promoting Cooperation With OIG

Under the Inspector General Act, we are authorized "to have access to all records, reports, audits, reviews, documents, papers, recommendations, or other material," which relate to NSF's programs and operations. We also are obligated to summarize in our Semiannual Reports to the Congress any instance when information or assistance "is, in the judgement of the Inspector General, unreasonably refused or not provided."

During our review of a program (see page 23), we encountered substantial difficulty in obtaining documents from employees in DGC, OGC, and the program directorate. Although

some employees did cooperate with us, some refused to provide us with documents, while others demanded a formal written request. Although employees were directed to cooperate with us, it took several iterations to obtain all requested documentation. These actions made it very difficult for us to assess quickly whether we should devote further resources to the alleged impropriety that we were then reviewing only informally.

We informed NSF's Director about these difficulties, and he promptly ordered all involved staff to cooperate fully and promptly with our investigation. In addition, the Director

issued a memorandum to all NSF staff (O/D 91-18) directing prompt and full cooperation with all requests for assistance from our office. The Director stated that “Requests from the IG’s staff for records, documents, or interviews should receive priority attention. The OIG is entitled both by law and by Foundation policy to all records, documents, papers, and other materials that relate to NSF programs and operations.” The Director explained to his staff that under the law we are “under no obligation

to inform staff of the reasons for [OIG] requests and often may be precluded from doing so.” The Director also explained that we “need not provide a written request or receipt for documents or files turned over to them.” Finally, the Director concluded that “The interests of the Foundation and its staff will be best served by completely open and forthright cooperation with our Inspector General.” We believe that the Director’s actions have substantially increased cooperation.

## Noncompetitive Procurements Have Not Been Adequately Documented

Under the Competition in Contracting Act, contracts awarded by federal agencies must be openly and fairly competed unless an exception applies. The most commonly used exception is that the services needed by the agency are available from only one responsible source. Before a contract may be awarded under any of the exceptions, that action must be fully justified, in writing, according to procedures set out in the statute and amplified in the Federal Acquisition Regulation (FAR).

During our review of an NSF program (page 23), we found that justifications for sole-source contracts needed improvement. We then expanded our review to cover nine other recent written justifications for sole-source contracts. Our review focused solely on the adequacy of the written justifications. We did not review the underlying contracts or any other documents. We found these justifications to be consistently inadequate, both procedurally and substantively.

In our opinion, none of the justifications complied with all of the FAR’s procedural requirements, and most complied with few. The objective of the procedural requirements is to force the agency to analyze its reasons for having other than full and open competition and to help the agency determine how it can obtain competition in the future. One benefit of compliance with the prescribed procedures is that a later review to assess compliance with the law’s substantive requirements is facilitated. The poor quality of the justifications we reviewed made it impossible for us to confirm whether a sole-source contract was justified in particular cases.

We concluded that the written justifications we reviewed were not adequate. We advised DGC to work with OGC to ensure that in the future sole-source contracts are entered into only when necessary and after compliance with FAR’s procedural and documentation requirements. Management is currently reviewing our findings and recommendations.

# Summary of Other Legal Issues

**MISCONDUCT REGULATION FINAL:** In this reporting period, NSF's final amendment to its regulation on misconduct in science and engineering was published without substantive modification from the proposed rule. The final rule, which was published at 56 Fed. Reg. 22285 (May 14, 1991), is discussed on page 27.

**CHANGES TO GRANT FORMS AND TERMS AND CONDITIONS CONCERNING FINANCIAL IRREGULARITIES:** NSF agreed with and acted upon our previous recommendation to amend the terms and conditions of its grants to require grantees to advise NSF when grant recipients become aware of substantial problems relating to the administrative or financial aspects of the grant. In addition, NSF has agreed to, but has not yet taken the following actions based on our prior recommendations: (1) adopting language in its Grant Policy Manual advising grantees that the agency, when evaluating possible remedial action, will consider whether grantees had informed NSF about significant problems, and (2) modifying the grant forms to include signed certifications informing the signatory that providing false information or a false claim can be a violation of criminal law.

**CHECKING FOR DEBARRED PARTIES:** NSF acted on our recommendation to begin manually checking every new contractor, grantee, and principal investigator against the procurement and nonprocurement debarment lists published by the Government Services Administration (GSA), as required by the FAR. Unfortunately, GSA publishes the information in a form that is very difficult to use and does not provide the list in an electronic format that is useful to NSF.

**OGE'S PROPOSED CONFLICT-OF-INTEREST RULES SHOULD BE MODIFIED:** On July 23, 1991, the Office of Government Ethics published its proposed uniform standards of ethical conduct for executive branch employees and invited comments. NSF's General Counsel provided extensive comments, which we reviewed and found unobjectionable. However, we wrote separately to the Office of Government Ethics because its proposed standards may supersede NSF's *1-year rule*, which prohibits NSF employees from representing themselves or others for a 1-year period after they leave NSF.

