National Science Foundation

Office of Inspector General

Semiannual Report to Congress

September 2013

About The National Science Foundation...

The National Science Foundation (NSF) is charged with supporting and strengthening all research discplines, and providing leadership across the broad and expanding frontiers of science and engineering knowledge. It is governed by the National Science Board which sets agency policies and provides oversight of its activities.

NSF invests approximately $7 billion per year in a portfolio of more than 49,400 research and education projects in science and engineering, and is responsible for the establishment of an information base for science and engineering appropriate for development of national and international policy. Over time other responsibilities have been added including fostering and supporting the development and use of computers and other scientific methods and technologies; providing Antarctic research, facilities and logistic support; and addressing issues of equal opportunity in science and engineering.

And The Office of the Inspector General...

NSF's Office of the Inspector General promotes economy, efficiency, and effectiveness in administering the Foundation's programs; detects and prevents fraud, waste, and abuse within the NSF or by individuals that recieve NSF funding; and identifies and helps to resolve cases of misconduct in science. The OIG was established in 1989, in compliance with the Inspector General Act of 1978, as amended. Because the Inspector General reports directly to the National Science Board and Congress, the Office is organizationally independent from the agency.

About the Cover...

Front Cover: Photograph of The Einstein Memorial on the grounds of the National Academies of Science in Washington, D.C., taken in early Spring 2013 by Investigative Scientist Scott J. Moore.

Back Cover: The quotation attributed to Albert Einstein appears on the outer wall of The Einstein Memorial.

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From the Inspector General

This Semiannual Report to Congress highlights the activities of the National Science Foundation Office of Inspector General (NSF OIG) for the six months ending September 30, 2013. During this period, our investigative staff closed 86 investigations, had six research misconduct cases result in findings by NSF, and recovered over $504,095 for the government. In addition, we issued six audits and reviews which identified more than $1.1 million in questioned costs.

This report reflects my office's work to promote the efficiency and effectiveness of the National Science Foundation's programs and operations and to safeguard their integrity. The OIG is committed to providing rigorous, independent oversight of NSF. To that end, in the past six months our audit of NSF's management and oversight of contingencies in a major construction project disclosed more than $339,000 in questioned costs. Another audit recommended that an awardee return nearly $800,000 in NSF funds that were spent improperly. Our investigations found fraudulent use of funds intended for grants to support innovative research by small businesses; mischarges to NSF awards for travel and unallowable costs; and research misconduct, including falsification of data and plagiarism in proposals to obtain NSF funds.

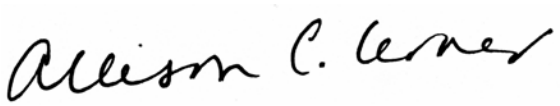
As budgets tighten and Federal resources are strained, it is vital that every taxpayer dollar allocated to support scientific research be used for its intended purpose. To help meet this critical objective, we are focused on providing robust oversight to strengthen NSF's financial controls and processes.

Our office is not unaffected by these difficult budgetary times. In fiscal year 2013 we lost five auditors, investigators, and attorneys and did not replace any staff. In addition, under the sequester the amount available to fund our audits, investigations and other operational needs was cut in half. Despite these challenges, our staff have continued to produce high quality, thorough audits, investigations and reviews.

While our investment in data analytics has paid off, enabling us to work more efficiently and effectively, the most valuable asset we have in these challenging times is our staff. Across the organization, people have willingly shouldered the work of colleagues who have left and not been replaced. They have worked diligently to identify low- or no-cost training that enables us to meet mandatory continuing education requirements at a time when the funds for such activities have been slashed. And they continue to maintain our office's lead role in the OIG community's

efforts to combat fraud in the Small Business Innovation Research program, to expand the use of suspension and debarment to protect Federal funds, and to ensure that critical accountability tools are not lost or watered down as part of the process to reform Federal grant management.

Their dedication to this work during these challenging times reflects the office's sustained commitment to helping NSF be an effective steward of taxpayer dollars and benefits from the support of NSF management across the Foundation. We look forward to our continued partnership with NSF and the Congress to fulfill this goal.



Report Highlights

- Our audit of the United States Antarctic Program medical screening process found that NSF may have missed opportunities to reduce the cost of this process because it has not implemented certain recommendations from its medical review panel. For at least five years, the panel has recommended that NSF base required medical tests on factors such as how long an individual will be in Antarctica, and the assigned duty station and job responsibilities, rather than require all applicants to undergo the same tests. Revising the number of medical tests performed based on these criteria could lower costs, which are approximately $860 per person.

- An audit covering over $113 million charged by a university to NSF awards between 2008 and 2011 found that an estimated $794,221 in unallowable costs were charged to these awards. The unallowable costs included more than $660,000 in direct costs for supplies such as laptops, monitors, and toner cartridges that should have been treated as facilities and administrative costs.

- Investigations involving fraud in the Small Business Innovation Research Program (SBIR) resulted in a Principal Investigator (PI) being indicted for false claims, false statements, and theft; a proposed five-year debarment for a small business owner who improperly spent more than half of his SBIR award funds; and the government-wide suspension of a PI and his company due to false statements and false claims with respect to an SBIR award.

- We referred thirteen cases of research misconduct to NSF including a post-doctoral fellow who admitted falsifying data, a graduate student who was expelled for fabricating data, and a PI who plagiarized text in two awards.

Opportunities May Exist for Cost Savings on USAP Medical Screenings

Before going to the Antarctic through the United States Antarctic Program (USAP), potential travelers must pass a number of medical and dental examinations based on factors such as gender and age. With minor exceptions, this physical qualification testing is "one size fits all," meaning that all candidates, regardless of their deployment duration, job responsibilities, season of travel, or duty station, must undergo the same medical tests.

Our audit of the USAP medical screening process found that NSF may have missed opportunities to reduce the cost of the medical screening process because it has not implemented certain recommendations from its medical review panel. For example, for at least five years, the panel has recommended that NSF base required medical tests on factors such as how long an individual will be in Antarctica, duty station, and job responsibilities, rather than require all applicants to undergo the same tests. Revising the number of medical tests performed based on these criteria could lower costs, which are approximately $860 per person.

We also noted that nearly 20 percent of applicants withdraw each year before completing the medical screening process, constituting significant time and effort for staff as well as incurring medical examination costs. To reduce these costs, NSF should identify the reasons why applicants withdraw from the process and address these causes.

The Antarctic Support Contractor (ASC) and its subcontractors prepare, process, and pay as many as 1,600 individual reimbursement requests each year for costs related to medical screening. We found that guidance about what medical expenses will be reimbursed by the contractor is unclear. As a result, applicants may be submitting claims for expenses that are not eligible for reimbursement.

We also found that the contractor does not have policies and procedures for reviewing ASC invoices, including those for medical processing. The Contracting Officer told us that NSF cannot tell if it is being accurately invoiced by Lockheed Martin (LM) for medical processing costs and is reliant on

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the contractor to charge them correctly and on one contractor employee to examine LM invoices, including those for medical processing, more closely. While we recognize medical processing costs only amount to $1 million out of the first full year's contract value of $173 million, finding a less than robust internal control system over relatively small costs raises the possibility that a similar level of control could exist over larger contractor costs. NSF should consider increasing its investment in the oversight of invoiced costs until it is better assured of the contractor's internal controls.

We recommended that NSF establish a process to address and track medical panel recommendations in a timely manner and identify and address the reasons why applicants withdraw during the medical screening process. We also recommended that NSF require the contractor to document its internal controls over ASC invoicing for the medical screening process. NSF agreed with our recommendations and stated that it is taking steps to implement them.

Improper Use of NSF Award Funds Leads to More than $339,000 in Questioned Costs

Our 2012 audit of NSF's management and oversight of contingencies in the construction portion of the EarthScope project[1] found that contingency expenditures in a cooperative agreement to Stanford University for the San Andreas Fault Observatory at Depth (SAFOD) portion of the project increased from the initial estimate of $1.5 million to over $4.9 million. We also found that Stanford did not separately identify these contingency expenditures in its accounting system.

As a result of these findings, we conducted an audit of Stanford's expenditures for the SAFOD project, which totaled nearly $24.6 million, 90 percent of which was awarded to eight subawardees. In turn, one of these subawardees contacted portions of its work to several subcontractors. Due to the many levels of subcontracting used, the details of both the work completed and the corresponding expenditures were not readily visible to us. We selected a sample of $16.3 million of transactions for review; however, because of the significant amount of subawarded work, we were able to review only $753,541 of SAFOD expenditures.

Of the $753,541 reviewed, we identified $333,024 of payments to a subawardee and $6,253 of other direct costs as questioned costs. Specifically, $290,000 was improperly used to replace a subcontractor's uninsured lost equipment and another $43,024 was spent in excess

1 Audit of NSF's Management of Contingency in the EarthScope Awards, Report No. 12-2-010, dated September 28, 2012.

of the subaward agreement ceiling prices. Of the remaining $420,517 reviewed, we found that Stanford spent $6,253 on unallowable costs, such as sales taxes, promotional items, and alcohol.

We recommended that the NSF request Stanford University to repay NSF the $339,277 of questioned costs.

More than $794,000 in Unallowable Costs Charged to NSF Awards

Based on statistical sampling, an audit covering over $113 million charged by Cornell University to NSF awards between 2008 and 2011 estimated that more than $794,000 in unallowable costs was charged to these awards. The estimated unallowable costs included more than $660,000 in direct costs for supplies such as laptops, monitors, and toner cartridges that should have been treated as facilities and administrative costs. In addition, Cornell improperly charged costs for services at facilities such as computer centers and supply stores which should have been treated as facilities and administrative costs. Further, Cornell charged NSF awards for foreign travel that exceeded the maximum allowable per diem rate and was not adequately documented.

