

**OFFICE OF
INSPECTOR GENERAL**

**SEMIANNUAL REPORT
TO
THE CONGRESS**

Number 2

October 1, 1989 — March 31, 1990



National Science Foundation

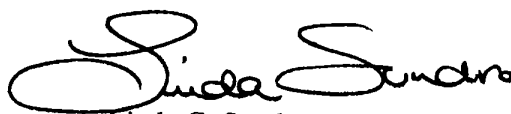
March 31, 1990

TO THE NATIONAL SCIENCE BOARD AND THE CONGRESS

This report, covering our activities for the first half of fiscal year 1990, is submitted to you for transmission to the Congress. Section 5 of the Inspector General Act of 1978, as amended, requires that the Board transmit this report to the appropriate congressional committees within 30 days of its receipt, along with any comments the Board may wish to make.

At the close of our first full year, we continue to develop our resources to comply with the responsibilities imposed by the Act and implement the initiatives described in our first semiannual report. In the current budgetary environment it is imperative that we all manage better and make limited resources go further. We are planning our programs and human resource development with this goal in mind.

The accomplishments summarized in this report could not have been achieved without strong support of our efforts by Foundation management and National Science Board members. I want to express my appreciation for that support and commitment to maintaining effective working relationships with Foundation staff at all levels.

A handwritten signature in black ink, reading "Linda Sundro". The signature is fluid and cursive, with the first name "Linda" and last name "Sundro" clearly distinguishable.

Linda G. Sundro
Inspector General

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EXECUTIVE SUMMARY

This is the second semiannual report on the activities of the National Science Foundation's Office of Inspector General for the 6-month period ended March 31, 1990. The report presents an overview of our first-year progress and describes significant audit, oversight, investigations, and legal findings.

Development of physical and human resources remains a priority. We are working with the agency to maximize our effectiveness by improving our space, communications, and equipment resources. Discussions continue on the best way to build human resources to meet our highly varied responsibilities in the areas of science, finance, automated data processing, management and legal analysis.

Our external audit efforts have been directed toward increasing the number of NSF-funded organizations reviewed by the Office of Inspector General auditors, reducing the cost and completion time of individual audits, and ensuring that audit recommendations are implemented effectively. Although it is too early to draw firm conclusions about the cost-effectiveness of the new external audit approach, the early indicators appear to confirm our belief that, in many instances, cost and compliance audit work can be accomplished more quickly and at less cost by using our employees rather than contracting with private sector audit firms.

The Office of Oversight expanded resources to support its work in the science-engineering-education-related aspects of NSF operations and programs and continued its work in the area of misconduct in science. It investigated and resolved an NSF postemployment conflict-of-interest situation, closed out five allegations of misconduct for lack of evidence or jurisdiction, and collaborated with our attorney's investigation and resolution of an allegation of criminal wrongdoing.

Over the last 6 months we established a separate Investigations Unit within the Office of Internal Audit and Investigations. A highly trained criminal investigator has been hired, a separate system of records for investigations has been formally established, and requirements for a retrieval system for these records and a subpoena tracking system have been developed.

Our first year's achievements would not have been possible without the continued support of agency management. NSF's Director and the National Science Board have taken an active interest in our activities and development and have responded positively to our concerns. We look forward to working with the agency as it enters its fifth decade.

THE NATIONAL SCIENCE FOUNDATION AT FORTY

Forty years ago on May 10, President Truman signed the National Science Foundation Act of 1950. Shortly thereafter, National Science Board members and staff were appointed to administer the first operating budget of \$3.5 million. At that time, the President and the Congress expressed the value of research and education in terms of leadership in science and national security. As the National Science Foundation (NSF) begins its fifth decade, the value of research and education appears not only in terms of world leadership in science, engineering, and education, but also economic competitiveness. In this environment, NSF has requested a FY1991 budget of \$2.38 billion. This is a 14-percent increase over FY 1990 and a step towards doubling NSF's budget by FY 1993. This budget proposes expansion of NSF's efforts in research and facilities as well as in education and human resources.

In response to the growth of NSF's mission and resources, we are continuing to develop the Office of Inspector General's (OIG) resources to meet the challenges of the next decade. For FY 1990, our authorized budget is \$2.56 million, with an authorized staff of 25 full-time equivalents (FTE). At the end of this reporting period, we had 22 professionals and 3 clerical staff on board. This staffing level represents an increase of five professionals since our last report. Our new staff includes an attorney, a writer-editor, a criminal investigator, an engineer, and an auditor. NSF requested \$3 million for OIG's FY 1991 funding with an associated FTE of 27. This funding level represents an increase of approximately 17 percent over existing resources.

Our ability to provide complete audit coverage and satisfy all of our responsibilities under the IG Act Amendments will depend on our ability to develop additional resources in both budget and personnel in the coming years. As a new office, we are still learning how to integrate our resource requirements within NSF's budget process. The receipt of a separate line item appropriation has changed the way we work with the Foundation in setting goals and allocating resources. We are continuing to work with the National Science Board and the Foundation to develop planning mechanisms that accommodate the growth of the agency and our mission under the Inspector General Act.

OIG MISSION AND ACCOMPLISHMENTS

First-year Progress

We are continuing to work on the initiatives described in our first semiannual report. The external audit function has been strengthened by forming four external audit teams. Although it is too early to draw firm conclusions about the cost-effectiveness of the new external audit approach, the early indicators appear to confirm our belief that, in many instances, cost and compliance audit work can be accomplished more quickly and at less cost by using our employees rather than contracting with private sector audit firms.

Another valuable contribution has been the addition of independent legal counsel to the Office of Inspector General. This legal capability helped us to evaluate and dispose of several issues that required highly technical legal analysis. If independent legal resources had not been available, our ability to understand and resolve these matters would have been significantly compromised.

Our Office of Oversight continued its work in the area of misconduct in science by participating in government-wide planning sessions aimed at establishing uniform policies and procedures on this issue. Publication of an internal bulletin providing guidance on the handling of allegations of misconduct in science has contributed to an increase in the referral of these allegations to our office. Work continues on establishing procedures for analyzing and resolving these complaints.

The duties of the Oversight Office require staff with a strong technical background, who are familiar with NSF's peer review and proposal processing system and are capable of maintaining good contacts with NSF's management and professional staff in science, engineering, and education. Since our last report, the Oversight Office has hired a staff associate for oversight and a writer-editor. At this time, the staff consists of five full-time employees: the Assistant Inspector General for Oversight, a Ph.D. chemist with 20 years of experience in NSF research programs, science policy, National Science Board planning and policy, and audit and oversight work; two staff associates with previous NSF work experience, one with doctorates in chemical engineering and in the philosophy of science and the other with

a doctorate in sociology; a writer-editor with General Accounting Office (GAO) and Department of Defense (OIG) experience, and an oversight specialist with long-time administrative, budget, and management experience in NSF.

We have begun efforts to assess and accommodate the needs of the staff and to ensure adherence to the training requirements established by the *Government Audit Standards* (GAO Yellow Book, July 1988). We have implemented a system to ensure compliance with GAO requirements and have decided that the period for tracking and complying with these requirements began on October 1, 1988. Training requirements will be met every 2 years.

We have also defined training requirements for our new employees, including a criminal investigator and a writer-editor, as well as previously hired staff, computer specialists, auditors, and support staff.

The investigator attended training at the Federal Law Enforcement Training Center in Glynco, Georgia. To improve our publishing capability, our writer-editor is scheduled to attend training on desktop publishing. In addition, one of our computer specialists has received training necessary for installing a dedicated control system for investigative files.

Our staff has also received orientation training on IG concepts and procedures, including training on the use of IG subpoenas, and our new employees have attended standard NSF courses when appropriate. The audit and support staff training has focused on specific technical training to enhance the abilities of the staff. These enhanced abilities will allow the staff to be more productive and progress in their chosen fields.