**OTHER REGULATORY CHANGES:** In this reporting period, NSF acted on our prior recommendation to amend its regulations on the Freedom of Information Act (FOIA) to give our office the authority to decide whether OIG records should be released pursuant to a FOIA request. (56 Fed. Reg. 33,777 (Sept. 19, 1991).) OGC has agreed to, but has not yet acted on, our previous recommendation to adopt a regulation authorizing NSF to debar deficient contractors.

**REVIEW OF LEGAL MATTERS INVOLVING NSF DIVISION:** We reviewed allegations that NSF (1) does not provide expected service employees with protections similar to those provided to employees in

the government's general work force; (2) disregarded a congressional command to reduce its administrative staff, but instead reduced the staff of a division; and (3) disregarded the requirements of the Federal Advisory Committee Act. We looked into each of these allegations and found them to be without legal or factual support. We also reviewed a legal opinion by OGC concerning a conflict of interest of an employee of an agency division whose spouse was employed by the division's contractor. The Office of Government Ethics endorsed our conclusion that the OGC's legal opinion was reasonable. However, we did identify systemic problems in the handling of conflicts issues, and we made recommendations for corrective action.

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## SIGNIFICANT AUDIT RECOMMENDATIONS FROM PREVIOUS SEMIANNUAL REPORTS

We are responsible for reporting to Congress and following up on the resolution of audit recommendations. From April 1, 1991, to September 30, 1991, five reports with significant audit recommendations have been resolved. These reports were noted in previous OIG Semiannual Reports to the Congress (Numbers 2, 3, and 4).

### ***“Research Center Improperly Handled Interest Income”***

*Period First Reported: October 1, 1989 - March 31, 1990*

NSF awarded grants to a private nonprofit research center that develops computer software for educational purposes.

Our review disclosed that the research center did not report income as required and withdrew federal funds before they were needed to meet program expenditures. In addition, federal funds were not deposited in interest-bearing accounts as required by an OMB circular. Failure by the grantee to comply with interest income and drawdown requirements of the grant award cost the federal government more than \$17,000 in interest income and placed an additional \$133,000 at risk. The audit questioned \$11,905.

As a result of the resolution process, the research center spent the unreported project income for completion of the project in addition to \$2,789 of its own funds. NSF sustained \$2,593 of the questioned costs—by accepting an adjusting entry for \$2,056 and a check for \$537 for audit closure.

### ***“Museum Improperly Enters Into Contracts and Consulting Agreements”***

*Period First Reported: April 1, 1990 - September 30, 1990*

NSF awarded a \$1,627,901 grant to a natural science museum to produce a series of science curricula designed

to make science more accessible to elementary school children and their teachers.

Our review disclosed questioned costs resulting from (1) incorrectly allocating an individual’s salary and fringe benefit costs, (2) charging unallowable expenses to the grant, (3) incorrectly charging indirect costs as direct costs, and (4) awarding contracts and consulting agreements in violation of federal conflict-of-interest rules. We questioned \$249,802 in costs.

NSF has disallowed \$8,941 of the questioned costs and allowed \$241,540 of related party transactions on an *equity argument*. (The equity argument attempts to show that fair market value was received for the transactions questioned.) The grantee also received a strong statement of caution on the seriousness of related party transactions.

### ***“Fringe Benefits Claimed at Northeastern Nonprofit Exceeded Actual Costs”***

*Period First Reported: April 1, 1990 - September 30, 1990*

A nonprofit natural science corporation, located in the northeastern United States, had 36 awards valued at \$4,775,307. Claimed costs were \$3,866,845. Our audit questioned \$98,706 in costs because the actual fringe benefit costs were less than those claimed on the grants.

The grantee’s documentation supported \$16,342 in questioned costs. NSF disallowed \$82,364 of questioned costs. However, NSF allowed the institution to substitute \$65,839 of previously unclaimed costs that were directly related to the implementation of the grants, and NSF requested a \$16,525 repayment.

## **“SBIR Grantee Increases Subcontract Costs Without NSF Approval”**

*Period First Reported: October 1, 1990 - March 31, 1991*

NSF awarded a Small Business Innovation Research (SBIR) grant for \$193,600 to a for-profit small business that works on catalytic air cleaners.

The corporation had questioned costs of \$98,354 resulting from a significant increase in the subcontracting of services without receiving NSF approval, a lack of support for the salary charged for the principal investigator, and a lack of invoices for payments made to a consultant.

The grantee provided supporting documentation for the principal investigator and consultant services along with documentation for offsetting the other questioned costs. NSF received \$2,515 for interest earned and costs claimed that occurred after the award expired.