The audit recommended that Cornell refund the $794,221 to the government and that Cornell adhere to its procedures for charging costs to NSF awards. Although Cornell agreed that some of the costs identified in the audit were unallowable, it disagreed with the audit recommendations.

A-133 Audits

Single Audits Identify Repeat Findings at One-Third of Awardees with Findings

OMB Circular A-133 provides audit requirements for state and local governments, colleges and universities, and non-profit organizations receiving Federal awards. Under this Circular, covered entities that expend $500,000 or more a year in Federal awards must obtain an annual organization-wide audit that includes the entity's financial statements and compliance with Federal award requirements. Non-Federal auditors, such as public accounting firms and state auditors, conduct these single audits. The OIG reviews the resulting audit reports for findings and questioned costs related to NSF awards, and to ensure that the reports comply with the requirements of OMB Circular A-133.

The 149 audit reports reviewed and referred[2] to NSF's Cost Analysis and Audit Resolution (CAAR) Branch this period covered NSF expenditures of $6.4 billion as reported in the Single annual Audits during audit years 2011 and 2012, and resulted in 128 findings at 62 NSF awardees.

One awardee received an adverse opinion on its financial statements, and eight awardees received qualified opinions on their compliance with Federal grant requirements. Forty-seven of the 128 findings (37 percent), at 20 of the 62 awardees with findings (32 percent), were repeated from previous audits, calling into question the awardees' ability to adequately manage their NSF awards. The auditors also identified $227,819 in questioned costs.

Awardees' lack of internal controls and noncompliance with Federal requirements included: untimely and/or incorrect reporting of time and effort; inadequate support for salary/wages, equipment, travel, and indirect costs charged to awards; inadequate monitoring of subrecipients; inability to prepare the financial statements; and late submission of financial and/or progress reports.

Desk Reviews Continue to Find Audit Quality and Timeliness Issues in Nearly Half of Single Audits

The audit findings in A-133 reports are useful to NSF in planning site visits and other post-award monitoring efforts. Because of the importance of A-133 reports to this oversight process, the OIG conducts desk reviews on all reports for which NSF is the cognizant or oversight agency for audit, and provides guidance to awardees and auditors for the improvement of audit quality in future reports. In addition, OIG returns to the awardees reports that are deemed inadequate so that the awardees can work with the audit firms to take corrective action.

During the period, we conducted desk reviews of 79 audit reports[3] for which NSF was identified as the cognizant or oversight agency for audit, and found that 46 fully met Federal reporting requirements. Thirty-three reports (43 percent) contained audit quality and timeliness issues.

The quality issues we identified included 17 reports in which the Schedule of Expenditures of Federal Awards did not provide sufficient information to allow for identification of awards received from non-Federal "pass-through" entities or did not adequately describe the significant accounting policies used to prepare the schedule. Ten reports were submitted after the due date required by OMB Circular A-133. Seven

2 We also reviewed and rejected two reports based on audit quality deficiencies. We will report on the opinions and findings for these audits upon receipt of the revised reports.
3 The audits were conducted by 48 different independent accounting firms.

reports did not use reporting language required by AICPA[4] standards, and six reporting packages contained Data Collection Forms (Form SF-SAC) that failed to accurately reflect the results of the audit. In addition, three of the 11 reports that included audit findings related to compliance with Federal requirements failed to adequately present the required elements of the finding to assist auditee management in correcting the reported deficiency, and four reports failed to adequately present the required elements of the auditee managements' plan to correct the deficiencies reported.

For those errors which potentially impacted the reliability of the audit reports, we contacted the auditors and awardees, as appropriate, for explanations of each of the potential errors. In most cases, the auditors and awardees either provided adequate explanations and/or additional information to demonstrate compliance with Federal reporting requirements. However, we rejected two reports due to substantial non-compliance with Federal reporting requirements. After completion of all 79 reviews, we issued a letter to each auditor and awardee informing them of the results of our review and the specific issues on which to work during future audits to improve the quality and reliability of the report.

Quality Control Review on Single Audit Work Performed by Public Accounting Firm Discloses Serious Deficiencies

OIG uses a risk assessment process to identify single audits which merit further review to determine whether the audits were conducted in accordance with applicable standards. These Quality Control Reviews involve in-depth examinations of the auditors' supporting documentation. Our quality control review of the audit documentation and report prepared for the Single Audit of an NSF awardee for which the auditor issued unqualified opinions on the financial statements and on compliance with Federal requirements, disclosed serious deficiencies in the work performed. The auditors did not identify one of the direct and material compliance requirements in effect for the major program, and did not adequately plan and perform testing related to several Federal requirements that were identified as direct and material to the major program, including a failure to select a sample size large enough to meet AICPA standards (as well as the firm's policy) for testing of one compliance requirement. The auditors agreed with our recommendation to conduct additional testing and reissue the audit report. We will report on our review of the additional work during the next semiannual period.

4 American Institute of Certified Public Accountants.

Audit Resolution

More Than $248,000 in Questioned Costs in Five Awards to University of Notre Dame

An audit of five awards made to the University of Notre Dame questioned $248,983 of claimed costs. The questioned costs consisted of $119,330 in unsupported participant support and travel costs; $44,300 for unsupported and unallowable subaward costs; $80,800 in participant support costs that were re-budgeted without the required prior approval from NSF; and $4,553 of indirect costs associated with questioned direct costs. The auditors also identified several compliance and internal control deficiencies in financial practices at Notre Dame and its subawardees that, if not corrected, could impact current and future NSF awards.

According to NSF, the University of Notre Dame has made improvements to its subrecipient monitoring process. In addition, NSF said that it has recommended that the subawardees develop formal methodologies for documenting participant support costs under NSF awards.

NSF Takes Steps to Help Ensure that Project Reports are Submitted on Time

In response to our recommendations, NSF stated that it will implement a report for use by NSF Program Officers that will list awards with annual and/or final project reports that are at least 90 days overdue. NSF also agreed to provide additional training on how to identify late reports.

Debarment Considered for Failure to Comply with Final Reporting Requirements

OMB Circular A-110 requires recipients of Federal funds to submit performance reports at least annually and at the end of a project. NSF has implemented this requirement through its Grant General Conditions (GC-1 § 15), which obliges awardees to “submit annual project reports 90 days prior to the end of the current budget period and final reports.” The agency uses the reports from Principal Investigators (PIs) to monitor the progress and accomplishments on funded projects.

During the course of this audit, we identified a number of individual PIs who had repeatedly failed to comply with the reporting requirement, including eight individuals with multiple missing final reports. In our view, repeated non-compliance with the final reporting requirement (in particular) indicates a lack of present responsibility to handle federal funds, and we opened a dialogue with the agency about the possibility of government-wide debarment in these instances. To support debarment

consideration, we provided NSF officials with relevant information gathered and assembled by our audit staff, such as the number and amount of active awards, the length of time the final reports were overdue (all were at least a year past due), the amount of the relevant awards, verification that notices had been sent to the PIs about the delinquent reports, and whether the PIs had also failed to submit annual reports.

NSF responded by issuing letters to the institutions and PIs requiring submission of the reports or an action plan within 30 days. The letters further indicated that failure file a report or action plan would result in administrative action. NSF's prompt action in this regard is consistent with practice known as a "show cause" letter, whereby an awarding agency provides an opportunity for individuals or entities being considered for suspension or debarment to demonstrate present responsibility before formal action is taken. In this instance, 6 of the 8 PIs ultimately complied with the requirement after NSF issued its letter. We are following up with the agency concerning the remaining two cases.

Investigations

Civil and Criminal Investigations

NSF's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs provide grants for small businesses to "undertake research and development with high technical risk and high commercial reward." In order to obtain such grants, companies and their PIs must certify that they meet eligibility criteria that remain in effect for the duration of the awards. While the vast majority of the companies tell the truth in their proposals and reports and spend their funds properly, our investigations continue to find companies that committed fraud or other wrongdoing.

PI Indicted for SBIR Fraud

We previously reported[5] that a PI and his company were suspended government-wide after our investigation determined that the PI had provided false effort information in official project reports submitted to NSF to obtain grant payments. During this reporting period, the PI was indicted for false claims, false statements, and theft for significantly inflating the amount of effort he and other company employees spent on the NSF project.

$275, 000 in Funds Put to Better Use from STTR Award

As a part of an ongoing investigation, we recommended that NSF withhold final payments associated with a Phase II STTR award that had expired, after finding that: (1) the company had misrepresented its accounting and timekeeping systems to NSF in order to obtain the award, and (2) the mandatory milestone reports submitted by the company to NSF provided false information regarding salary payments to the PI. NSF financially closed the award and withheld the final payments, resulting in $275,000 in funds put to better use.

Proposed Five Year Debarment for SBIR Company Owner and $49,986 in Funds Put to Better Use

Our investigation found that the owner of a small business in Oklahoma spent 57 percent of his SBIR award funds on expenses unrelated to the award project, primarily for a

5 March 2012 Semiannual Report, p.26.

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subsidiary company engaged in a separate business. Based on our recommendation, NSF terminated the award, resulting in $49,986 in funds put to better use. The company went into bankruptcy and its assets were sold. After DOJ declined prosecution, we recommended NSF debar the businessman for five years. NSF's decision is pending.

NSF Suspends PI and SBIR Company Government-wide Due to PI's False Representations

We previously reported[6] that NSF followed our recommendation to retain the final payment on an SBIR Phase II award as a result of false statements and false claims submitted by the PI of a small business in Texas. Based on our recommendation, NSF also suspended the PI and the small business government-wide pending the conclusion of our joint investigation with the NASA and DOE OIGs and the Defense Criminal Investigative Service.