At the close of our first full year of operation, we are maturing into the responsibilities imposed by the IG Act. Availability of resources continues to be a factor in our ability to respond both to our statutory obligations and to NSF management's priorities. We are working with management to maximize our effectiveness by improving our space, communications, and equipment resources. Discussions continue on the best way to build human resources to meet our highly varied responsibilities in the areas of science, finance, automated data processing, and management and legal analysis.

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 review accounting records and other financial information for assisting NSF management in determining if amounts claimed or billed and indirect rates are reasonable and allowable, and if the grantee or contractor has complied with laws and regulations for those transactions and events that may have a material effect on the financial statements. 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 and nonprofit institutions are performed by public accountants or state auditors on a reimbursable basis under the oversight of the Department of Health and Human Services' OIG. NSF's OIG staff, public accountants under contract with our OIG, the Defense Contract Audit Agency, and a few other OIG staffs conduct audits in other areas. Audit reports containing significant issues 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.

Recent Progress

Over the last 6 months, the Office of External Audit's efforts have been directed toward increasing the number of organizations audited, providing better coverage of each of the grantees audited, providing audit results in a more timely manner, conducting these audits at a lower cost per audit, and ensuring that audit recommendations are implemented effectively. We also revised the audit guide used by NSF and contract auditors to better address specific audit issues, issued a request for proposals so that contracts could be negotiated with independent public accountants for audit services during the next 3 to 5 years, hired in-house audit staff to expand capabilities, and worked with DGC on our jointly managed audit report tracking system to improve the resolution process for audit recommendations.

In this reporting period, we processed 192 audit reports. Cognizant audit agencies conducted 144 of these audits. OIG staff conducted 6 audits and public accountants under contract to OIG conducted the remaining 42 audits. The following table shows the total number of reports issued by OIG staff, public accountants, and cognizant auditors for current and prior semiannual periods.

Reporting Period*	Cognizant Auditors	OIG and Public Auditors	Total Reports
<i>Office of Inspector General</i>			
10-01-89 to 03-31-90	144	48	192
04-01-89 to 09-30-89	87	29	116
<i>Office of Audit and Oversight</i>			
10-01-88 to 03-31-89	78	29	107
04-01-88 to 09-30-88	67	13	80
10-01-87 to 03-31-88	69	19	88
04-01-87 to 09-30-87	70	18	88
10-01-86 to 03-31-87	66	16	82

* Prior to the February 10, 1989, establishment of the Office of Inspector General, these reports were processed by the Foundation's Office of Audit and Oversight.

In the second quarter of FY 1990, OIG staff conducted six financial audits. These audits were completed at a lower cost and within a shorter time period when compared with reports done by other federal audit organizations or by independent public accountants under contract with us. Questioned costs generated by in-house auditors were not significantly higher than those identified by audits produced by independent public accountants. However, we believe that the management and programmatic findings and recommendations generated by in-house auditors were more significant and useful to grantees and NSF grants managers.

We expect to continue using independent public accountants for audits of NSF awards. We are in the process of selecting firms to be under contract over the next 3- to 5-year period beginning October 1, 1990. Independent public accountants are essential to our external audit program because our current staffing level cannot meet the demands of our audit cycle. We also believe continuous interaction between the private sector's auditors and our in-house staff provides a stimulating exchange of information and ideas.

The audit resolution process is the mechanism used by the Foundation to assess the validity of costs questioned by OIG. DGC is responsible for resolving audit recommendations relating to grants and contracts. During the last reporting period, we made improvements to the resolution system. Largely as a result of these improvements we were able to reduce the number of unresolved reports from 31 to 14.

The following two report sections briefly describe the audits conducted by External Audit and contract auditors during this reporting period.

Audits Conducted by External Audit Staff

Research Center Improperly Handled Interest Income

NSF awarded grants to a private nonprofit research center that develops computer software for educational purposes. Our audit reviewed seven grants with an aggregate budget in excess of \$8 million awarded over a 4-year period. Some of these grants allowed the center to generate income from activities undertaken in performance of the award. For example, the center sponsored symposia and generated income by charging registration fees.

We found 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.

Premature withdrawal of federal funds helped to cause bank balances in a checking account to exceed the level covered by the Federal Deposit Insurance Corporation (FDIC). This action placed federal funds in excess of the FDIC coverage at risk. 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.

Nonprofit Has Inadequate Internal Controls

NSF awarded grants to a private nonprofit institute that gives fellowships to support research and study in India. At the time of our audit, the institute had three NSF grants totaling \$128,000.

We found that the institute did not adequately account for funds in the NSF-supported program. Internal controls were poor. We could not determine whether grant budget limitations were followed or whether management approvals should have been obtained for exceeding the limitations. The institute had inadequate records on labor distribution and had not completed quarterly reports in 5 out of 8 instances. Although we did not question any cost, we recommended significant changes in accounting, reporting, and reviewing procedures.

***Corporate Recipient's
Accounting Procedures
Found Deficient***

NSF awarded a "Phase II" Small Business Innovative Research grant for \$199,785 to a privately owned corporation. The grant funds were used to develop an improved technique for mobile communications.

We found that the corporation did not have written accounting procedures or criteria to determine reasonableness, accountability, and allocability of federal funds. The company did not segregate the duties of its employees, used labor rates inconsistently, and did not classify employees' bonuses according to accounting requirements. Although our questioned costs may be offset by unbilled expenses, we believe this profit-making company is likely to experience increasing difficulties if the above-stated practices are not corrected.

***Inadequate
Documentation to
Support Matching
Funds Agreement***

NSF awarded two "Phase II" grants under its Small Business Innovative Research 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.

Documentation in the grant jacket indicated that the grantee had initially sought NSF funding for this project in the amount of \$400,000. The Foundation declined to fund the proposal in this amount, but expressed interest in offering a grant of about \$200,000 with the condition that the corporation finance the remainder of the proposal from its own resources.

NSF awarded \$211,368 in support of the proposal, but failed to include the grantee's agreement to provide additional funding in the grant's terms and conditions. The corporation provided only \$10,536 in support for the project from its own funds and the grantee's controller indicated he was unaware of any agreement for cofunding. We also found that expenses recorded for the project included \$55,432 in indirect costs, which were not part of NSF's budget. The lapse in documentation for cofinancing resulted in significantly fewer resources being devoted to this project than intended by NSF program staff.

Audits Performed by Independent Public Accountants

Travel Service Contract Poorly Documented

NSF awarded a contract for \$3,140,564 to a profit-making corporation that provides travel services to the general public. The company provides NSF with travel services, including arranging travel accommodations and meeting rooms and administering per diem expenses for out-of-town travel.

The company did not have adequate documentation to support approximately \$1 million of costs claimed under the contract. In addition, the contractor had received payments from NSF of \$139,987 in excess of claimed costs. The corporation disagrees with our findings and these questioned costs are in the process of resolution.

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.

The audit disclosed that 62 percent of the federal funds withdrawn had not been spent for purposes specified in the grant agreements. The corporation also had significant problems with internal control and compliance requirements, which may have contributed to the company's excessive withdrawals. At the end of this reporting period, the grantee had not provided an explanation for its use of federal funds for purposes unrelated to its awards and the matter remains unresolved.

Museum Awards Noncompetitive Subcontract

NSF awarded a \$302,006 grant to a science museum. The primary purpose of the museum is to promote public and private education through development and expansion of the museum's educational and research activities in science.

The science museum awarded a noncompetitive subcontract to construct an exhibit to a company owned by one of the scientists employed under the grant. This subcontract was awarded without NSF's written approval. In addition, in violation of federal standards, the museum incorrectly allocated salaries and did not remit the interest earned on NSF advances. The audit

questioned costs for (1) subcontracting, \$200,446; (2) incorrectly allocating salaries, \$6,882; and (3) not remitting interest, \$4,594.

***Documentation of Small
Business Expenses
Lacking***

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

The corporation did not have adequate documentation to support its expenditures under the grant. Auditors were not able to find a general ledger, trial balance, timesheets, or job ledgers; could not reconcile the grantee's financial statements; and found the grantee's filing system was inadequate. In addition, there was inadequate segregation of duties and the required annual audit had not been undertaken. At the time of our review, the grantee had withdrawn the entire grant amount. Based on these findings, this entire amount was questioned.