## **“University Controls Development of Grant Byproduct”**

*Period First Reported: October 1, 1990 - March 31, 1991*

We conducted a review of an allegation at a major eastern university. The allegation concerned the uses of federal funds to support a company that was not the recipient of an NSF grant, but was owned by an individual who was the principal investigator on an NSF grant. The allegation was not substantiated, but we questioned \$19,179 in claimed costs.

Based on the information received from the grantee, the questioned costs were allowed.

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## REPORTS WITH OUTSTANDING MANAGEMENT DECISIONS

No management decisions have been made for the following 63 reports. The first 57 reports listed have questioned costs. The remaining 6 reports have compliance recommendations that have not been resolved. DGC is tasked with resolving recommendations in External Audit reports. During this reporting period, DGC resolved 27 of the 83 reports with questioned costs that were over 6 months old. They also resolved 4 of the 10 reports with compliance findings that were unresolved at the beginning of the period. Continued attention must be given to all unresolved reports. When a report is more than 1 year old, the resolution process becomes more difficult. OIG and DGC will continue to work together to improve audit resolution.

Audit Number	Title	Date Report Issued
Reports with questioned costs:		
89-1206	Atlanta Thoughtworks One	07/11/89
89-1207	Ctr. Adv. Study Behav. Sci.	07/11/89
89-1223	KMS Fusion, Inc.	08/25/89
90-1034	Slotta Engineering Assoc., Inc.	10/05/89
90-1125	Englekirk & Hart Consulting Engr.	12/18/89
90-1129	Santa Fe Institute	12/27/89
90-1136	U.S. Automation	01/04/90
90-1139	Cyclotomics, Inc.	01/12/90
90-1184	Building Systems Development	02/28/90
90-1190	Verax Corporation	03/23/90
90-1217	ITT Antarctic Services, Inc.	05/04/90
90-1230	New York Hall of Science	05/31/90
90-1236	American Society of Mechanical Engineering	06/21/90
90-1241	COMCO	06/21/90
90-1247	Artificial Intelligence Research Inst. of Texas	07/13/90
90-1254	Discovery Learning, Inc.	08/09/90
90-1307	Calif. Academy of Sciences	08/29/90
90-1308	S.E. Consortium for Minorities in Engineering	08/30/90
90-1317	Recording for the Blind, Inc.	08/31/90
90-1320	Aeon Systems	09/21/90
90-1325	Pacific Science Center Foundation	09/24/90
90-1327	Westover Consultants, Inc.	09/24/90
91-1001	Paths/Prism	10/30/90
91-1002	Anver Bioscience Design, Inc.	11/15/90
91-1004	American Chemical Society	11/15/90
91-1005	American Statistical Association	11/15/90
91-1006	American Geological Institute	11/15/90
91-1009	Corridor Partnership for Excellence in Education	11/21/90



91-1034	Hahn Engineering, Inc.	12/12/90
91-1035	Research Biochemicals, Inc.	12/12/90
91-1038	Prism Productions	12/21/90
91-1039	Pennsylvania State University	12/27/90
91-1040	Applied Management Sciences	12/27/90
91-1058	Howard University	01/03/91
91-1063	American Society of Zoologists	01/04/91
91-1069	Field Museum of Natural History	01/10/91
91-1093	Maine Audubon Society	01/22/91
91-1098	Southeastern Universities Research Association	01/26/91
91-1100	Spaceborne, Inc.	01/26/91
91-1115	Courtesy Travel Services	01/31/91
91-1116	La Jolla Institute	02/01/91
91-1117	Penn State University	02/11/91
91-1120	Wisconsin Academy of Sciences, Arts & Letters	02/14/91
91-1121	Kalamazoo Area Math & Sci. Center	02/15/91
91-1122	Life Lab Science Program	02/25/91
91-1124	Federal Electric Corporation (ITT)	02/25/91
91-1128	Electroimpact, Inc.	02/25/91
91-1132	American Society of Civil Engineers	02/25/91
91-1133	Optima Systems	02/25/91
91-1135	National Public Radio	03/06/91
91-1136	American Geophysical Union	03/11/91
91-1137	Rangen Aquaculture Research Center	03/10/91
91-1138	Texas Learning Technology Group	03/10/91
91-1139	Torrey Pines Institute for Molecular Studies	03/11/91
91-1143	Thermalon	03/25/91
91-1145	National Association of Biology Teachers	03/27/91
91-1146	Center for Applied Linguistics	03/25/91

Reports with only compliance recommendations:

90-1303	ITT Antarctic Services, Inc.	08/28/90
90-1315	Scholastic, Inc.	09/07/90
91-1041	Cyberoptics Corporation	12/28/90
91-1060	Skidaway Institute of Oceanography	01/03/91
91-1064	Harbor Branch Oceanographic Institute, Inc.	01/09/91
91-1141	American Astronomical Society	03/15/91

*The following eight audits were highlighted in Semiannual Report No. 4 (October 1, 1990 - March 31, 1991).*

### **“Museum Has Questioned Costs”**

NSF awarded 49 grants to a natural history museum for an aggregate amount of \$7,333,292. Claimed costs under these awards were \$5,306,944. Our audit questioned \$52,173 in costs because (1) unidentified costs were claimed, (2) some of the subcontract and related costs claimed were unsupported, (3) fringe benefits were claimed in excess of actual costs, and (4) indirect costs were claimed in excess of predetermined indirect cost rates.