STTR PI Indicted on Additional Count of Federal Program Fraud

We previously reported[7] that the PI of an NSF STTR awardee company was indicted for wire fraud, mail fraud and falsification of records based upon a variety of grant-related documents he submitted to NSF, which contained false information. Based on additional information uncovered in our investigation, the Grand Jury issued a superseding indictment against the PI to add one count of theft from a federal program arising from an additional fraud scheme in which he authorized students to receive federally-funded stipends and required the students to pay him significant portions of the stipend funds.

Unsupported Expenditure of ARRA Funds Results in Recommendation for PFCRA Recovery

Our investigation of a California small business that received an SBIR award funded under ARRA disclosed that the company failed to segregate and track costs as required for ARRA awards, and did not properly document expenditure of more than half of the $99,077 it received. In addition, the company falsely certified that it had complied with the ARRA award requirements. We referred the case to DOJ, which declined to accept the matter for FCA action. We therefore recommended that NSF pursue a PFCRA action against the small business to recover the funds paid as a result of the submission of the false report, as well as penalties and damages, totaling $76,052. NSF's decision is pending.

6 March 2013 Semiannual Report, p.23.
7 March 2013 Semiannual Report, p.22.

The Program Fraud Civil Remedies Act (PFCRA)

When an OIG investigation reveals that a grantee submitted false claims to NSF, we have generally referred the matter to DOJ for civil action under the False Claims Act (FCA), which provides up to treble damages and penalties up to $11,000 for each false claim. However, an FCA action requires DOJ to proceed to trial in federal court or engage in settlement negotiations, and not all referrals are accepted, sometimes due to the damages falling below DOJ's monetary loss threshold. PFCRA provides an agency administrative remedy to recover money from grantees when the amount of each false claim does not exceed $150,000. Under NSF's PFCRA regulation, our office refers the case to NSF for action, and NSF can recover up to twice the amount of each false claim, as well as a penalty of $5,000 for each false claim. PFCRA can also be used subsequent to a criminal conviction to seek funds not recovered by the criminal action.

As discussed above, we recently made our first PFCRA recommendation to NSF, and we are now considering the use of PFCRA as a possible remedy in all substantiated fraud investigations.

NSF Debars Former PI for Purchase Card Fraud

We previously reported[8] that a PI at a Missouri university used his university purchase card to buy items charged to several NSF awards and then returned the items in exchange for gift cards. The PI pled guilty and was sentenced to two years' probation and payment of $2,525. Based on our recommendation, NSF debarred the PI for three years.

Theft of Equipment at an NSF-Funded Research Facility

A former employee of an NSF-supported research facility in Louisiana was convicted of theft in state court and sentenced to five years' probation and restitution of $14,925. We recommended that NSF debar the individual for three years; NSF's decision is pending.

University Returns Over $6,000 for Mischarging Travel Costs

Our investigation found that an Oklahoma university wrongly charged participant travel expenses under an NSF award to a domestic travel account, thus incorrectly incurring indirect cost charges. The university returned $6,201 to NSF.

8 March 2013 Semiannual Report, p.24.

Company Returns Misspent Participant Support Costs

Our investigation of a Rhode Island company uncovered $5,267 in misspent participant support costs under an NSF award, which the company repaid.

Debarment Recommendation Based on Professors' False Statements and Non-Disclosure of Dual Employment

We previously reported[9] that NSF terminated an NSF award, resulting in $295,933 funds put to better use, based on our investigation into allegations that two professors were receiving duplicate salaries from NSF grants awarded to their Georgia university and from a foreign university. Our investigation revealed that the professors, who held tenured faculty positions at the Georgia university and served as PIs or co-PIs on NSF awards, simultaneously held full-time faculty positions at a university located in Israel. The PIs charged salary and foreign travel expenses associated with trips and time spent working in Israel to the NSF awards. They failed to disclose their dual employment to NSF, the U.S. university, and the foreign university, and they made false statements regarding their dual employment. The U.S. university conducted an internal investigation, which resulted in the professors' resignations.

We referred the matter to the State of Georgia's Attorney General's Office for consideration, but it declined criminal action. We recommended that NSF debar the PIs for five years, and NSF's decision is pending.

Debarment Recommended for PI and an NSF Center Director Based on Diversion of Program Income

Our investigation of a former PI on multiple NSF awards and a former director of an NSF Center revealed that they diverted program income earned as a result of sales of curriculum products developed under active NSF awards, without the Texas awardee institution's knowledge. They sold the products through two non-profit corporations they formed and deposited the program income into bank accounts to which the awardee institution did not have access. As a result, the awardee institution was unable to either report the program income to NSF or to determine how to use the program income to further the NSF award purposes, as required. After DOJ declined prosecution, we recommended that NSF debar the PI, the former director, and their affiliated companies for five years. NSF's decision is pending.

9 September 2011 Semiannual Report, p.9.

Non-Profit Improperly Spends NSF Funds

Our investigation of an NSF cooperative agreement with an Alaskan non-profit organization revealed that the PI and the organization spent NSF funds on expenses incurred by other Arctic researchers on non-NSF research, requested duplicative reimbursement of the same expenses, and failed to maintain adequate documentation of expenses. We recommended that NSF debar the PI and the non-profit organization for three years, and NSF's decision is pending.

Former Professor and His Company Proposed for Debarment for Ten Years for Theft of Award Funds

We previously reported[10] that a former professor of an Indiana university used NSF grant funds to purchase items for personal use, and as a result he was: suspended government-wide by NSF; indicted and pled guilty to criminal conversion; sentenced to probation and home confinement; and ordered to make restitution to NSF due to his misuse of NSF grant funds. Based on our recommendation, NSF proposed debarment of the individual and his company for ten years. NSF also prohibited the individual from serving as an NSF reviewer, advisor, or consultant to NSF during the period of debarment.

Research Misconduct Investigations

Research misconduct damages the scientific enterprise, is a misuse of public funds, and undermines the trust of citizens in government-funded research. It is imperative to the integrity of research funded with taxpayer dollars that NSF-funded researchers carry out their projects with the highest ethical standards. For these reasons, pursuing allegations of research misconduct by NSF-funded researchers continues to be a focus of our investigative work. In recent years, we have seen a significant rise in the number of substantive allegations of research misconduct associated with NSF proposals and awards. The NSF definition of research misconduct encompasses fabrication, falsification, and plagiarism.

NSF takes research misconduct seriously, as do NSF's awardee institutions. During this reporting period, institutions took actions against individuals found to have committed research misconduct, ranging from letters of reprimand to termination of employment. During this reporting period, NSF's actions in research misconduct cases ranged from letters of reprimand to one year of debarment.

10 March 2011 Semiannual Report, p.22, September 2011 Semiannual Report, p.9, and March 2013 Semiannual Report, p.24.

We referred thirteen cases of research misconduct to NSF, which are summarized below. In every case, we recommended that NSF make a finding of research misconduct, send the subject a letter of reprimand, require the subject to complete a Responsible Conduct of Research training program, and other actions as described below. NSF's decisions are pending in all cases.

Post-Doctoral Fellow Admits Falsifying Data

A post-doctoral fellow who conducted NSF-funded research at a Washington university admitted that he manipulated images in a manuscript submitted to a journal. The university's investigation determined that he intentionally committed falsification, but found that the image manipulations did not affect the conclusions of the manuscript. The university issued a research misconduct finding and terminated the fellow's employment. The journal rescinded its acceptance of the manuscript for publication.

We concurred with the university's findings and recommended that NSF debar the fellow for one year. We further recommended that, for three years after the debarment period, NSF: bar him from participating as a peer reviewer, advisor, or consultant for NSF; require certifications and assurances for all proposals or documents submitted to NSF; and require submission of a detailed data management plan with annual certifications of adherence for any resulting awards.

Graduate Student Fabricates Microscope Images

A graduate student at an Illinois university twice fabricated microscope images, misrepresenting his research abilities. The student admitted to his actions and was expelled from the university. We recommended that NSF debar the student for one year, require two years of certifications and assurances after the period of debarment, and bar him from serving as a consultant or reviewer for NSF for two years.

Graduate Student Expelled for Fabricating Data

A graduate student at a university in Kentucky committed research misconduct when he fabricated research data. The student's advisor became suspicious when the student provided new data so soon after returning from vacation. The advisor checked the lab equipment on which the student supposedly conducted the experiments and found it had not been used. When the advisor confronted the student, the student admitted he fabricated the data. The department chair conducted an investigation, concluded the student fabricated, and dismissed him from the program.

We concurred with the university's conclusions and recommended that NSF debar the student for one year, require him to submit certifications and an assurances for one year following the debarment period, and bar the student from serving as a reviewer, advisor, or consultant for NSF.

Research Team Omission of Experimental Details and Overstatement of Results Constitutes Falsification

Our investigation determined two faculty members and a graduate student at a North Carolina university recklessly omitted experimental details and overstated their experimental results in a published article, to an extent that constituted falsification.

The university's investigation concluded that at least one of the faculty members had falsified but had done so carelessly, which did not constitute research misconduct. Nevertheless, the university requested that the authors retract the article. When the authors disregarded that request, the university sent the request directly to the journal — which did not retract the article.

We continued our investigation with additional interviews and examined the laboratory records. The student's lab notebooks, which described some experiments in great detail, lacked documentation to support the pertinent claim discussed in the article. Although both faculty members claimed to have reviewed the raw data, we concluded that the minimal raw data that existed in fact contradicted the pertinent claim in the article. We also reviewed subsequent articles that the coauthors asserted constituted corrections to the original paper, but we found that these articles did not address the deficiencies in the original article.

We concluded that collectively the coauthors recklessly falsified their work in the original article. We recommended that NSF require retraction of the article and three years of certifications and assurances for each author, and bar each author as an NSF reviewer, advisor, or consultant for three years.