***Inappropriate and
Unsupported Payroll
Cost Questioned***

NSF awarded two grants for an aggregate \$406,092 to a commercial corporation. The grants were in support of research concerned with noise levels on various radio bandwidths.

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. Auditors questioned the indirect charges associated with claims for these funds and salaries.

In addition to the questioned costs, the grantee had not (1) segregated the staff's duties, (2) established written personnel policies, (3) approved employee timesheets for a portion of the audit period, or (4) maintained payroll registers and canceled payroll checks for the first year of the grant. Although the grantee's recordkeeping and expenditure approval documentation had improved since the first year of the awards, we believe further improvements are necessary. We questioned \$140,562 in costs.

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 and data processing systems, investigating charges of improper actions by NSF staff, and following up on the implementation of recommendations included in both NSF and GAO audit reports. Two of the six audit reports issued by Internal Audit during this reporting period resulted in significant findings and are discussed below.

Review of NSF Grant Administration

Our audit revealed that internal controls were inadequate to ensure that grant closeout requirements have been met. Final project reports were not submitted, erroneous receipt dates for the final project reports were entered in the NSF data base, and new awards were made without properly closing prior awards. Our review also disclosed that NSF's audit reports system and procedures for processing, resolving, and closing audits performed by independent audit firms needed to be improved to ensure that timely responses and appropriate actions are taken to resolve audit findings and recommendations.

In response to our recommendations, NSF agreed to establish additional controls to ensure that grant closeout procedures are followed. The controls will be strengthened by modifying the electronic data base to improve the detection and prevention of erroneous final project report entries. NSF also has taken action designed to ensure prompt and proper resolution and implementation of audit recommendations. The agency has established a branch responsible for resolving all audit report recommendations and a committee that is responsible for determining how grantees' accounting systems can be evaluated and monitored.

NSF Presence in Foreign Locations

We conducted a review to identify the foreign locations where NSF maintains a presence and to determine the costs associated with each location. "Presence" was defined as any foreign location where NSF pays for salary or services not associated with an NSF award. Five locations were identified as physical presences, and two locations were identified where NSF pays for

services provided by the Department of State. We identified the operational costs associated with each location; however, we did not assess the scientific merit or the cost benefit of maintaining any of these foreign presences.

NSF maintains offices in two foreign locations for benefits specific to each location. The agency has full-time employees at offices in Christchurch, New Zealand, and Tokyo, Japan. The Christchurch office consists of one NSF employee, who is responsible for planning, coordinating, implementing, and managing U.S. Antarctic Program activities in New Zealand. The Tokyo office has an NSF employee in charge and several foreign national subordinate specialists who provide information about Japanese (and other Far Eastern) science and technology programs.

Three other foreign locations (Paris, Stockholm, and Geneva) have former NSF employees on temporary assignment. NSF currently reimburses the Department of State for services provided in Paris, France. NSF plans to establish a separate NSF office in Paris, which will provide services similar to the one maintained in Tokyo. Work at the Stockholm, Sweden, and the Geneva, Switzerland, locations is partially financed by NSF and is staffed by former NSF employees on temporary assignment to other agencies. In addition, NSF reimburses the Department of State for services provided by embassy staff in Israel and India.

We made three recommendations at the close of our review. We suggested that NSF (1) establish a policy for employees' home leave, (2) conduct an assessment of the Paris office in light of recent changes in the European Community, and (3) request the transfer of funds from another agency to share the cost of a foreign Intergovernmental Personnel Act (IPA) assignment.

INVESTIGATIONS

Introduction

Our Investigations Unit, which is the other operational component within the Office of Internal Audit and Investigations, 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 the appropriate federal, state, or local prosecutors for criminal or civil prosecution, or to NSF's Office of the Director to apply warranted administrative sanctions or penalties.

Establishing an Investigative Program

During this reporting period, we expended significant effort to establish an Investigations Unit within the Office of Internal Audit and Investigations. Our first criminal investigator/special agent was hired in December 1989. This agent has a broad investigative background and a Masters of Arts Degree in Criminal Justice with a concentration in economic crime. We have established requirements for an automated investigative retrieval system and a subpoena tracking system and are currently working on the design and implementation of both systems. The Investigations Unit has begun efforts to establish a secure storage area for investigative files and has published a Privacy Act notice for these files. In addition, we designed and issued credentials and badges during this reporting period.

Summary of Investigative Activities

We received eight allegations involving possible violations during this reporting period. Three of the case files were closed after preliminary assessments revealed that these allegations were too vague for effective followup with our limited resources. OIG's Investigations Unit currently has six active cases, one is a carryover from a previous period. Two cases (one involving alleged forgery on NSF stationery and the other involving alleged embezzlement of grant funds) have been referred to the Department of Justice for prosecution. An additional case is scheduled for trial in California State court for alleged embezzlement of grant funds.

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 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 in science and engineering. It oversees the operations and technical management of about 200 NSF programs, undertakes inspections, and performs special audits and studies.

OIG Representation

In an effort to increase awareness of OIG's function, we published a brochure explaining the Office of Inspector General to NSF employees. This brochure introduces the OIG and

briefly presents its responsibilities, activities, and methods of operation. Besides an initial distribution to NSF employees, this brochure will be distributed to all incoming NSF employees, IPA assignees, consultants, and experts.

Oversight of NSF Research and Education Programs

NSF is responsible for using its resources effectively and efficiently and for ensuring that the United States receives maximum return on its research and education funds for science and engineering. To meet this responsibility requires effective internal control systems for NSF programs and operations. During a 1-year period, these NSF functions involve over \$2 billion, more than 37,000 proposals, and approximately 17,000 awards.

Our ongoing oversight of NSF's approximately 200 research and education programs has two complementary components:

- one monitors NSF's compliance with its rules, regulations, policies, and procedures that apply to proposal evaluation and to postaward administration; and
- the other monitors the technical management of each program using assessments of technical management by external peer oversight committees.

Review of Proposal Actions and Postaward Administration

To monitor NSF's compliance with its rules for handling proposals and awards, the Oversight Office, on a continuing basis, selects and reviews samples of proposals that have been awarded, declined, withdrawn, or returned as inappropriate. We perform compliance-type and operations-type audits to determine program adherence to established rules, regulations, policies, and procedures. We develop a worksheet for each proposal jacket reviewed. This worksheet notes any problems found during our review and is returned to the responsible program officer through the cognizant assistant director and division director. Several times each year the Oversight Office summarizes its findings in a written report to the NSF Director and NSF's Executive Council.

Periodically, NSF-wide sampling is supplemented by indepth reviews of all actions in six or seven NSF programs.

Our most recent compliance review is based on 386 proposal and award files for actions through the first quarter of FY 1989. Problems occurring 10-percent of the time or more included incomplete review record forms, missing information or signatures on NSF's action processing form, lack of compliance

with NSF's six-month rule for processing proposals, and incomplete or improper evaluation of prior NSF-supported research.

Appraisal of Technical Management of NSF Programs

To monitor the technical management of its programs, NSF organizes an external peer oversight (EPO) review of each of its approximately 200 programs every 3 years. A committee from outside NSF approaches its task by considering a series of questions that address the quality of the merit reviews conducted by the program, the quality of the decisions made in the program, programmatic and other balances in the program, and whether the program is meeting the objectives NSF has set for it.

At the conclusion of the EPO review committee's work, which is based on an examination of files for awards, declinations, withdrawals, or declarations of inappropriateness, it prepares and submits a written report. This report describes the review, addresses the above-stated questions, and provides an appraisal of the technical management of the program. Copies of this report are sent to the NSF Director, the Office of Inspector General, and the public as requested. Once each year, the Oversight Office summarizes the EPO reports for the NSF Director to transmit to the National Science Board.