DGC is awaiting the museum’s response to the findings.

### **“A Majority of Thirteen Grants To Association Has Questioned Costs”**

NSF awarded 13 grants for an aggregate amount of \$4,887,741 to a professional association. The association claimed expenditures for \$3,970,652. Our audit questioned \$768,037 of claimed costs because: (1) labor and fringe benefit costs were not supported by timesheets; (2) unallowable costs for meetings, including alcoholic beverages were charged against the grant; (3) claimed costs were not recorded on the books of account; (4) claimed costs were inadequately documented; and (5) indirect costs were claimed in excess of allowable amounts.

NSF met with the association on May 16, 1991. Most of the unresolved costs involve cost sharing and indirect costs. A position on these issues is currently being developed by NSF.

### **“Nonprofit Does Not Provide Documentation To Support Reimbursement Claims”**

NSF awarded 10 grants for an aggregate amount of \$1,998,449 to a nonprofit society for support of in-service training workshops, travel grants, and a young scholars’ partnership program. We questioned \$227,738 in costs.

Our review found that (1) documentation was not available to determine the reasonableness of consultant’s fees, (2) salaries and fringe benefits were claimed at budgeted amounts rather than actual expenditures, and (3) indirect costs were claimed in excess of actual expenditures.

Final resolution is expected in early FY 1992.

### **“Nonprofit Fails To Claim Costs in Accordance With Federal Guidelines”**

NSF awarded a \$1,558,192 grant to a nonprofit organization to develop an experimental science curriculum for elementary schools. Claimed costs were \$832,726.

Our audit questioned \$102,986 in costs because the nonprofit organization did not comply with the cost principles and administrative guidelines required by OMB circulars.

Resolution is expected in the next reporting period.

## ***“Institute Claims Unsupported Travel Costs”***

A Virginia nonprofit institute received 12 awards for sponsorship and support of travel to national and international conferences. The awards totaled \$603,799 and claimed costs were \$564,572.

NSF has received documentation from the grantee. After reviewing the documentation, NSF still had questions and therefore asked the grantee to address the questions.

## ***“Research Firm Fails To Maintain Records”***

NSF awarded a \$225,000 grant to a small business involved in the delivery of unique biochemicals used in neurological research.

The audit questioned \$89,291 for (1) all salaries, wages, and fringe benefits claimed; (2) inadequate documentation to support expenditures for materials and supplies; and (3) indirect costs claimed in excess of allowable expenditures.

Final action is expected within 30 days.

## ***“Commercial Firm Earns Interest on NSF Funds”***

NSF awarded two grants totaling \$2,255,496 to a privately owned for-profit corporation that provides technical and scientific information to commercial television stations. Claimed costs were \$2,113,620.

Our audit questioned \$410,338 and recommended that an additional \$21,175 of interest earned on NSF advances be returned to NSF. The questioned costs resulted from: salary costs not being adequately supported, a personal loan was charged to the grant, invoices supporting expenditures were not available, and indirect costs were charged at a rate higher than the actual rate or the maximum provisional rate.

DGC is awaiting the organization’s response to the findings.

## ***“Commercial Company Inappropriately Claims Costs”***

NSF awarded a \$205,205 grant to a commercial company to promote scientific research. Our audit reviewed \$146,791 in claimed expenditures. We questioned \$112,065.

We recommended that NSF terminate the grant and require the company to return \$112,065 in questioned costs, plus \$1,700 in interest and dividends earned on NSF funds to NSF.

NSF has been involved in extended discussions with the grantee and his counsel. The grantee has submitted information for questionable activities under the grant. NSF is still reviewing the information.

*The following three audits were first reported in Semiannual Report No. 3 (April 1, 1990 - September 30, 1990).*

## ***“Nonprofit Fails To Correct Deficiencies”***

NSF awarded two grants for an aggregate \$779,768 to a nonprofit institution, located in the southeast, to increase the number of minority students who qualify for and complete the study of engineering. In 1988, NSF conducted an interim audit on the first of the two grants. We questioned \$63,625 in costs. During negotiations, the grantee assured NSF that its problems had been resolved.

We conducted a second audit and questioned \$162,142. This amount is comprised of \$63,625 from the original audit and an additional \$98,517 of newly questioned costs. We questioned these costs because they were unsupported, not in agreement with the grantee’s records, and charged to the incorrect grant.