Extensive Plagiarism Found in PI's Proposal

Our investigation found plagiarism in a proposal submitted by a PI. The PI and the president of the Idaho company did not dispute that the proposal contained copied text, but explained that the PI neglected to finish the proposal because of "extenuating circumstances," specifically a visit from his fiancé, whom he had not seen in a year. Subsequently, another company employee submitted the proposal without consulting the PI.

Our investigation, however, also found extensive plagiarism in a proposal submitted to another federal entity, casting doubt on the claim the NSF plagiarism was due to "extenuating circumstances." We concluded that the PI knowingly committed plagiarism and recommended that NSF require certifications and assurances for three years.

Professor Copies from NSF Proposal She Reviewed

Our investigation determined a North Carolina professor retained copies of NSF proposals she reviewed and shared them with her students without approval by the NSF program officer. She also copied a figure from one of the proposals and used it in a conference presentation without attribution to its author. Our investigation concluded that the professor committed plagiarism and violated NSF reviewer rules. We recommended that NSF require that the professor provide certifications and assurances for three years, and be barred from service as a reviewer or consultant to NSF for three years.

Small Business Owner Plagiarizes in Two NSF Proposals

A small business owner plagiarized in an NSF proposal but claimed the plagiarism was a result of computer software. Our investigation found that the owner had submitted another NSF proposal a year earlier, contrary to his contention, and that this proposal also contained plagiarism.

The owner ultimately accepted responsibility for the copied text while claiming he misunderstood the definition of plagiarism. This claim was not plausible in light of his extended experience at large U.S. research institutions and U.S. research companies. We concluded that the owner knowingly committed plagiarism and recommended that NSF require the owner to provide certifications for two years.

Proactive Review Identifies Two Incidents of Plagiarism

We routinely carry out proactive reviews to identify fraud, research misconduct, and other wrongdoing in NSF awards. As a part of an ongoing proactive review, we have been looking for plagiarism by reviewing all proposals funded by NSF in 2011. In one case that arose from that review, a South Carolina PI plagiarized in his NSF proposal. The university investigation found additional plagiarism, concluded the PI intentionally plagiarized, and took several actions in response. Our investigation identified more plagiarism, revealing a pattern. We concurred with the university's findings, and we recommended that NSF require the PI to submit certifications and assurances, and bar the PI from participating as a peer reviewer, advisor, or consultant for NSF for two years.

In a second case, we determined that a South Carolina co-PI plagiarized in an NSF proposal. During our investigation, we found no additional instances of copied text. We recommended that NSF require the co-PI to provide certifications for one year.

PIs Submit Proposals without Noticing Plagiarism by Others

In two cases we recommended that PIs be found to have committed plagiarism because they submitted proposals in their names which had been significantly plagiarized by others. In the first case, a PI at an Ohio institution submitted a collaborative proposal in which almost nine of twelve pages were plagiarized. The NSF U.S.-Egypt program announcement states that proposals "should be jointly developed ... and reflect a true intellectual collaboration," and it includes explicit language about plagiarism. The PI admitted that his collaborator, an Egyptian scientist with whom the PI was unfamiliar, prepared virtually all of the proposal.

Our investigation concluded that the PI recklessly committed plagiarism. Although the PI authored only one small section of the proposal, he submitted a document provided to him by a foreign scientist, whom he admittedly did not know professionally or personally, without performing any due diligence such as carefully reviewing the document — despite having engaged in email correspondence in which it was clear the Egyptian scientist has a very limited command of English. We recommended that NSF require certifications and assurances for one year.

In the second case, an associate professor at an Illinois university recklessly plagiarized material into an NSF proposal. An inexperienced graduate student wrote the proposal and the professor submitted it with minimal review. He claimed that family matters affected his ability to exercise due diligence and compromised his judgment when deciding to submit the proposal. We recommended that NSF require certifications and assurances, and bar the professor from serving NSF as a reviewer, advisor, or consultant for one year.

PI Plagiarizes in Two Awards

A PI at an Illinois university plagiarized text in two awards from ten sources. The PI claimed he paraphrased and prominently referenced sources to support the text; however, the identified text was not demarcated by quotation marks or indentation. The university inquiry determined the PI committed plagiarism, but the university did not conduct an investigation because the PI subsequently obtained employment elsewhere. We agreed with the university's findings that

the PI plagiarized and recommended that for one year NSF require certifications for all proposals or documents submitted to NSF and bar him from participating as a peer reviewer, advisor, or consultant for NSF.

Assistant Professor Blames Software for Deleting Citations

A Pennsylvania professor plagiarized text into an NSF proposal and claimed that the software he used to merge components of the proposal somehow caused citations to disappear. A university committee with expertise in the same software examined the original proposal components and found no indication that attribution was ever present. The committee also noted that the professor made slight modifications to the copied text to fit his subtly different research area, and that copying such a large amount of text would be inappropriate for quotation marks or even a large indented block. The committee concluded that his actions constituted research misconduct, and we agreed and recommended that NSF require certifications and assurances, and bar him from serving NSF as a reviewer, advisor, or consultant for one year.

Actions by NSF Management on Previously Reported Research Misconduct Investigations

NSF has taken administrative action to address our recommendations on nine research misconduct cases reported in previous semiannual reports. In each case, NSF made a finding of research misconduct, issued a letter of reprimand, and required the subject to complete a Responsible Conduct of Research training program. NSF also took additional significant actions in response to our recommendations as summarized below.

- NSF proposed a five-year debarment for a former doctoral student at a Minnesota university who intentionally fabricated and falsified data.[11] NSF will then require certifications and assurances and bar him from serving as a consultant or peer reviewer for five years.
- NSF debarred a former graduate student at an Illinois university, who fabricated and falsified data in a publication and his Ph.D. thesis dissertation,[12] from participating as a peer reviewer, advisor, or consultant, for three years, followed by three years of certifications and assurances as well as certifications of adherence to a data management plan. NSF also required him to retract the publication.
- NSF proposed a three year debarment for an ex-professor and co-owner of a small business, and the business itself, in California for plagiarism,[13] submitting duplicative proposals, misrepresenting research capabilities, and providing false certifications to NSF

11 March 2013 Semiannual Report, pp.26-27.
12 March 2013 Semiannual Report, p.27.
13 March 2013 Semiannual Report, p.34.

- NSF debarred three New York professors[14] for one year, required certifications and assurances from them for three years following the debarment, barred them from participating as NSF peer reviewers,advisors, or consultants for three years following the debarment, and required certification of compliance with the requirements imposed by their institution.
- NSF barred a PI who plagiarized in proposals submitted from two SBIR companies[15] from participating as a peer reviewer, advisor, or consultant for NSF, and required certifications and assurances, for two years.
- NSF barred a Texas PI who copied text without citation or quotation[16] from participating as a peer reviewer, advisor, or consultant for NSF for one year, and required certifications and assurances for two years.
- NSF required a research scientist at a small business in Maryland, who plagiarized text into an awarded NSF proposal,[17] to submit certifications, and barred him from participating as a reviewer, advisor, or consultant, for one year.
- NSF required a professor at a Colorado university, who recklessly plagiarized in the proposal for his ARRA-funded CAREER award,[18] to provide certifications, and barred him from serving NSF as a reviewer, advisor, or consultant, for one year.
- NSF required an Ohio PI, who recklessly plagiarized in his NSF proposal,[19] to provide certifications for one year.

Administrative Investigation

Significant Abuse of Transit Subsidy

Our investigation found that an NSF employee used her transit benefit 938 times for personal trips and 51 times for parking over three years. During this period, the employee replaced her Metro card four times but did not transfer the subsidy balance to the new card, thereby leaving almost $1,000 of federal funds on the old card accounts. She also applied for and received an almost $1,000 cash reimbursement for transit expenses that she had not incurred.

During our interview, the employee admitted that she had given her son the cards, obtaining new cards as he lost or broke them and registering them with NSF to continue the subsidy. Because the employee's

14 March 2013 Semiannual Report, pp.27-28.
15 March 2013 Semiannual Report, p.28
16 March 2013 Semiannual Report, p.28.
17 March 2013 Semiannual Report, p.30.
18 March 2013 Semiannual Report, pp.29-30.
19 March 2013 Semiannual Report, p.30.

actions were fraudulent, we referred this matter to the U.S. Attorney's Office, which declined criminal prosecution in lieu of administrative action by NSF. We referred the matter to the employee's supervisor and recommended that NSF recover the approximately $4,000 of inappropriately used funds, and take appropriate personnel action. NSF has proposed a 20-day suspension, and its final decision is pending.

Management Implication Reports

Recommendations to Improve NSF's Award Management System

NSF's web-based application, eJacket, is the agency's system for performing many functions for awards and proposal processings, and is a critical tool to enable NSF personnel to manage awards effectively and to maintain the official record for awards. In addition, OIG uses eJacket routinely in investigations, financial reviews, and audits. Proposals, reports, and peer reviews are uploaded to eJacket automatically, as well as some information about the institution, PI, and co-PIs. Additional award information that should be stored in eJacket includes relevant emails and other documentation pertaining to the progress of the proposal and award.

As the primary means for maintaining the official NSF record, eJacket should present a clear and accurate picture of each proposal and award, including a straightforward and comprehensible record of the proposal's and award's history. This would help NSF program and grants officers manage their awards efficiently, and also facilitate review by others (including OIG). Due to the large number of personnel who rotate through NSF, and the potential for multiple program and grants officers to oversee a given award at different points in time, it is critical to be able to sort eJacket information into a meaningful arrangement in order to understand and manage their workload.

We found numerous instances in which significant award information was missing from eJacket. For example, we found an award for which it appeared that a PI changed the project scope without approval from NSF, as required. The NSF program officer told us that in fact he approved the change and had exchanged numerous emails with the PI, but he had not uploaded those emails into eJacket. In another award, we found that a program officer approved a no-cost extension but had not entered either the PI's request or NSF's approval into eJacket. These examples also illustrated another issue, which arises when program officers upload the missing documents: eJacket displays documents in order of the date they were uploaded, so if documents are not uploaded chronologically (as in these cases) it can be very difficult later to determine what transpired.