In FY 1989, we maintained the schedule for EPO, monitored the schedule, received copies of the resulting EPO committee reports, and summarized reports received during the fiscal year. For FY 1989, we reported that 84 of the 195 NSF eligible programs were scheduled and reviewed by EPO committees. By March 1, 1990, we had received, read, and summarized 82 EPO reports for FY 1989.

EPO review committees reported no major problems in the technical management of the 82 programs they reviewed. They made "generally positive" appraisals of the

- merit review process conducted in the reviewed programs;
- appropriateness of the documentation for program decisions on proposals;
- balance among competing subfields in a given program, or in size or number of awards, or distribution of awards by age or geographical location of the principal investigators; and

- ways the individual programs (within the constraints of their budgets) met NSF objectives.

EPO review committees made positive evaluations on the technical management of all programs under review in FY 1989. There was strong endorsement for the work of the NSF technical staff and many expressions of appreciation for their technical stewardship.

Special Studies

Review of NSF's Reconsideration Process

In calendar year (CY) 1989, NSF had no formal process to appeal a decision either to decline a proposal or to declare a proposal inappropriate for NSF funding. However, NSF did accept requests for reconsideration. Reconsideration is a review of how NSF applied policies and procedures to ensure that the proposal was processed fairly. It is not intended to provide a forum for rebutting the program officer's judgment.

We reviewed the reconsideration process at NSF during CY1989 and collected statistics on both the requests for reconsideration and the disposition of those requests. There were 38 requests for reconsideration. In all but one case, the previous decisions to decline proposals or to return them as inappropriate for NSF were upheld; in one case the initial NSF decision to return was reversed. The 38 requests for reconsideration received by NSF in CY 1989 represent 0.2 percent of the approximately 20,000 declined and returned proposals in FY 1989 and indicate very limited use of the reconsideration process.

We did not find any major problems, although we identified six instances where the 30-day response time for completing the reconsideration was not met by assistant directors in CY 1989. However, in cases that took longer than 30 days to process, individuals requesting reconsideration were notified of the delay. NSF documentation for the reconsideration process was complete.

From CY's 1985 through 1989, the average annual number of requests for reconsideration was 37.8. Our review and data are timely because in February and March 1990, NSF started to expand the reconsideration process to a formal system that explicitly includes rebuttal. We expect to review the new system at the end of its first operating year using the information found in this review for comparison.

***Few Alleged Violations
of NSF's Important
Notice 91 on Use of
NSF-funded Research
Instruments and
Facilities***

Important Notice (IN) 91 expresses NSF's intent that grantees should not use NSF-supported research instrumentation or facilities in fee-for-service competition with private companies that provide equivalent services. At the suggestion of the NSF Director, we performed a brief study of compliance by universities with IN 91 and reported our findings.

We conducted a survey of NSF's office heads and assistant directors and found few complaints of noncompliance from small companies, although more complaints may be in the files and difficult to access or locate. Fifty percent of the complaints identified came from the same organization. Some NSF policies, such as leaving enforcement of the notice to the universities, seem to be creating friction between grantees and small companies. We proposed changes in the notice and its enforcement, including (1) incorporating the IN 91 guidelines in NSF's Grant General Conditions, (2) modifying the IN 91 guidelines to address the situation in which grantees advertise services using NSF-supported equipment, and (3) examining more closely grantee institutions' regulations on IN 91 and their handling of alleged violations.

***Conflict-of-interest Reviews on Professional Employees and
Intergovernmental Personnel Act Assignees***

In these reviews, the Oversight Office seeks to detect, prevent, and eliminate certain conflicts of interest on the part of persons entering and leaving NSF service.

To this end, the Oversight Office, on about a monthly basis, compares NSF proposal and award computer records, as well as other relevant data from NSF's Management Information System, against personnel lists. This procedure detects possible conflict-of-interest situations for employees who have been involved as a principal investigator on NSF proposals and awards. All new NSF employees, those on new IPA assignments, all recent NSF employees, and all recent IPA assignees are included if they are a GS-12 or equivalent, or higher.

In the past 6 months, we reviewed 268 individuals entering and leaving work assignments at NSF and prepared worksheets on each employee or IPA assignee for whom a conflict-of-interest problem was found. This worksheet is sent to the cognizant assistant director and the cognizant conflict-of-interest official as well as to NSF's Conflicts Counsellor in the Office of General Counsel. As appropriate, the Oversight Office recommends actions to ensure necessary compliance. Over the last 6 months, based on these reviews, we initiated eight inquiries into specific conflict-of-interest matters.

***Contract Awarded to
Former Employee in
Violation of NSF
Postemployment
Restrictions***

NSF's 1-year, postemployment conflict-of-interest restriction on representational activities was violated when a former employee was awarded a contract to conduct an employee attitude survey. The former employee transmitted his proposal in a competition for a purchase order contract and was also involved in negotiating the final budget.

Our review of this violation disclosed that internal controls intended to enforce NSF's conflict-of-interest regulations did not function. Although NSF staff involved in the selection of this bidder were aware of his past employment with the agency, these same NSF staff failed to contact their designated conflicts official and obtain written advice on how to handle a proposal involving a former employee as required by NSF's conflict-of-interest manual.

Inquiries also indicated that both the former employee and the contracting officer contacted NSF's Conflicts Counsellor for advice. The individuals were advised that the former employee did not need to appoint a substitute negotiator when first applying for the contract. This advice was given because it was the Office of General Counsel's initial opinion that NSF's requirement to appoint a substitute negotiator applied to grants and did not extend to contracts. We believe that because a substitute negotiator was not appointed at the outset, the individuals involved mistakenly entered into a discussion of budget matters. The Office of General Counsel has reconsidered its policy and will now always advise former employees to appoint a substitute negotiator when applying for any form of NSF funding.

In addition to the actual conflicts violation, we are concerned that there is an appearance that the contracting process may have been compromised. There were at least four conversations between the former employee and the contract specialist. The amount of the final bid was increased over the amount initially bid by the former employee. We accept the agency's explanation that the award price increased to enable the bidder to obtain a software package unavailable at NSF, but essential to contract performance. However, we remain concerned about the appearance problem.

During the early stages of our inquiry into this matter we recommended that work under the contract be suspended until the matter had been fully reviewed. The agency initially complied with our request for suspension, but within 30 days authorized continuation of the work. At the close of our inquiry, we recommended termination of the award for the convenience of the government and also recommended that recompetition be conducted without prejudice to any prior bidder.

To ensure better compliance with internal regulations governing conflicts of interest in the future, we also recommended that employees responsible for processing grants and contracts be reminded of their responsibility to comply with NSF's internal guidance on conflicts. Last, we recommended improvements in the system designed to alert NSF staff, responsible for processing contract and grant awards, of the prior employment status of bidders.

The agency implemented all of our suggestions for remedial actions, but declined to terminate the award. In refusing to terminate, the agency cited the relatively small dollar amount of this award, the technical nature of the violation, its belief that the problem would not recur, and the fact that the award had been reinstated prior to completion of our report and was substantially complete.

While we remain concerned that the appearance of impropriety is not overcome by an action less than the termination of the award, we have deferred to the agency in this instance. We believe, and the agency agrees, that the effectiveness of regulations and procedures designed to prevent conflict-of-interest violations is dependent upon their consistent application by staff at all levels throughout NSF. Agency leadership has reaffirmed its commitment to this principle and we trust that this renewed commitment will prevent recurrence of similar violations.

Misconduct in Science and Engineering

The Oversight Office is responsible for investigating all allegations of misconduct in science, engineering, and education related to NSF proposals and awards. After an initial evaluation of each allegation received, the Oversight Office determines whether an inquiry or an investigation is indicated. In most instances, inquiries and any subsequent investigations are deferred to the involved institution. When appropriate, the office conducts its own investigations. Our final report typically includes the institution's report as accepted by OIG and OIG recommendations based on our review of the findings. It then goes to NSF's Deputy Director for review and final action.