An NSF program officer reviewed documentation submitted by the grantee on June 25, 1991. Additional documentation was received on August 20, 1991, and is currently being reviewed. The grantee is trying to establish an equity argument to support its position. Resolution is expected within the first quarter of FY 1992.

## ***“Corporation Does Not Retain Documentation for Grant Expenditures”***

NSF awarded a \$340,088 grant to a nonprofit corporation, which provides innovative learning experiences and opportunities for youth and adults. We questioned \$285,095 in costs because the grantee did not have adequate documentation to support its expenditures.

During the current reporting period, NSF received the summary of charges from the grantee, reviewed the documentation, and requested more details for certain charges. On August 25, 1991 the response to that request was received. DGC is reviewing the documentation and resolution is expected in early FY 1992.

## ***“New York Museum Claims Exceed Documented Support”***

A science museum in New York had four NSF grants totaling \$913,713. Our audit identified \$370,958 in questioned costs, which resulted from (1) costs claimed twice, (2) lack of cost sharing, (3) indirect costs claimed in excess of allowed expenditures, (4) salaries and wages that did not have after-the-fact activity reports, and (5) costs charged that lacked supporting documentation.

NSF is reviewing the appropriateness of the audit recommended indirect cost rate at zero percent. The local government provides operating funds for the general support of the museum and therefore it does not have any *true* indirect costs. Resolution is expected during the first quarter of FY 1992.

*The following four audits were first highlighted in Semiannual Report No. 2 (October 1, 1989 - March 31, 1990).*

## ***“Inadequate Documentation To Support Matching Funds Agreement”***

NSF awarded two “phase II” grants under its SBIR program to a privately held corporation. The corporation

used the grant funds to develop an efficient process to produce various kinds of cells for medicine and research.

Our report questioned \$161,870 for internal material/supply charges, computer time, and costs associated with the operation of a bioreactor. NSF is in the negotiation stages of resolution of these questioned charges.

## ***“Grantee’s Claims Not Substantiated”***

NSF awarded three grants for an aggregate amount of \$375,094 to a commercial corporation in the building industry specializing in techniques for mitigating the effects of earthquakes. Our audit disclosed that 62 percent of the federal funds withdrawn had not been spent for purposes specified in the grant agreements.

NSF is still determining the appropriate levels of questioned costs to allow.

## ***“Documentation of Small Business Expenses Lacking”***

NSF awarded a \$188,254 grant to a commercial corporation to develop and construct a new machine tool to make steel wire used for reinforcing concrete.

Our review disclosed that the corporation did not have adequate documentation to support its expenditures under the grant.

Resolution of the report was delayed because of an initial refusal by the grantee’s accountant to release documents. Resolution is expected within the next few months.

## ***“Inappropriate and Unsupported Payroll Cost Questioned”***

NSF awarded two grants for an aggregate \$406,092 to a commercial corporation.

The corporation had questionable costs resulting from claims for funds in excess of expenditures and salaries for individuals who did not maintain approved timecards and

who had not been included in the original projects' budget.

Completing the resolution has been delayed because of (1) a change in the company's ownership and (2) difficulties in establishing contacts for negotiation and resolution of

the audit. One of the required final reports has been received from the new owners with the second final report promised. If the second report is not received, the audit will be resolved in FY 1992 using available information.

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## **AGENCY REFUSALS TO PROVIDE INFORMATION OR ASSISTANCE**

In this reporting period, there was one matter in which requests for documents or assistance were initially refused by NSF staff. The issue was appropriately resolved by NSF's Director (see page 36).

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## **INSPECTOR GENERAL'S DISAGREEMENT WITH SIGNIFICANT MANAGEMENT DECISIONS**

The Inspector General has no disagreement with significant management decisions made during this reporting period.

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## **SIGNIFICANT MANAGEMENT DECISIONS WHICH WERE REVISED**

No significant management decisions were revised during this reporting period.

# LIST OF REPORTS

We issued the following audit reports and, where applicable, the total dollar value of questioned costs (including a separate category for the dollar value of unsupported costs) is listed for each report. During this reporting period, we did not have any reports with recommendations on how to use funds more efficiently.