We also found that progress reports that are rejected by NSF for any reason are expunged from eJacket and are unavailable. Rejected progress reports can provide useful information to program officers as well as OIG investigators, such as by demonstrating a PI's submission of inadequate, inconsistent, misleading, or even fraudulent information.

Further, like employees everywhere, NSF staff come and go, and it is important to be able to ascertain who was responsible for an award at a particular time. Similarly, designated PIs and co-PIs also sometimes change in the course of an award, or their institutions or contact information can change. eJacket does not keep track of such changes, and NSF would benefit from comprehensive record of such information stored in eJacket.

We made eight recommendations to NSF to make eJacket more effective and useful by addressing these and related issues, and NSF's response to our recommendations is pending.

Concerns About Accelerated Spending Under ARRA Awards

In March 2013, NSF sent emails to all ARRA awardees that were not granted a waiver of the September 30, 2013, deadline for expending ARRA award funds. The emails reminded awardees of the September deadline; encouraged them to "responsibly accelerate expenditures"; and, stated that "expenditures must be allowable pursuant to applicable cost principles and terms of the award." As of the end of May 2013, according to NSF records, more than 450 ARRA awards had balances above $100,000, and for 87 of those, the amount unexpended was 40% or more of the award amount. We were concerned about the risk that some awardees may focus on accelerating spending at the expense of spending responsibly. In light of this risk, we recommended that NSF write again to its ARRA awardees with significant unexpended funds to emphasize that (1) remaining ARRA funds can be used only for the direct benefit of the award project; and (2) funds that cannot be spent properly should be left to expire, for return to the Treasury and reduction of the deficit. NSF agreed with the first recommendation but not the second.

Management Activities

Outreach

The OIG's outreach program is an essential component of our mission to prevent and detect fraud, waste, and abuse and to promote economy, efficiency, and effectiveness in NSF programs and operations. To this end, OIG staff addressed programmatic, financial, and compliance issues with the awardee community to educate them about fraud recognition and prevention, research misconduct, and the responsible conduct of research. We have provided instruction and shared insights based on our oversight to the National Council of University Research Administrators, the American Association of State Colleges and Universities, and the Association of College and University Auditors, among others.

A particular focus of our outreach has been educating awardee institutions about our use of data analytics in oversight to supplement traditional auditing techniques. The use of automated techniques enhances our oversight and permits us to identify high-risk awardees and target work; to focus limited audit resources on questionable expenditures; and to expand oversight from a random sample of transactions for a few awards to 100 percent coverage of all transactions for all awards. Thus, these techniques provide transparency over recipient spending that was difficult to see using traditional methods. In April, the OIG hosted a Data Analytics Webinar on the use of automated techniques to enhance grant oversight. Over 300 registrants from the OIG community and universities participated in the webinar.

We have also enhanced oversight and accountability through leadership within the IG community. In particular, NSF OIG is leading three high-profile IG community working groups under the auspices of the Council of the Inspectors General on Integrity and Efficiency aimed at protecting government funds on a broad scale. One of these is focused on suspension and debarment remedies, the other concerns the SBIR and STTR programs.

The Suspension and Debarment Working Group is dedicated to enhancing the IG community's understanding and use of government-wide suspension and debarment. These tools protect taxpayer funds by ensuring that the government only does business with responsible parties.

The SBIR/STTR Working Group has worked to combat fraud, waste, and abuse in these programs. A key aspect of this effort has been the development of program-wide certifications modeled on those long in use at NSF. Strong certifications can be an extraordinarily effective means of deterring program fraud and bolstering the government's ability to prosecute fraud when it does occur. Another area of working group activity has involved a sub-group of Special Agents from SBIR/STTR funding agencies. Agents participating in this group meet periodically to share information about ongoing cases, lessons learned, and best practices related to SBIR/STTR investigations. Such cooperation has greatly enhanced efforts to combat fraud in these programs

Finally, the Grant Reform Initiatives Working Group, composed of OIGs that oversee grant programs at twenty Federal agencies, has provided comments on the impact of proposed guidance on our mission of ensuring accountability over Federal funds. Collectively, the agencies overseen by the working group members fund 94 percent of the approximately $1.2 trillion in direct federal award dollars covered by Single Audits each year.

CHALLENGE: Establishing Accountability over Large Cooperative Agreements

Overview: A federal agency can use a cooperative agreement (CA) when entering into a relationship with a recipient when the primary purpose is to transfer a thing of value to carry out a public purpose of support or stimulation, and substantial involvement between the federal agency and the recipient when carrying out the agreement is expected. A CA is not subject to the same rigor and reporting mechanisms as a contract, and does not have the same level of transparency over transactions as a contract.

NSF reported that as of August 28, 2013, it had 480 active cooperative agreements, totaling nearly $10.2 billion. Among other things, NSF uses CAs to construct and fund the operations and maintenance of large facility projects. Since NSF uses CAs for the construction, operation, and maintenance of high-risk, high-dollar large facility projects, it is imperative that it exercise strong cost surveillance controls over the lifecycle of such projects.

Over the last three years, audits of the proposed construction budgets for three of these non-competitive proposals valued at $1.1 billion found that they contained approximately $305 million (almost 28 percent), in unallowable or unsupported costs. Inadequate proposals which contain large amounts of unallowable and unsupported costs undermine NSF's ability to properly monitor and administer the CAs. Consequently, there are serious questions about NSF's accountability over the $10.2 billion in cooperative agreements in its portfolio.

OIG has also identified serious weaknesses in NSF's post-award monitoring processes for high-risk projects that increase the prospect that unallowable costs could be charged to awards. NSF does not routinely obtain incurred cost submissions or audits of costs claimed on its largest CAs to determine the allowability of direct and indirect costs claimed on federal awards. While not required, such submissions and audits help to ensure accountability in high-risk, high-dollar projects. In addition, our audits have determined that NSF's awardees do not separately track the expenditure of contingency funds in their accounting, memorandum, or subsidiary records. Therefore, unallowable

costs charged to large cooperative agreements may go undetected because they are not visible to those responsible for oversight.

NSF's cooperative agreement award and monitoring process was also cited as a significant deficiency in the FY 2011 and FY 2012 financial statement audits. Without improving end-to-end processes over CA monitoring from the proposal stage to award close-out, NSF cannot affirm that it has received reasonable value for taxpayer dollars and that those dollars are not misused. The audit reports recommended that NSF strengthen cost surveillance policies and procedures to ensure adequate stewardship over federal funds.

Challenge for the Agency: It is an ongoing challenge for NSF to establish accountability for the billions of federal funds in its large cooperative agreements. Proper accountability requires cost surveillance measures that include strong pre- and post- award monitoring, especially for high-risk, high-dollar facility projects. With regard to pre-award processes, NSF does not require audits of awardees' proposals for such projects to ensure that they have reasonable budgets and adequate accounting systems in place before the award is made. NSF should establish a clear threshold above which it would require price proposal and accounting system audits prior to awarding new high-dollar, high-risk cooperative agreements.

During the post-award monitoring process, NSF does not routinely obtain awardees' incurred cost submissions (a list of award expenditures) or initiate audits of costs claimed on its largest CAs, and therefore lacks detailed information to effectively oversee these expenses. As a result, there is an increased risk of unallowable costs being charged to these awards and going undetected. Further, OIG continues to encounter significant delays in obtaining incurred cost submissions from awardees selected for audit that compromise the timeliness and effectiveness of these reviews. NSF should either require annual incurred cost submissions in major awards (at least for awardees in which it has cognizance); or, notify its recipients of high-dollar, high-risk awards to expect periodic audits and require them to produce incurred cost submissions in a timely manner.

Another ongoing challenge for NSF is the management and oversight of contingency costs in proposed budgets for its large construction projects. Contingency comprises a significant portion (up to 30%) of the budget of most large construction CAs. In total, recent audits have identified more than $223 million in unallowable contingency costs out of total proposed costs of over $1.1 billion. More than any other category of the budget, contingency funds are prone to being improperly used as discretionary reserve funds, if not properly overseen. Because NSF's awardees are not required to separately track the expenditure of contingency funds,

these funds are vulnerable to unauthorized use without detection. The challenge for NSF is to correct this management control weakness by placing the requirement to track contingency expenditures in all applicable awards.

OIG's Assessment of the Agency's Progress: Over the past three years, the agency has participated in ongoing discussions with OIG regarding the resolution of audit findings and recommendations related to NSF's management of its large cooperative agreements. To its credit, NSF recognized the need to provide additional rigor to the review of costs for large facilities, as documented in the Report to the National Science Foundation Director on Major Multi-User Research Facilities (March 18, 2013). NSF has also agreed to strengthen its internal control (pre-award and post-award) processes over future NSF construction projects. However, NSF has not yet provided us with a plan that adequately addresses our most important concerns for establishing accountability over current large cooperative agreements as stated above.

CHALLENGE: Improving Grant Administration

Overview: In FY 2012, NSF competitively reviewed approximately 48,600 proposals for research, education and training projects. Each year the Foundation funds approximately 11,500 new awards, and as of June 2013, it had a portfolio of over 49,400 active awards totaling $32.5 billion. In light of the fact that most of these awards are made as grants, it is vital that NSF's grant management processes ensure the most stringent level of accountability.

Challenge for the Agency: Oversight and management of awards that is sufficient to safeguard federal funds invested in scientific research has been an ongoing challenge for NSF. For FY 2012, the Foundation's financial statement auditors found that while NSF had made improvements in its processes for awarding and administering grants, improvements in internal controls over processing grant transactions were necessary and that follow-up on awardee corrective action plans remained a concern.