Successful handling of misconduct allegations depends critically on an interdisciplinary approach involving the technical expertise of Ph.D. research scientists, engineers, and educators as well as attorneys to evaluate, oversee and, if necessary, conduct inquiries and investigations. In addition to the current in-house technical staff, we can use the expertise of about 400 staff Ph.D. scientists, engineers, educators, and lawyers employed by NSF as well as the expertise of consultants.

Since the start of FY 1990, the Oversight Office has received 22 allegations. All have been preliminarily evaluated. As of March 31, 1990, five allegations of those received in FY 1990 have been closed for lack of evidence or jurisdiction and 20 allegations are pending, including three received before the start of FY 1990.

The Oversight Office also has responsibilities for preventing, detecting, and eliminating misconduct and for recommending policies that address the problem of misconduct as it affects the integrity of scientific scholarship. Such misconduct involves waste and misuse of public funds. As we gain experience, we may wish to formalize OIG's developing procedures and present them for criticism to a greater community of interest, including the Congress, other federal agencies, and awardees.

An Approach to Measuring Misconduct in Research

The Office of Oversight is interested in developing measures of the extent to which misconduct occurs. Such information would meet a frequently expressed need and would show whether the cases that occur are rare individual deviations or whether there is a systemic problem. In the latter case, broad education of researchers may be required in addition to any sanctions imposed on individuals.

Our study of this important area is expected to continue through FY 1990 and beyond. This report discusses our initial efforts. Later semiannual reports will provide updates.

Definition of Misconduct

On July 1, 1987, NSF issued final regulations that defined "misconduct" as follows: (1) fabrication, falsification, plagiarism, or other serious deviation from accepted practices in proposing, carrying out, or reporting results from research; (2) material failure to comply with federal requirements for protection of researchers, human subjects, or the public or for ensuring the welfare of laboratory animals; or (3) failure to meet other material legal requirements governing research. (*Federal Register*, Vol. 52, No. 126, p. 24468)

The Office of Oversight study is concentrating on item (1) of the definition. The study is not concerned with very small infractions. Instances of unintentional technical error or of technical disagreement do not come under the definition of misconduct.

Initial Efforts

Since the issuance of the 1987 regulations, the Office of Oversight and its predecessor offices have processed a number of misconduct allegations. This valuable experience has provided background for the present study. Background has also been provided by professional literature.

From its review of the literature, the Oversight Office has prepared a report, *Survey Data on the Extent of Misconduct in Science and Engineering*, that summarizes the results from past surveys that have attempted to measure research misconduct. The report finds that the data often are not of high quality and that no existing survey provides all the information needed. Surveys have asked quite different questions and have used varying definitions of misconduct. Response rates are usually poor. Our review concludes that the full extent of misconduct is not yet known.

Early Interviews

The principal activity since the last semiannual report has been to begin a pilot survey of editors of research journals. Editors appear to be centrally placed individuals who are in a position to

observe cases of misconduct. The interviews will determine whether editors can and will provide statistically useful information. At this point, about 12 interviews have been conducted, 3 with editors and the rest with experts in the field of misconduct in research.

Preliminary results indicate that journal editors see very few cases of serious misconduct and moreover do not keep good records of them. They are fairly likely to see relatively minor offenses like multiple publication of essentially the same article. Much less often, they may see plagiarism, but they seldom learn of data fabrication.

Plans for Future Work

The Office of Oversight plans to continue its pilot survey of journal editors and perhaps extend it to different fields of science and engineering. After evaluating the results of this pilot study, the Oversight Office will consider whether there ought to be a full-scale survey of editors or a survey of some other population.

In addition to surveys, other ways of gathering information on the extent of misconduct in research have been suggested. One is by auditing the laboratory data that underlie research papers offered for publication. It has been proposed that biomedical journal editors join in setting up such an arrangement. We have taken no position on this proposal; however, we have adopted the policy that we will not conduct audits of research data and will investigate research data only when necessary in resolving specific allegations of misconduct.

LEGAL ISSUES

Introduction

The Counsel 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 also 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 the Counsel supported many of OIG's activities, which are described in other sections in this report. In carrying out his duties, the Counsel to the IG has 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 the Office of General Counsel and other organizations within NSF in various legal fields, such as conflict of interest, financial, and regulatory matters. Our relationship with the General Counsel and his staff has been cordial and effective. Throughout this reporting period our legal recommendations have been generally accepted.

National Science Board Instructions to the IG

Under the terms of the Inspector General Act, the IG reports to and serves under the general supervision of the National Science Board, and "shall not report to, or be subject to supervision by" any other organization or individual. Although the legislative intent is clear, implementing this directive was difficult because the National Science Board meets only periodically and for short periods and the NSF Director, who manages the agency on a daily basis, is a voting member of the Board, *ex officio*. To facilitate the establishment of our office, the Board issued "General Supervisory Instructions" to the IG. The instructions provide guidance to the IG in several operational areas, including relations with NSF's Director, contacts with the Congress and the media, and allocation of resources.

The National Science Board and the GAO have agreed on the final version of the supervisory instructions, and we believe that the instructions are consistent with the Inspector General Act of 1978, as amended. Most important, we are able to report that our working relationship with the Director of NSF as well as the Board has been excellent.

Privacy Act Notice

In early 1989, we received an allegation that there had been a violation of a misdemeanor provision contained in the Privacy Act. The Privacy Act gives individuals the right to obtain access to records about them maintained by a federal agency and, when appropriate, to request modification of those records if they are inaccurate. To help individuals determine what records

about them might exist, Congress required that each government agency publish in the Federal Register a notice of the existence and character of each “system of records.” Under the Privacy Act, a “system of records” is a group of records “from which information is retrieved by the name of the individual”

To enforce this provision, and to emphasize its significance, Congress enacted this penalty: “Any officer or employee of any agency who willfully maintains a system of records without meeting the notice requirements of subsection (e)(4) . . . shall be guilty of a misdemeanor and fined not more than \$5000.”

At NSF, important documents containing information on individuals are maintained in files commonly referred to as “proposal jackets.” These proposal jackets contain all of the documents, including reviews by scientific peers, which are used for deciding to grant or deny proposals for funding.

From September 1975 until August 1988, NSF officials asserted that the proposal jackets were not subject to the Privacy Act because they were not a “system of records” as defined by the Act. Accordingly, on the advice of its attorneys, NSF did not publish a notice in the Federal Register declaring that these records were covered by the Act. In August 1988, NSF changed its position and published a notice in the Federal Register of the existence of a “new system of records” that encompassed NSF’s set of proposal jackets.

We conducted an evaluation of the alleged violation of the Privacy Act and concluded that since September 1975 NSF’s set of proposal jackets have been a group of records from which information was retrieved by the individual’s name. We did not find persuasive NSF’s prior position that proposal jackets were not a “system of records” because they were usually filed by the institution’s name instead of the individual’s name. In our view, no matter how the proposal jackets were filed, information was retrieved from the jackets by the name of the individual scientist who was responsible for the proposal. For that purpose NSF employees have used several indexes that cross-reference individual scientists to their institutions and to the proposal jackets that concern them. Accordingly, in our opinion, NSF’s set of proposal jackets has always been a “system of records” for which a published notice was required.

We referred this matter to the Justice Department, and it declined to prosecute. Because of the Justice Department’s decision, it is not appropriate for anyone to conclude that there was a violation of criminal law and we have made no such determination.

NSF management has thoroughly reviewed this matter. We are confident that NSF is striving to comply fully with all legal requirements that are applicable to federal agencies. We have also made specific recommendations on how to improve NSF’s current practices regarding the Privacy Act. These recommendations have been or are being adopted.

Program Fraud Civil Remedies Act Needs to be Amended

We currently have several methods for handling matters involving fraud. We can recommend criminal prosecution or initiate proceedings to debar an individual from obtaining government funding in the future. However, in order to recover monetary damages our principal recourse is to recommend that the Justice Department attempt to recover these funds by initiating a civil prosecution under the False Claims Act. This can only be done when monetary damages are very large.