## EXTERNAL AUDIT

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-1147	ITT Antarctic Services, Inc.	04/29/91	0	0
91-1148	Student Pugwash, Inc.	04/29/91	75,252	0
91-1149	AeroChem Research Laboratories, Inc.	04/29/91	0	0
91-1150	Institute of Electrical & Electronic Engin.	04/29/91	125,882	55,017
91-1151	Georgia State University	04/29/91	0	0
91-1152	Assoc. of Univ. for Research in Astronomy	04/29/91	0	0
91-1153	Cleveland City School District	04/29/91	0	0
91-1154	Amarillo College	04/29/91	0	0
91-1155	State of California	04/29/91	0	0
91-1156	State of Louisiana	04/29/91	0	0
91-1157	Assoc. of Bay Area Governments	04/29/91	0	0
91-1158	Temple, Barker, & Sloane, Inc.	04/29/91	0	0
91-1159	Assoc. of Bay Area Governments	04/29/91	0	0
91-1160	University of Georgia	04/29/91	0	0
91-1161	SRI International	05/01/91	0	0
91-1162	Northeastern Ohio Univ. College of Med.	05/01/91	0	0
91-1163	Indiana State University	05/07/91	0	0
91-1164	Univ. of Calif.—San Francisco	05/07/91	0	0
91-1165	Christopher Newport College	05/07/91	0	0
91-1166	University of Notre Dame du Lac	05/07/91	0	0
91-1167	New York University	05/07/91	0	0
91-1168	Westat, Inc.	05/07/91	0	0
91-1169	State of Tennessee	05/07/91	0	0
91-1170	University of Virginia	05/07/91	0	0
91-1171	Medical College of Georgia	05/07/91	0	0
91-1172	Georgia Southwestern College	05/07/91	0	0
91-1173	Energy Environmental Research Corp.	05/07/91	0	0
91-1174	SRI International	05/07/91	0	0
91-1175	University of Pennsylvania	05/07/91	0	0
91-1176	Southwestern Oklahoma State University	05/07/91	0	0
91-1177	Texas Southmost College	05/07/91	0	0
91-1178	Lucas County Board of Education	05/07/91	0	0
91-1179	Lucas County Board of Education	05/07/91	0	0
91-1180	University of Miami	05/07/91	0	0

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-1181	Amarillo College	05/07/91	0	0
91-1182	State of Minnesota	05/07/91	0	0
91-1183	Western Kentucky University	05/07/91	0	0
91-1184	Pennsylvania State University	05/09/91	1,223	0
91-1185	Dull Knife Memorial College	05/09/91	0	0
91-1186	Bio-Engineering, Inc.	05/20/91	38,265	2,667
91-1187	American Economic Assoc.	05/20/91	3,469	0
91-1188	Eastern Kentucky University	05/20/91	0	0
91-1189	Oregon Museum of Science and Industry	05/20/91	0	0
91-1190	Towson State University	05/22/91	0	0
91-1191	Planning Research Corp.	05/22/91	0	0
91-1192	American Academy of Arts & Sciences	07/01/91	2,468	0
91-1193	Business Labor Council of Ventura Cty.	06/19/91	125,714	0
91-1194	Carle Foundation	05/30/91	3,218	593
91-1195	Northern Kentucky University	06/14/91	0	0
91-1196	Skidaway Institute of Oceanography	06/14/91	55,793	55,793
91-1197	Science Weekly	07/24/91	115,887	0
91-1198	RE/SPEC, Inc.	07/24/91	13,498	0
91-1199	Sepracor, Inc.	07/24/91	129,611	0
91-1200	Museum of Northern Arizona	08/06/91	50,503	0
91-1201	Thames Science Center	08/06/91	97,420	2,000
91-1202	American Geological Institute	07/03/91	0	0
91-1203	The Science Museum of Virginia	07/03/91	26,369	574
91-1204	Denver Audubon Society	07/03/91	0	0
91-1205	American Statistical Assoc.	07/03/91	1,250	1,250
91-1206	Education and Resources Group, Inc.	07/03/91	0	0
91-1207	American Assoc. for the Adv. of Science	07/03/91	0	0
91-1208	The Science Museum of Virginia	07/03/91	40,192	4,332
91-1209	Paths/Prism	07/03/91	40,000	8,193
91-1210	28th International Geological Congress	07/05/91	136,730	0
91-1211	The Brookings Institution	07/05/91	0	0
91-1212	American Statistical Assoc.	07/05/91	0	0
91-1213	Council of the American Geophysical Union	07/05/91	67,089	0
91-1214	Johns Hopkins University	07/08/91	0	0
91-1215	University of Calif—Davis	07/08/91	338	0
91-1216	University of Calif—San Francisco	07/08/91	41,524	0
91-1217	Ohio Center of Science & Industry	07/08/91	0	0
91-1218	ASM Associates	07/08/91	0	0
91-1219	Virginia Commonwealth University	07/09/91	0	0
91-1220	Energy Environmental Research Corp.	07/09/91	0	0
91-1221	Univ. of Arkansas for Medical Science	07/09/91	0	0
91-1222	Massachusetts Institute of Technology	07/09/91	0	0
91-1223	West Georgia College	07/09/91	0	0
91-1224	New York University	07/09/91	0	0