Oversight of grants is also challenging because, unlike contractors, grant recipients request payments as an aggregate dollar amount and are not required to present supporting documentation, such as invoices and receipts, to receive payment from the agency.

Recent proposed changes by OMB could further challenge NSF's ability to exercise adequate grants management. Single Audits are an important oversight tool in part because they identify internal control weaknesses that warrant additional scrutiny. If enacted, the proposed increase from $500,000 to $750,000 in the threshold to trigger a Single

Audit means that NSF will have to do more to ensure appropriate oversight of awards from $500,000 to $750,000 as they will no longer be subject to Single Audits. In addition, proposed changes to the labor effort reporting requirements could make it more difficult to determine the allowability of salaries and related costs. Collectively, these and other changes could contribute to an increased workload for NSF's Division of Grants and Agreements staff.

OIG's Assessment of the Agency's Progress: NSF's Award Monitoring and Business Assistance Program (AMBAP) was designed in part to provide advanced monitoring to ensure that awardee institutions have adequate policies and systems to manage their NSF awards. NSF reported that it eliminated the backlog of AMBAP site visits in FY 2012. Additionally, NSF has created an AMBAP Site Visit Activity Status Report to keep appropriate senior management apprised of the status of all open AMBAP Site Visit reports with major concerns. In FY 2013, NSF increased the number of virtual site visits from four the previous year to seven. As of September 30, 2013, NSF has substantially completed all of the 30 AMBAPs planned for FY 2013.

CHALLENGE: Strengthening Contract Administration

Overview: Cost reimbursement contracts represent a significant portion of NSF's portfolio of contracts. In FY 2013, NSF reports that it obligated $437 million for all contracts: $259 million were for CR contracts and $65 million of that amount applied to contracts that allow advance payments for services on programs with two contractors. Cost reimbursement contracts are inherently risky because the government assumes much of the responsibility that poor performance on the part of the contractor will result in cost overruns. NSF has implemented a number of corrective actions aimed at strengthening its controls over cost reimbursement contracts since the agency's financial statement audit first identified their handling as a significant deficiency in 2009.

However, concerns with contract administration remain, especially with regard to the U.S. Antarctic Program (USAP), the largest NSF contract awarded worth nearly $2 billion. NSF has worked with a new contractor since December 2011, and audits of the new contractor's incurred costs in FY 2011 and 2012 are needed to identify any potential problems in the early years of the contract. Periodic audits of the contractor's accounting system and timely reviews of disclosure statement revisions are also important to adequately monitor the contract. These audits will identify whether costs are being claimed and accounted for properly. Finally, in December 2012 the USAP contractor transferred the NSF contract to a different business segment within the company, which could potentially increase costs to the agency.

In addition, there are significant issues outstanding with NSF's prior USAP contract issued in 1999 that have yet to be resolved. Annual incurred cost audits of the prior USAP contract are currently in process; however, the annual revenues from the USAP stores have not been credited in the incurred costs submitted by the contractor. NSF's full recovery of questioned costs sustained and uncredited revenues will depend on the completion of the audits that are currently ongoing. Final settlement of all contract claims may be some years in the future.

The FY 2012 management letter that accompanies NSF's financial statement audit recognizes the progress NSF has made in this area, but presents four recommendations for strengthening NSF's contract monitoring practices. They emphasize the importance of having incurred cost and disclosure statement audits completed; implementing NSF's Acquisition Manual; and ensuring use of accurate object class codes for accounting transactions. These recommendations were made to ensure NSF's contractors' compliance with contract terms and federal regulations. In March 2013, the Government Accountability Office (GAO) issued an audit report on contracting practices, also noting that the agency implemented improvements during the past decade. However, GAO found that NSF needs to supplement its guidance to focus on the early stages of acquisition planning, and arrange for audits, not funded by OIG, of major NSF contracts.

Challenge for the Agency: NSF's challenge is to strengthen controls over cost reimbursement contracts in order to reduce the risk of fraud, waste, and abuse. The agency should obtain disclosure statements, incurred cost submissions and incurred cost audits of its largest contracts on a regular basis and promptly resolve any questioned costs that arise. NSF should also review and verify the contractor's disclosure statement to determine if it is adequate and compliant with Cost Accounting Standards, prior to or shortly after awards are made and whenever the contractor submits major revisions. NSF must also continue to improve its contract oversight relating to: timely receipt of incurred cost submissions and procurement of audits, when needed; and the determination of adequacy of contractor's accounting systems during the post award period. With regard to the current USAP contract, NSF should request that the Defense Contract Audit Agency determine if the new USAP contractor's transfer of the NSF contract to a different segment within the company results in any increased costs to the agency.

Finally, NSF management should continue to implement its remaining planned corrective actions to ensure that it maintains adequate control over cost reimbursement contracts. The agency is still obtaining audits of its largest contracts, including millions of dollars in costs incurred from 2009 – 2012 by the former USAP contractor. These final audits

will determine the resolution of at least $10.4 million in unallowable sustained costs that previous audits have found that the contractor owes NSF, and should determine whether or not USAP revenues totaling $24 million were properly credited against contract costs.

OIG's Assessment of the Agency's Progress: In FY 2013, NSF made progress in addressing some of the problems with contract administration. It has taken steps to strengthen its guidance and is receiving some audits of costs incurred on its two largest contracts. However, the most recent management letter indicates that work remains to be done to strengthen NSF's monitoring procedures, especially relating to cost reimbursement contracts. While the agency has made progress, the financial statement auditors indicate that the conditions identified in the previous management letter are only partially corrected.

As a result of the GAO report on NSF contracting, the agency is also working to develop new guidance for increasing lead times for acquisition, but the agency's draft response doesn't indicate how long it will need to prepare or implement the guidance. In response to GAO's second recommendation to fund audits of major contracts, NSF has placed the responsibility on the individual Program Offices to determine if an audit is needed and to provide the funding. However we are concerned that Program Offices may not take the initiative to request an audit, particularly if they must fund it.

CHALLENGE: Management of the U.S. Antarctic Program

Overview: Antarctica is the coldest, driest, windiest, most remote continent on earth. The weather changes frequently and abruptly; temperature drops of as much as 65 degrees F in twelve minutes have been recorded.

Scientific investigators and supporting personnel make up the U.S. Antarctic Program (USAP), which implements the nation's goals of exerting an active and influential science presence in support of Antarctica, including fostering cooperative research with other nations, and protecting the Antarctic environment in accord with the U.S. Antarctic Conservation Act. The USAP mission is accomplished largely through the support of peer-reviewed research conducted by scientists from universities and other research agencies often in collaboration with scientists from other nations. Operations and logistics are supported with contracts with commercial and government entities. NSF funds and manages the program through its Office of Polar Programs.
The extreme Antarctic environment and the short period of time during which access to the continent is possible, strain the effort to provide logistical support for the USAP. Logistical support activities

include communications, health and safety programs, and vehicle and equipment maintenance. In July 2012, a Blue Ribbon Panel, commissioned by the Office of Science and Technology Policy and NSF, issued its report on infrastructure and logistical challenges in the Antarctic.

Challenge for the Agency: Establishing and maintaining a world-class scientific research program in Antarctica's remote and harsh environment is a formidable logistical challenge. The Blue Ribbon Panel report stated that U.S. activities in Antarctica are well-managed, but suffer from an aging infrastructure, lack of a capital budget, and the effects of operating in an extremely unforgiving environment. To address these pressing challenges, the Panel made recommendations pertaining to ten topic areas and provided 84 implementing actions to support these overarching recommendations.

In March 2013, NSF responded to the recommendations with a summary report and a working matrix describing the status of the 84 implementing actions. We recognize the challenges facing NSF in implementing the Panel recommendations and understand that some of these challenges are compounded because NSF has limited control over some of the necessary actions and others will require additional funding. Nevertheless, it is important for NSF to work toward implementation in a well-organized and structured manner, and we issued a memorandum to NSF making several suggestions to improve the usefulness of its working matrix, such as including timelines for action and identifying a responsible person for each action.

Cost containment issues are also a challenge for NSF. The Antarctic Support Contract, which was awarded to Lockheed Martin in December 2011 is the agency's largest contract, valued at approximately $1.925 billion over 13 years, and is a cost reimbursement contract. Such contracts are inherently risky because the government assumes much of the risk that poor performance on the part of the contractor will result in cost overruns. In addition, the contract includes a provision for the contractor to receive an award fee for performance of the science support. An NSF official in the Office of Polar Programs makes the final decision about whether the contractor receives an award fee and then also determines the amount of the award fee based on a panel recommendation. Absent input from an external, independent entity, it may be a challenge for NSF to objectively evaluate the contractor's performance.

Another challenge for NSF is to control the cost of the USAP and to ensure adequate oversight of payments to the USAP contractor. Our audit of the medical screening process for travelers to Antarctica found that NSF's medical review panel has made recommendations that

could reduce the cost of this process, but NSF has not implemented these recommendations. For example, for the last five years the panel recommended that NSF base required medical tests on factors such as how long an individual will be in Antarctica, and what their duty station and job responsibilities will be. Revising the number of medical tests performed to reflect these criteria could lower costs of the screening process, which currently totals approximately $860 per person.

Although the cost of the USAP medical screening process constitutes approximately $1 million out of the first full year's contract value of $173 million, NSF is largely reliant on the contractor to provide accurate invoices. We found that the contractor does not have policies and procedures for reviewing Antarctic support contract invoices. Our audit also found that NSF has limited oversight to ensure accuracy of medical screening costs billed to it by the contractor. As a result, NSF may be paying unallowable costs.