Although NSF's budget is not insignificant (\$2.38 billion requested by President Bush for FY1991), NSF by and large funds a relatively large number of proposals for scientific and engineering research and education in relatively small amounts that would not be encompassed by the False Claims Act.

In the past, Congress has analyzed similar problems, and to remedy such situations, it enacted the Program Fraud Civil Remedies Act of 1986 (31 USC 3801-3812). Under the Program Fraud Act, agencies can recover twice the amount of damages and civil penalties for fraud cases that are relatively small in dollar amount.

Because many NSF-funded projects are relatively small in dollar amount, we believe the Program Fraud Act is very well suited for resolving problems that we may encounter. Unfortunately, the Program Fraud Act is limited in scope to extend only to a government "authority." The term "authority" is defined to include an "establishment" under the Inspector General Act of 1978. The amendments to the Inspector General Act in 1988 created our Office of Inspector General. Under the amended Inspector General Act, NSF is a "designated federal entity" instead of an "establishment" and accordingly is not covered by the Program Fraud Act.

In order to allow us to take appropriate action to protect the government's resources, we strongly recommend that the Program Fraud Civil Remedies Act be amended to include NSF within the Act's jurisdiction.

SIGNIFICANT AUDIT RECOMMENDATIONS FROM PREVIOUS SEMIANNUAL REPORTS

We are responsible for reporting to Congress and following up on the resolution of audit recommendations. Four of the significant recommendations reported in OIG's first Semiannual Report to Congress (Number 1) were resolved.

Scientist's Dispute Over Grant Charges

A negotiated settlement resulted in a private New York university returning \$15,055 to NSF. The check was reimbursement to NSF for graduate students' fees and salaries and related indirect costs. This settlement was out of a total questioned cost of \$27,605 (*Semiannual Report No. 1*, page 11).

Poor Accounting Practices Result in Questioned Costs

The grantee provided us with documentation that resolved questions on indirect costs. The grantee resolved other questionable costs by returning \$15,325 to NSF and by reporting expenses not previously billed (*Semiannual Report No. 1*, page 11).

Accounting System Found Inadequate

This audit was resolved during the period in which the audit was initially reported (*Semiannual Report No. 1*, page 10).

Management Review at Observatory Results in Improved Operations

All of the procedural recommendations made in this review were implemented when the report was issued. Our recommendations for changes in the accounting year and the role of internal auditors were rejected by observatory and NSF management as management prerogatives. We have deferred to the agency in this instance (*Semiannual Report No. 1*, page 13).

AGENCY REFUSALS TO PROVIDE INFORMATION OR ASSISTANCE

During this reporting period, there were no reports made to the National Science Board of instances where information or assistance, requested under section 6(b)(2) of the Inspector General Act of 1978, as amended, was unreasonably refused or not provided.

REPORTS WITH OUTSTANDING MANAGEMENT DECISIONS

The following list of 14 reports were issued before the start of the reporting period for which no management decision has been made. Within NSF, DGC is tasked with the resolution of recommendations contained in external audit reports. During this reporting period, DGC has resolved recommendations for 26 of the 31 reports with recommendations over 6 months old. These audit reports were listed in our previous semiannual report. In this reporting period, an additional nine reports with outstanding management decisions became at least 6 months old. We believe significant progress has been made in the resolution process, but recognize that

continued attention must be applied to all outstanding reports. OIG and DGC will be working together to ensure that the followup system and the actions taken continue to address the intent of the resolution requirements.

Audit Report Number	Title	Date Report Issued
87-1127	Woodrow Wilson National Fellowship Foundation	06/25/87
87-1144	Capital Children's Museum	08/17/87
88-1133	RF Monolithics, Inc.	09/20/88
89-1014	Kariotis & Associates	10/31/88
89-1043	Maryland Academy of Sciences	11/29/88
89-1081	Southeastern Consortium Minority Engineering	01/30/89
89-1135	Smithsonian Institution	04/26/89
89-1152	Sonoscan, Inc.	05/18/89
89-1175	Triple Vision, Inc.	05/31/89
89-1180	Consort. for Math & Applications	06/12/89
89-1181	NY Botanical Garden	06/12/89
89-1206	Atlanta Thoughtworks One	07/11/89
89-1207	Ctr. Adv. Study Behav. Science	07/11/89
89-1223	KMS Fusion, Inc.	08/25/89

New Grants Suspended at California Museum

During this period, NSF made arrangements with the museum for repayment of questioned costs over 24 months. The museum has also appealed these questioned costs and NSF formed an independent panel to review the museum's, NSF grant officials', and auditors' positions. The panel met with all parties involved.

The panel has recommended, and the agency has agreed, to consider any information provided by the museum to support questioned costs. In our opinion, much of the information the museum has submitted in support of its claim does not meet the technical definition of "complete documentation."

Meanwhile, we are continuing to work with museum officials to improve the museum's accounting, internal controls, and management systems. All negotiations are scheduled for completion by May 15, 1990. NSF has agreed not to make any new awards to the museum until these issues are resolved.

SIGNIFICANT MANAGEMENT DECISIONS WHICH WERE REVISED

No significant management decisions were revised during this reporting period.

INSPECTOR GENERAL'S DISAGREEMENT WITH SIGNIFICANT MANAGEMENT DECISIONS

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

LIST OF AUDIT 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 REPORTS

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-1001	Amarillo College	10/02/89	\$ 0.00	\$ 0.00
90-1002	Ball State University	10/02/89	0.00	0.00
90-1003	Kennesaw College	10/02/89	0.00	0.00
90-1004	Valdosta State College	10/02/89	0.00	0.00
90-1005	East Carolina University	10/02/89	0.00	0.00
90-1006	State of Michigan	10/02/89	0.00	0.00
90-1007	Mary Washington College	10/02/89	0.00	0.00
90-1008	University of Nebraska	10/03/89	0.00	0.00
90-1009	James Madison University	10/03/89	0.00	0.00
90-1010	Applied Research Corporation	10/03/89	0.00	0.00
90-1011	State of Minnesota	10/03/89	0.00	0.00
90-1012	Purdue University	10/03/89	0.00	0.00
90-1013	University of Maine System	10/04/89	76.00	76.00
90-1014	Murray State University	10/04/89	0.00	0.00
90-1015	Northern Kentucky University	10/04/89	0.00	0.00
90-1016	Northeast Missouri State University	10/04/89	0.00	0.00
90-1017	Agbabian Associates	10/04/89	0.00	0.00
90-1018	Brown University	10/04/89	0.00	0.00
90-1019	Computer Horizon, Inc.	10/04/89	0.00	0.00
90-1020	Physical Sciences, Inc.	10/04/89	24,294.00	0.00
90-1021	Bend Research, Inc.	10/04/89	3,858.00	0.00
90-1022	Education Development Center	10/04/89	4,041.00	3,626.00
90-1023	Lowell Observatory	10/04/89	0.00	0.00
90-1024	Rochester Institute of Technology	10/04/89	0.00	0.00
90-1025	Rochester Institute of Technology	10/04/89	0.00	0.00
90-1026	Brown University	10/04/89	0.00	0.00
90-1027	University of Mississippi Medical Center	10/04/89	0.00	0.00
90-1028	University of Mississippi	10/04/89	20,861.00	0.00
90-1029	Georgia Department of Education	10/04/89	0.00	0.00
90-1030	Western Carolina University	10/04/89	0.00	0.00
90-1031	Fairbanks North Star Borough School District	10/04/89	0.00	0.00
90-1032	Howard University	10/04/89	0.00	0.00