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-1225	Southern Methodist University	07/09/91	0	0
91-1226	Purdue University	07/09/91	0	0
91-1227	North Dakota State University	07/09/91	0	0
91-1228	Georgia Department of Education	07/09/91	0	0
91-1229	Mary Washington College	07/09/91	0	0
91-1230	State of Louisiana	07/09/91	0	0
91-1231	University of Louisville	07/09/91	0	0
91-1232	Loyola University of Chicago	07/10/91	0	0
91-1233	Radford University	07/10/91	0	0
91-1234	State of Oregon	07/10/91	0	0
91-1235	Electronic Data Systems Corp.	07/10/91	0	0
91-1236	Old Dominion University	07/10/91	0	0
91-1237	Valdosta State College	07/10/91	0	0
91-1238	American Inst. of Biological Sciences	07/11/91	52	0
91-1239	Bend Research, Inc.	07/11/91	0	0
91-1240	Battelle—Pacific Northwest Laboratories	07/11/91	0	0
91-1241	State of Colorado	07/11/91	0	0
91-1242	Kennesaw State College	07/11/91	0	0
91-1243	New Mexico Highlands University	07/11/91	0	0
91-1244	Applied Research Associates	07/11/91	0	0
91-1245	General Electric Co.—Corp. R & D Ctr.	07/11/91	0	0
91-1246	Foster—Miller, Inc.	07/12/91	0	0
91-1247	Brown University	07/12/91	0	0
91-1248	University of Pittsburgh	07/12/91	0	0
91-1249	Computer Sciences Corp./System Svcs.	07/12/91	0	0
91-1250	Atmospheric & Environmental Research	07/12/91	0	0
91-1251	Virginia Polytechnic Inst. & State Univ.	07/15/91	0	0
91-1252	College of Charleston	07/15/91	0	0
91-1253	Santa Clara University	07/15/91	0	0
91-1254	University of Notre Dame du Lac	07/15/91	0	0
91-1255	SRI International	07/15/91	0	0
91-1256	Pennsylvania State University	07/15/91	0	0
91-1257	Bend Research, Inc.	07/17/91	0	0
91-1258	State of Utah	07/17/91	0	0
91-1259	State of Montana	07/03/91	186,281	0
91-1260	Missouri Botanical Garden	08/26/91	0	0
91-1261	The Oceanic Institute	08/29/91	0	0
91-1262	Excel Technology	08/29/91	0	0
91-1263	Statistical Sciences, Inc.	08/29/91	13,269	0
91-1264	Fairchild Tropical Garden	08/29/91	27,573	6,600
91-1265	Norfolk State University	08/29/91	0	0
91-1266	New Mexico Highlands University	08/30/91	0	0
91-1267	Burton Technologies, Inc.	08/30/91	6,105	0
91-1268	Burton Technologies, Inc.	08/30/91	0	0
91-1269	The Rand Corporation	08/30/91	0	0
91-1270	Fort Valley State College	08/30/91	0	0
91-1271	American Physical Society	08/30/91	163,069	121,003



Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-1272	Univ. of Southern Mississippi	09/03/91	0	0
91-1273	Audits & Surveys	09/03/91	0	0
91-1274	Carnegie Mellon University	09/03/91	13,600	0
91-1275	Haskins Laboratories	09/03/91	0	0
91-1276	Stanford University	09/03/91	0	0
91-1277	Albany State College	09/03/91	0	0
91-1278	Raised Dot Computing, Inc.	09/30/91	3,026	0
91-1279	Society for the History of Technology	09/19/91	0	0
91-1280	H.J. Degenkolb	09/30/91	81,904	0
91-1281	Association for Symbolic Logic	09/24/91	131,354	131,354
91-1282	Optical Society of America	09/30/91	38,208	20,345
91-1283	Antarctic Support Associates	09/30/91	0	0
91-1284	Quantum Research Corporation	09/30/91	0	0
91-1285	Westat, Inc.	09/30/91	1,050	0
91-1286	Moshman Associates, Inc.	09/30/91	64,038	0
91-1287	National Academy of Sciences	09/30/91	180,812	869
91-1288	Consortium for Scientific Computing	09/30/91	3,373,246	471,419
91-1289	Ketron Management Science, Inc.	09/30/91	16,627	0
91-1290	ECOVA Corporation	09/27/91	2,574	0
91-1291	Penn State University	09/30/91	9,833	0
91-1292	Harvard University	09/30/91	0	0

## INTERNAL AUDIT

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-2104	Review of NSF's Voucher's Payable System	06/28/91		
91-2105	Review of Program Library Security for Automated Systems	07/15/91		
91-2106	Review of NSF's Third Party Draft Inventory and Internal Controls Within the Division of Financial Management	08/16/91		
91-2107	Review of NSF's Third Party Draft Inventory and Internal Controls Within the Division of Administrative Services	09/17/91		
91-2108	Review of NSF's Travelers Check Inventory and Controls	09/24/91		
91-2109	Audit of Ocean Drilling Program Trust Fund Schedules for the Year Ending September 30, 1991	06/04/91		
91-2110	Audit of the International Phase of Ocean Drilling Schedules for the Year Ending September 30, 1991	06/04/91		
91-2111	Review of NSF's Distributed Program Development and Management Activity Funds	06/11/91		
91-2112	Review of NSF Premium Class Air Travel	09/27/91		
91-2113	NSF Administration of SRS Contracts	09/30/91		