OIG's Assessment of the Agency's Progress: NSF's summary report responding to the Blue Ribbon Panel report and its creation of a matrix document for the 84 implementing actions are steps in the right direction. In response to our audit on reducing costs of the medical screening process, NSF concurred with the OIG's recommendations and agreed to formalize its process for addressing and tracking medical panel recommendations. Further, NSF will direct Lockheed Martin to document its internal controls over subcontractor management regarding receipt and flow-through of subcontractor's invoices costs for medical screening.

CHALLENGE: Moving NSF Headquarters to a New Building

Overview: On June 7, 2013, the General Services Administration (GSA) and representatives of the Hoffmann Company executed a 15-year lease for a new NSF headquarters in Alexandria, Virginia. The Alexandria facility has not been built yet, and it is estimated that construction will take three to four years. Because the current Arlington leases expire before NSF can move, GSA negotiated temporary lease extensions for the two Arlington office buildings, to enable NSF to stay in those buildings through December 30, 2017. NSF is currently planning to move at the end of 2016 and has the option to terminate the Arlington leases early.

Challenge for the Agency: NSF has major scheduling, design, cost, operational, and communications challenges associated with the move. In terms of scheduling, key milestones need to be met for the construction to be completed by 2016. According to NSF, the construction schedule is very aggressive and will be difficult to achieve; therefore, it will be a challenge for NSF to complete the move before December 30, 2017.

The primary challenge for NSF will be planning and managing the details of its space requirements and relocation. The Alexandria building has to meet the requirements set out in the lease agreement; but that agreement does not specify detailed design specifications that may be needed by individual directorates. Thus, NSF, GSA, and the building owner must negotiate a number of design issues that are not included in the original space requirements. The agency will need to make timely and prudent decisions to ensure the building meets its objectives with minimal delay and cost. If NSF's requested changes will cost more money, the agency will have to determine whether to use part of the move allowance, make a trade off, or forego the change. Unused portions of the allowance may be applied to the rent to save the government money.

NSF stated that all computers, chairs and tables will be moved to the new buildings and that its primary cost will be for workstations that cannot be moved. NSF will need to control its moving expenses tightly. It will also need to plan how it will move successfully if it does not receive additional funding to cover moving costs.

During the move, NSF plans dual operations in Arlington and Alexandria, which will be an operational challenge. The agency has to ensure that the move does not disrupt its mission. For example, NSF told us that it will hold panel reviews during the move and may hold them in Alexandria before NSF staff begins to move from Arlington. As such, it will have to ensure operational capabilities in two places simultaneously. NSF indicated that it will consider more virtual panels during this transition.

In addition to the scheduling, design, and operational challenges, NSF has overarching communications challenges: Collaboration and communication internally within NSF and with external stakeholders including GSA, the Alexandria building owner, Congress, and OMB will be critical to the success of the NSF move.

OIG's Assessment of the Agency's Progress: NSF has been planning for a possible move since 2008, when it hired the project director. NSF created the Future NSF Headquarters Office (FNSF) to coordinate and manage the move. That office currently has five employees and a team of eight contractors, including a relocation manager, design specialist, interior designer, technology manager, budget specialist, and support and communications liaison. The FNSF's senior advisor and project director are the same staff who directed NSF's last move in 1993 from Washington DC to Arlington.

In addition, the agency created a Future NSF internal website, and has conducted a survey, feasibility study, and more than 300 meetings with NSF staff. To facilitate internal collaboration, FNSF meets regularly with Directorate and Division liaisons, union representatives, a FNSF relocation executive advisory group, and a relocation working team.

CHALLENGE: Managing Programs and Resources in Times of Budget Austerity

Overview: Fiscal Year 2013 presented significant financial challenges for NSF and other federal agencies, as sequestration pinched budgets and increased the pressure for managers to ensure that expenditures are cost-effective, and that investments in programs have real impact. While government budgets are developed long in advance, there are numerous discretionary purchases in every organization that occur on a weekly or monthly basis and offer real opportunities for savings.

Recently OIG has initiated several reviews to identify possible cost savings. For example, OIG is currently performing an audit of purchase cards and has found that NSF's controls over the purchase card program needed to be strengthened to uncover and, if possible, prevent inappropriate purchases. During our audit, NSF issued a revised purchase card policy and improved training for cardholders. The Government Charge Card Abuse Prevention Act of 2012 requires all federal agencies to implement internal controls to prevent waste, fraud, and abuse of purchase cards, travel cards, and centrally billed accounts. In FY 2012, NSF incurred expenditures of approximately $5.5 million for its purchase cards, $1.0 million for its individually billed travel cards, and $13.7 million for its centrally billed travel card account.

OIG's audit of costs associated with NSF's use of Intergovernmental Personnel Act (IPA) assignees found no indication that NSF has examined the additional costs incurred as a result of using IPAs or sought ways to reduce those costs. Because NSF pays IPA costs out of program funds, reducing these costs could free up more money for research grants. Our audit estimated that NSF paid an annual, additional cost of approximately $6.7 million or an average of over $36,000 per IPA, for 184 full-time IPAs in 2012 as compared to federal employees in equivalent positions. During a time of national austerity, it is important that NSF do its part in identifying all opportunities for savings.

Challenge for the Agency: There are many opportunities to conserve money within a $7 billion dollar organization like NSF without compromising the accomplishment of the agency's core mission. The agency is therefore challenged to identify opportunities to streamline processes and cut costs where it can, in order to send a clear message

to its employees and stakeholders that strong, sound management practices are being applied; reasonable ideas to reduce spending are welcome and will be implemented; and at a time of hardship for so many Americans, the public's continued financial support for science is not taken for granted.

OIG's Assessment of the Agency's Progress: NSF has generally contained and in some cases reduced its operational costs during FY 2013. It has also been receptive to considering and implementing more value-added business practices. The agency concurred with OIG's audit recommendation to evaluate ways the costs of using IPAs can be reduced. NSF has also been piloting the use of technology to cut costs related to its merit review process, and reports that it increased the share of virtual merit review panels over the past year from five to 20 percent. Due in part to those efforts, the agency has realized savings of $9.4 million compared to what it spent on travel in 2010. Other cost cutting initiatives are being introduced or contemplated for conferences, printing, and telecommunications. It appears that NSF has made progress this year in fostering a culture of economy and efficiency and should continue to identify ways to reduce costs.

CHALLENGE: Ensuring Proper Stewardship of ARRA funds

Overview: Under the American Recovery and Reinvestment Act of 2009 (ARRA), NSF received $3 billion of funding, with which it made more than 5,000 awards with a duration of two to five years. On September 15, 2011, the Office of Management and Budget (OMB) directed federal agencies to accelerate the spending of ARRA funds consistent with existing laws and regulations and the objectives of the programs. OMB stated that if those funds were not spent by September 30, 2013, agencies "shall reclaim them to the extent permitted by law."

At the time, NSF had about 700 awards expiring in FY 2013 that could be extended past September 30, 2013, using no-cost extensions. In response to OMB's directive, NSF amended those awards to remove awardees' ability to unilaterally grant no-cost extensions past the new deadline. NSF subsequently obtained waivers from OMB from the deadline for 512 other awards. As of October 21, 2013, the remaining active awards with OMB waiver requests have collectively expended 74.1% of their ARRA funding. There are also 1,886 awards without OMB waiver requests that are still active that have thus far expended 97.3% of their ARRA funding.

Challenge for the Agency: At each stage of the award administration process, the additional ARRA funds that NSF received in 2009 have posed significant challenges for NSF's business model. Even as most ARRA awards wind down, post-award administration challenges remain.

They include: 1) ensuring awardees' timely, complete, and accurate reporting on Federal Reporting.gov and; 2) monitoring the awards, especially those made to high-risk institutions, to ensure the funds are not subject to fraud, waste, and abuse. Assessing the accuracy of recipients' reporting has been a particular challenge, as it requires independent reviews or audits of additional corroborating data from ARRA awardees.

OMB's directive to accelerate funding required that NSF closely monitor ARRA spending rates during FY 2013 to ensure that awards without waivers completed all spending necessary for their projects by the new deadline. However, the agency must also pay attention to the increased risk of fraud, waste, and abuse that arises when a project's timeline is prematurely shortened. Specifically, there is an increased risk of unallowable cost transfers (e.g., spending ARRA funds on non-ARRA awards), and expenditures of ARRA funds for purposes unrelated to an ARRA award, as awardees rush to spend remaining funds prior to award expiration. In addition, there may be additional temptation for awardees to submit inflated claims during a period when science funding in general is declining.

Therefore, the primary management challenge is to determine if awardees have spent their ARRA funds in accordance with applicable federal and NSF requirements, including the special terms and conditions of their ARRA awards. Ongoing OIG audits of institutions that received ARRA money also address this issue, but do not replace NSF's responsibility and challenge to monitor its awardees' use of ARRA funds.

OIG's Assessment of the Agency's Progress: Each quarter NSF reports the results and trends for eight data elements including: the number of jobs created/retained, total ARRA funding obligated, and total reported ARRA expenditures. To determine if awardees used ARRA funds, as required, NSF has conducted 253 ARRA desk reviews, although of only one ARRA award in each review. It has used the results of the desk reviews as risk factors in conducting about 30 more comprehensive reviews annually. NSF appears to have adequate processes in place to monitor awardees' continuing and final reports on FederalReporting.gov and to close out ARRA awards in the NSF system. As the number of active awards decreases, NSF's vigilance should be maintained.