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-1033	University of Maryland	10/04/89	\$ 0.00	\$ 0.00
90-1034	Slotta Engineering Associates Incorporated	10/05/89	154,362.00	35,440.00
90-1035	Incorporated Rsch Institutions for Seismology	10/05/89	0.00	0.00
90-1036	Missouri Botanical Garden	10/05/89	0.00	0.00
90-1037	Emory University	10/05/89	0.00	0.00
90-1038	Agbabian Associates	10/05/89	0.00	0.00
90-1039	Conference Board of the Mathematical Sciences	10/10/89	0.00	0.00
90-1040	Los Angeles County Museum of Natural History	10/13/89	0.00	0.00
90-1041	Council of Chief State School Officers	10/13/89	44,767.00	17,982.00
90-1042	Telemechanics Inc.	10/16/89	22,340.00	0.00
90-1043	American Assoc. for the Advancement of Sci	10/16/89	0.00	0.00
90-1044	Omega World Travel	10/18/89	1,146,215.00	1,006,228.00
90-1045	Displaytech Incorporated	10/18/89	2,083.00	0.00
90-1046	Varian Associates, Inc.-Beverly Microwave Div	10/18/89	21,560.00	0.00
90-1047	Children's Television Workshop	10/20/89	0.00	0.00
90-1048	Advance, Incorporated	10/25/89	8,571.00	0.00
90-1049	Delta State University	10/30/89	0.00	0.00
90-1050	University of Hawaii	10/30/89	0.00	0.00
90-1051	Eastern Kentucky University	10/30/89	0.00	0.00
90-1052	Southern Methodist University	10/30/89	334.00	0.00
90-1053	California State University	10/30/89	0.00	0.00
90-1054	University of Virginia	10/30/89	0.00	0.00
90-1055	University of Mississippi Medical Center	10/30/89	0.00	0.00
90-1056	Kentucky State University	10/30/89	0.00	0.00
90-1057	University of North Carolina at Wilmington	10/30/89	0.00	0.00
90-1058	Syracuse University	10/30/89	0.00	0.00
90-1059	University of Miami	10/30/89	0.00	0.00
90-1060	La Jolla Institute	10/31/89	0.00	0.00
90-1061	Virginia Commonwealth University	10/31/89	0.00	0.00
90-1062	Joint Oceanographic Institution, Inc.	10/31/89	0.00	0.00
90-1063	Consad Research Corporation	10/31/89	0.00	0.00
90-1064	Evaluation Technologies, Incorporated	10/31/89	0.00	0.00
90-1065	University of Hawaii	10/31/89	0.00	0.00
90-1066	ITT Federal Electric Corporation	10/31/89	0.00	0.00
90-1067	Northern Illinois University	10/31/89	0.00	0.00
90-1068	Illinois State University	10/31/89	0.00	0.00
90-1069	University of Nebraska	11/01/89	0.00	0.00
90-1070	North Slope Borough Assembly	11/02/89	0.00	0.00
90-1071	State of Louisiana	11/02/89	0.00	0.00
90-1072	St. Louis University	11/02/89	0.00	0.00
90-1073	San Francisco State University Foundation, Inc.	11/02/89	0.00	0.00

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-1074	State of Washington	11/02/89	\$ 0.00	\$ 0.00
90-1075	Antarctic Support Associates	11/02/89	0.00	0.00
90-1076	State of Maryland	11/02/89	0.00	0.00
90-1077	University of the Sacred Heart	11/03/89	0.00	0.00
90-1078	Science Museum of Virginia	11/16/89	51,868.00	40,746.00
90-1079	Science Museum of Virginia	11/16/89	0.00	0.00
90-1080	Center for Religion, Ethics & Social Policy	11/16/89	0.00	0.00
90-1081	Physical Dynamics, Inc.	11/16/89	0.00	0.00
90-1082	George Mason University	11/16/89	0.00	0.00
90-1083	Computational Physics Incorporated	11/16/89	0.00	0.00
90-1084	Mississippi Research & Development Center	11/16/89	0.00	0.00
90-1085	Cal State Bakersfield Foundation	11/16/89	0.00	0.00
90-1086	State of Tennessee	11/16/89	0.00	0.00
90-1087	Computer Horizons, Inc.	11/20/89	0.00	0.00
90-1088	University of North Carolina-Asheville	11/20/89	0.00	0.00
90-1089	College of Charleston	11/20/89	0.00	0.00
90-1090	University of Alabama	11/21/89	0.00	0.00
90-1091	Drexel University	11/21/89	0.00	0.00
90-1092	University of Wyoming	11/21/89	446.00	0.00
90-1093	Agbabian Associates	11/21/89	5,383.00	0.00
90-1094	Science Museum of Virginia	11/21/89	55,431.00	55,431.00
90-1095	Pembroke State University	11/21/89	0.00	0.00
90-1096	Medical College of Georgia	11/21/89	0.00	0.00
90-1097	State of Delaware	11/21/89	0.00	0.00
90-1098	State of Delaware	11/21/89	0.00	0.00
90-1099	University of Georgia	11/21/89	0.00	0.00
90-1100	University of North Carolina	11/21/89	0.00	0.00
90-1101	North Dakota State Board of Higher Education	11/21/89	0.00	0.00
90-1102	University of San Francisco	11/21/89	0.00	0.00
90-1103	State of North Carolina	11/29/89	0.00	0.00
90-1104	State of Utah	11/29/89	0.00	0.00
90-1105	Commonwealth of Massachusetts	11/30/89	633.00	0.00
90-1106	Milwaukee Public Museum	11/30/89	0.00	0.00
90-1107	Physical Dynamics, Inc.	12/04/89	0.00	0.00
90-1108	Auburn University	12/04/89	0.00	0.00
90-1109	Thomas Jefferson University	12/04/89	0.00	0.00
90-1110	Medical College of Wisconsin, Inc.	12/04/89	0.00	0.00
90-1111	Georgetown University	12/04/89	0.00	0.00
90-1112	University of Pittsburgh	12/04/89	0.00	0.00
90-1113	North Carolina State University	12/05/89	12,122.00	0.00
90-1114	University of South Carolina at Columbia	12/05/89	0.00	0.00

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-1115	University of South Carolina at Columbia	12/05/89	\$ 0.00	\$ 0.00
90-1116	University Foundation California State Univ.	12/15/89	0.00	0.00
90-1117	Illinois State University	12/15/89	0.00	0.00
90-1118	Chicago State University	12/15/89	0.00	0.00
90-1119	State of Delaware	12/15/89	0.00	0.00
90-1120	University of Delaware	12/15/89	0.00	0.00
90-1121	State of Texas	12/15/89	0.00	0.00
90-1122	Salt Lake County Utah	12/15/89	0.00	0.00
90-1123	Salt Lake County Utah	12/15/89	0.00	0.00
90-1124	Decision Science Research Institute, Inc.	12/18/89	0.00	0.00
90-1125	Englekirk & Hart Consulting	12/18/89	73,067.00	0.00
90-1126	National Gardening Assoc., Inc.	12/18/89	1,285.00	0.00
90-1127	University of Southern Mississippi	12/18/89	0.00	0.00
90-1128	Materials & Electrochemical Research Corp	12/27/89	2,425.00	413.00
90-1129	Santa Fe Institute	12/27/89	91,378.00	90,322.00
90-1130	Zualcomm, Inc.	01/04/90	0.00	0.00
90-1131	Optivision, Inc.	01/04/90	36,977.00	1,305.00
90-1132	Mt. St. Mary's College	01/04/90	0.00	0.00
90-1133	State of Florida	01/04/90	0.00	0.00
90-1134	State of Florida	01/04/90	0.00	0.00
90-1135	University of Nevada System	01/04/90	0.00	0.00
90-1136	U.S. Automation	01/11/90	188,254.00	188,254.00
90-1137	California Museum Foundation	01/11/90	211,922.00	0.00
90-1138	RDS Systems, Inc.	01/12/90	8,855.00	8,774.00
90-1139	Cyclotomics, Inc.	01/12/90	140,562.00	65,430.00
90-1140	Infrasense, Inc.	01/12/90	0.00	0.00
90-1141	Flow Research, Inc.	01/12/90	9,986.00	0.00
90-1142	NC Council for Minorities in Sci, Math & Eng	01/12/90	172.00	0.00
90-1143	North Carolina Museum of Life and Science	01/12/90	1,599.00	1,599.00
90-1144	Calif. Polytechic State University Foundation	01/16/90	0.00	0.00
90-1145	AURA/NOAO	01/31/90	0.00	0.00
90-1146	Penobscot Indian Nation	01/16/90	0.00	0.00
90-1147	Penobscot Indian Nation	01/16/90	0.00	0.00
90-1148	Broward Community College	01/16/90	0.00	0.00
90-1149	Ohawa University	01/16/90	0.00	0.00
90-1150	National Academy of Sciences	01/16/90	0.00	0.00
90-1151	The Oceanic Institute	01/16/90	0.00	0.00
90-1152	University of Kansas Center - Research	01/16/90	0.00	0.00
90-1153	Temple University	01/16/90	0.00	0.00
90-1154	Cal Poly Kellogg Unit Foundation, Inc.	01/17/90	0.00	0.00