## OVERSIGHT\*

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-3217	Committee of Visitors: Status of 2nd Quarter FY 91 Reviews	04/15/91		
91-3218	Conflicts-of-Interests Review: Volunteers Entering and Leaving, March 1991	05/20/91		
91-3219	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, March 1991	07/26/91		
91-3220	Committee of Visitors: Status of 3rd Quarter FY 91 Reviews	07/31/91		
91-3221	Conflicts-of-Interests Review: Volunteers Entering and Leaving, April 1991	09/03/91		
91-3222	Conflicts-of-Interests Review: Volunteers Entering and Leaving, May 1991	07/10/91		
91-3223	Conflicts-of-Interests Review: Volunteers Entering and Leaving, June 1991	07/10/91		
91-3224	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, April 1991	07/11/91		
91-3225	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, May 1991	07/26/91		

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-3226	Conflicts-of-Interests Review: Intergovernmental Personnel Act Assignees Entering and Leaving, May through June 1991	07/30/91		
91-3227	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, June 1991	09/03/91		
91-3228	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, July 1991	09/03/91		
91-3229	Conflicts-of-Interests Review: Intergovernmental Personnel Act Assignees Entering and Leaving, July 1991	09/03/91		
91-3230	Conflicts-of-Interests Review: Volunteers Entering and Leaving, July 1991	09/03/91		
91-3231	Compliance Review on OIG Submission of NSF Forms 681 and SFs 278	08/05/91		
91-3232	Cost Sharing on NSF Instrument Award on Way to Resolution	08/23/91		
91-3233	Conflicts-of-Interests Review: Intergovernmental Personnel Act Assignees Entering and Leaving, July through August 1991	09/30/91		
91-3234	Conflicts-of-Interests Review: NSF Staff and Rotators Entering and Leaving, August 1991	09/30/91		
91-3235	Compliance Review of NSF Proposal Actions: 3rd and 4th Quarters FY 90	09/30/91		

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
91-3236	Conflicts-of-Interests Review: Intergovernmental Personnel Act Assignees, March 1991	09/30/91		
91-3237	Conflicts-of-Interests Review: Intergovernmental Personnel Act Assignees, March through April 1991	09/30/91		

\*Many of the Oversight reports are brief memoranda that furnish level of compliance information to NSF management. For example, many check for adherence to certain NSF conflict-of-interest regulations as they apply to all new and leaving employees, intergovernmental personnel act assignees, and NSF volunteers. These conflict-of-interest reports facilitate NSF's policy of using active scientists and engineers to rotate into the agency at all NSF staff levels.

# STATISTICAL TABLE OF INSPECTOR GENERAL ISSUED REPORTS WITH QUESTIONED COSTS

The Inspector General Act Amendments of 1988 require that statistical information be presented on the number and the dollar value of recommended questioned costs and efficiencies contained in the reports issued during the period. The following tables provide the required statistical information.

	Number	Dollar Value	
		Questioned Costs	Unsupported Costs
A. For which no management decision has been made by the commencement of the reporting period	83	9,752,769	2,249,375
B. Which were issued during the reporting period	40	5,504,316	882,009
C. Reports which were reopened based on additional information	1*	7,082	7,082
Subtotals (A + B + C)	124	15,264,167	3,138,466
D. For which a management decision was made during the reporting period	33	5,313,028	545,635
(i) dollar value of disallowed costs		3,974,703	n/a
(ii) dollar value of costs not disallowed		1,338,325	n/a
E. For which no management decision has been made by the end of the reporting period	91	9,951,139	2,592,831
Reports for which no management decision was made within six months of issuance	57	8,012,867	2,182,241

\* This report was reactivated based on additional information.

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# GLOSSARY

The following defines the terms as used in this report.

## **Questioned Cost**

A cost the OIG has questioned because of an alleged violation of law, regulations, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; such cost is not supported by adequate documentation; or the expenditure of funds for the intended purpose is unnecessary or unreasonable.

## **Unsupported Cost**

A cost the OIG has questioned because of a lack of adequate documentation at the time of the audit.

## **Disallowed Cost**

A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the government.

## **Funds to be Put to Better Use**

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

## **Management Decision**

Management's evaluation of audit findings and recommendations and issuance of a final decision concerning management's response to such findings and recommendations.

## **Final Action**

The completion of all management actions—that are described in a management decision—with respect to audit findings and recommendations. If management concluded no actions were necessary, final action occurs when a management decision is issued.

## **Misconduct**

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.

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**OFFICIAL BUSINESS**  
**PENALTY FOR PRIVATE USE \$300**

**OFFICE OF INSPECTOR GENERAL**  
**SEMIANNUAL REPORT TO CONGRESS**