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-1155	Cal Poly Kellogg Unit Foundation, Inc.	01/17/90	\$ 0.00	\$ 0.00
90-1156	Knox College	01/17/90	0.00	0.00
90-1157	Earth Technology Corporation	01/19/90	27,996.00	0.00
90-1158	Brown University	01/19/90	0.00	0.00
90-1159	Joint Oceanographic Institution, Inc.	01/19/90	0.00	0.00
90-1160	Washington University	01/19/90	0.00	0.00
90-1161	City & County of Denver	01/19/90	0.00	0.00
90-1162	Scientific Computing Associates	01/19/90	0.00	0.00
90-1163	American Council on Education	01/19/90	36,204.00	0.00
90-1164	Lurleen B. Wallace State Junior College	01/24/90	0.00	0.00
90-1165	Trustees of Hlth & Hosp of the City of Boston	01/24/90	266.00	0.00
90-1166	George Washington University	01/26/90	0.00	0.00
90-1167	Syscon Corp	01/26/90	0.00	0.00
90-1168	State of Texas	01/26/90	0.00	0.00
90-1169	University of South Alabama	01/31/90	0.00	0.00
90-1170	National Aquarium in Baltimore, Inc.	02/07/90	2,734.00	2,734.00
90-1171	New Mexico Highlands University	02/07/90	0.00	0.00
90-1172	Temple University	02/07/90	0.00	0.00
90-1173	Perceptronics	02/12/90	36,429.00	0.00
90-1174	University of Iowa	02/12/90	0.00	0.00
90-1175	State of Mississippi	02/12/90	0.00	0.00
90-1176	Towson State University	02/20/90	0.00	0.00
90-1177	Towson State University	02/20/90	0.00	0.00
90-1178	Loyola University of Chicago	02/20/90	0.00	0.00
90-1179	State of South Dakota	02/20/90	0.00	0.00
90-1180	Decision Science Consortium	02/20/90	0.00	0.00
90-1181	The Exploratorium	02/21/90	57,274.00	10,326.00
90-1182	Technical Education Research Center	02/26/90	59,458.00	0.00
90-1183	Iowa State University of Science & Technology	02/26/90	0.00	0.00
90-1184	Building Systems Development	02/28/90	272,036.00	833.00
90-1185	Cincinnati Museum of Natural History	02/28/90	0.00	0.00
90-1186	Assoc. of Univ. for Research in Astronomy	02/28/90	0.00	0.00
90-1187	Assoc. of Univ. for Research in Astronomy	02/28/90	0.00	0.00
90-1188	World Wildlife Fund	02/28/90	0.00	0.00
90-1189	American Institute of Indian Studies	03/21/90	0.00	0.00
90-1190	Verax Corporation	03/23/90	161,870.00	0.00
90-1191	Compression Telecommunications	03/27/90	18,255.00	0.00
90-1192	Fastman, Inc.	03/28/90	30,243.00	0.00
	Total		<u>\$3,048,492.00</u>	<u>\$1,529,519.00</u>

INTERNAL AUDIT REPORTS ¹

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-2101	Review of NSF's Contracted Advisory Assistance Services	12/12/89		
90-2102	Review of the Division of Science Resources Studies' Publication and Distribution Processes	02/05/90		
90-2103	Review of the National Science Foundation's Grant Administration	03/30/90		
90-2104	Review of NSF's Presence in Foreign Locations	03/23/90		
90-2105	Ocean Drilling Program (ODP) Trust Fund Reports for the Year Ending September 30, 1989	03/30/90		
90-2106	International Phase of Ocean Drilling (IPOD) Trust Fund Reports for the Year Ending September 30, 1989	03/30/90		

INVESTIGATIONS REPORT ¹

90-4101	Closure of Alleged Criminal Violation of the Privacy Act	03/30/90		
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OVERSIGHT REPORTS ^{1, 2}

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-3104	Contract Awarded to Former Employee in Violation of NSF Postemployment Restrictions	03/23/90		
90-3200	Conflicts-of-Interests Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, July - September 1989	03/08/90		
90-3201	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, May - August 1989	12/21/89		
90-3202	Conflicts-of-Interests Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, September 1989 through January 1990	02/26/90		
90-3203	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, September 1989	02/22/90		
90-3204	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, October 1989	02/14/90		
90-3205	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, November 1989	02/14/90		

Audit Report Number	Title	Date Report Issued	Dollar Value	
			Questioned Costs	Unsupported Costs
90-3206	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, December 1989 through January 1990	02/14/90		
90-3211	Compliance Review of NSF Proposal Actions - 4th Qtr FY88 - 1st Qtr FY89	03/22/90		
90-3213	Review of NSF Reconsideration Process Calendar Year 1989	03/13/90		
90-3214	Survey Data on Extent of Misconduct in Science and Engineering	03/21/90		
90-3215	Study of Important Notice No. 91	03/30/90		
90-3218	FY 1989 Summary of External Peer Oversight Reviews	03/01/90		

¹ During this reporting period, we did not have any reports with questioned costs, unsupported costs, or recommendations on the better use of funds.

² Some of these oversight reports are brief memoranda and furnish level of compliance information to NSF management on certain NSF conflict-of-interest regulations as they apply to all new and leaving employees and Intergovernmental Personnel Act assignees. 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.

In addition to the above-cited reports, about 400 compliance audits were conducted on individual NSF proposal actions, including postaward administration. These one-page reports of findings are accumulated and provide a basis for assessing administrative, policy, and procedural compliance in proposal processing and grant administration throughout NSF.

AUDIT RESOLUTION

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 table provides the required statistical information.

INSPECTOR GENERAL ISSUED REPORTS WITH QUESTIONED COSTS

	Number	Dollar Value	
		Questioned Costs	Unsupported Costs
A. For which no management decision has been made by the commencement of the reporting period	55	\$4,744,190	\$1,127,610
B. Which were issued during the reporting period	42	3,048,492	1,529,519
C. Reports which were reopened based on additional information	2	47,320	0
Subtotals (A + B + C)	99	7,840,002	2,657,129
D. For which a management decision was made during the reporting period	49*	3,819,273	N/A
(i) dollar value of disallowed costs		715,386	N/A
(ii) dollar value of costs not disallowed		3,103,887	N/A
E. For which no management decision has been made by the end of the reporting period	50	4,020,729	1,982,627
Reports for which no management decision was made within six months of issuance	14	1,102,701	549,361

* Three of these have been appealed and are under review and negotiation.

INSPECTOR GENERAL ISSUED REPORTS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

During this reporting period, we did not issue any audit reports with recommendations that funds be used more efficiently.

GLOSSARY

The following defines the terms 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 research; material failure to comply with federal requirements for protection of researchers, human subjects, or the public or for ensuring the welfare of laboratory animals; or failure to meet other material legal requirements governing research.

If you want to report or discuss confidentially any instance of misconduct in science, fraud, waste, abuse, or mismanagement, please contact the Office of Inspector General.

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Assistant Inspector General for Internal Audit and Investigations	(202) 357-7833
Assistant Inspector General for Oversight	(202) 357-9458
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