CHALLENGE: Encouraging the Ethical Conduct of Research

Overview: Congress passed the America COMPETES Act in 2007 to increase innovation through research and development, and to improve the competitiveness of the United States in the world economy. Amid indications of a decline in the ethics of those new to research, one important aspect of the law was to promulgate new proposal

requirements that advance the professional and ethical development of young scientists, such as mentoring plans for all postdoctoral positions, and plans to provide training on the responsible conduct of research to undergraduates, graduate students, and postdoctoral researchers. However, information collected from our site visits and investigations suggests that many institutions are not implementing these requirements effectively, thereby undermining the public's confidence in the research enterprise and potentially placing NSF funds at risk. At a time when opinion surveys indicate that more Americans are becoming distrustful of scientific findings, it is important that the conduct of research not be tainted by instances of misrepresentation or cheating.

Challenge for the agency: NSF is challenged to provide more meaningful guidance regarding institutional administration of Responsible Conduct of Research (RCR) training. Successful RCR programs should help foster a culture of academic integrity that extends to all levels of the university. Recent surveys suggest that significant numbers of high school and college students admit to cheating, and 30% of researchers admit to engaging in questionable research practices. In its research misconduct work, OIG has noted a dramatic increase in substantive allegations of plagiarism and data fabrication, especially as it relates to junior faculty members and graduate students. Over the past 10 years, the number of allegations received by our office has more than doubled, and the number of findings of research misconduct NSF has made based on OIG investigation reports has more than quadrupled. Effective RCR programs give institutions the means to address this issue and reverse the increasing rate of integrity-related violations.

The NSF Act places responsibility on NSF to "strengthen scientific [and engineering] research potential at all levels in ... various fields". NSF's research and related training programs reach individuals at all levels of academic pursuit who are ultimately employed by academia, industry, and government, and could have a broad and positive impact on the US science, engineering and education workforce. Based on our focused proactive reviews, we believe that over 2,000 of the 45,000 proposals NSF annually receives are at risk for containing plagiarism and/or falsified data. While NSF has been responsive to the recommendations contained in our research misconduct investigation reports, those actions only address incidents that occur after the fact. Since NSF funds research in virtually every non-medical research discipline, the agency is in a unique position to lead the government response addressing these disturbing trends at all levels of education.

OIG's Assessment of the Agency's Progress: The agency responded to the America COMPETES Act by instituting a requirement that grantees submit mentoring plans for all NSF-supported "post-docs" and have an RCR training plan for NSF-funded students. The NSF guidance was

very limited and offered great flexibility to grantee institutions to develop plans tailored to their needs. OIG has observed a wide disparity among grantee RCR programs ranging from high quality mentoring programs to those that simply refer students to web-based or computer-based training. Early intervention remains critical to any effort to ensure that students understand proper professional practices and the implications of misconduct. Anecdotally, we continue to receive substantive data fabrication/falsification allegations involving students and post-docs; we currently have 15 active investigations regarding such allegations. Therefore, we continue to believe that more needs to be done and NSF should expand its influence with institutions regarding this important issue. In the coming year, OIG plans to systematically review a sample of institutional RCR plans to assess how the grantee community has implemented their training programs. We intend to initiate this review of institutional efforts in FY 2014.

EMERGING CHALLENGE: Implementing a New Financial Management System

In September 2012, NSF awarded a $24.4 million contract to Accenture Federal Services LLC to implement iTRAK, a new financial management system that will replace its current accounting system. The new system is designed to improve tracking and reporting of financial information across NSF systems and to enhance financial accountability and compliance. iTrak is expected to provide a number of new capabilities, including access to financial information and reports in real-time and the ability to link financial information to performance objectives.

The NSF Director at the time of the award, Dr. Subra Suresh, commented that "[t]his is one of the most complex projects NSF has undertaken. It is necessary to ensure that the agency has the tools it needs for informed operational and programmatic decision-making, and that it has superior financial and business accountability, integrity and compliance."

This complex undertaking involves risks, such as the lack of clear requirements and agency reluctance to change established business processes. NSF has developed a risk management strategy to address such concerns, and at this point the agency appears to be on schedule for iTrak implementation by October 1, 2014. The OIG is monitoring NSF's transition to iTrak and is bringing questions and concerns to the agency's attention as issues arise.

Statistical Data

Audit Data

Audit Reports Issued with Recommendations for Better Use of Funds

			Dollar Value
A.	For which no management decision has been made by the commencement of the reporting period		$304,895,499
B.	Recommendations that were issued during the reporting period		$0
C.	Adjustments related to prior recommendations		$0
Subtotal of A+B+C			$304,895,499
D.	For which a management decision was made during the reporting period		$0
	i)	Dollar value of management decisions that were consistent with OIG recommendations	$0
	ii)	Dollar value of recommendations that were not agreed to by management	$0
E.	For which no management decision had been made by the end of the reporting period		$304,895,499
For which no management decision was made within 6 months of issuance			**$304,895,499**

Audit Reports Issued with Questioned Costs

			Number of Reports	Questioned Costs	Unsupported Costs
A.	For which no management decision has been made by the commencement of the reporting period		13	$30,702,197	$2,548,323
B.	That were issued during the reporting period		13	$1,373,368	$221,178
C.	Adjustment related to prior recommendations		1	$4,553[20]	$4,553[20]
Subtotal of A+B+C				**$32,080,118**	**$2,774,054**
D.	For which a management decision was made during the reporting period		5	$439,054	$416,285
	i)	Dollar value of disallowed costs	N/A	$180,944	N/A
	ii)	Dollar value of costs not disallowed	N/A	$258,110	N/A
E.	For which no management decision had been made by the end of the reporting period		21	$31,641,064	$2,375,769
For which no management decision was made within 6 months of issuance			**9**	**$30,420,086**	**$2,288,981**

20 On report no. 12-1-003, an additional $4,553 was questioned during audit resolution.

Status of Recommendations that Involve Internal NSF Management Operations

Open Recommendations (as of 03/31/2013)	
Recommendations Open at the Beginning of the Reporting Period	74
New Recommendations Made During Reporting Period	2
Total Recommendations to be Addressed	76
Management Resolution of Recommendations[21]	
Awaiting Resolution	12
Resolved Consistent With OIG Recommendations	64
Management Decision That No Action is Required	0
Final Action on OIG Recommendations[22]	
Final Action Completed	12
Recommendations Open at End of Period (09/30/2013)	**64**

Aging of Open Recommendations

Awaiting Management Resolution	
0 through 6 months	2
7 through 12 months	6
More than 12 months	4
Awaiting Final Action After Resolution	
0 through 6 months	0
7 through 12 months	38
More than 12 months	14

21 "Management Resolution" occurs when the OIG and NSF management agree on the corrective action plan that will be implemented in response to the audit recommendation.
22 "Final Action" occurs when management has completed all actions it agreed to in the corrective action plan.

List of Reports

OIG and CPA-Performed Reviews[23]

Report Number	Subject	Questioned Costs	Unsupported Costs	Better Use of Funds
13-1-004	ARRA Cornell University	$794,221	$19,703	$0
13-1-005	EarthScope (SAFOD) San Andreas Fault Observatory at Depth	$339,277	$0	$0
13-2-009	USAP United States Antarctic Program's Medical Screening Process	$0	$0	$0
13-6-002	QCR of Lindquist, von Husen & Joyce, LLP	$0	$0	$0
13-7-001	IQCR of #12-2-002 & #12-2-004	$0	$0	$0
13-7-002	IQCR of #12-1-007	$0	$0	$0
	Total:	**$1,133,498**	**$19,703**	**$0**

NSF-Cognizant Reports

Report Number	Subject	Questioned Costs	Unsupported Costs
13-4-057	12-11 Rocky Mountain Biological Laboratory - CO	$0	$0
13-4-059	6-12 New York Hall of Science - NY	$0	$0
13-4-061	6-12 Association for Women in Science - VA	$0	$0
13-4-064	12-11 Association of Public & Land-Grant Universities - DC	$0	$0
13-4-065	9-12 Fermi Research Alliance LLC - IL	$0	$0
13-4-066	6-12 Pacific Northwest Gigapop - WA	$0	$0
13-4-067	6-12 QEMN Quality Education for Minorities Network - DC	$0	$0
13-4-068	6-12 The Computing Research Association - DC	$0	$0
13-4-069	9-12 The Concord Consortium - MA	$0	$0
13-4-070	6-12 Tupelo Public School District - MS	$0	$0
13-4-071	8-12 WGBH Education Foundation - MA	$0	$0
13-4-072	6-12 Los Angeles County Museum of Natural History Foundation - CA	$0	$0
13-4-074	6-12 Paleontological Research Institution - NY	$0	$0
13-4-075	6-12 REJECTED The Filmmakers' Collaborative - MA	$0	$0
13-4-076	6-12 Oakland Museum of California Foundation - CA	$0	$0
13-4-077	9-12 Virtual Astronomical Observatory LLC - DC	$0	$0
13-4-078	12-11 National Council for Science and the Environment - DC	$0	$0
13-4-079	12-11 Space Science Institute - CO	$0	$0
13-4-080	9-12 The Algebra Project - MA	$0	$0
13-4-081	6-12 The American Museum of Natural History - NY	$0	$0

23 The Office issued 6 reports this semiannual period.

13-4-082	6-12 Toyota Technological Institute at Chicago - IL	$0	$0
13-4-083	12-12 Council of Graduate Schools - DC	$0	$0
13-4-084	6-12 The New York Botanical Garden - NY	$0	$0
13-4-085	6-12 Five Colleges Incorporated - MA	$0	$0
13-4-086	9-12 COL Consortium for Ocean Leadership - DC	$0	$0
13-4-087	12-12 American Physical Society - MD	$0	$0
13-4-088	12-12 Denver Museum of Nature & Science - CO	$0	$0
13-4-089	6-12 REVISED Kennesaw State University Research & Service Foundation - GA	$0	$0
13-4-090	9-12 LSST, Inc. - AZ	$0	$0
13-4-091	6-12 MPC Corporation - PA	$0	$0
13-4-092	12-12 Portland VA Research Foundation - OR	$0	$0
13-4-093	12-12 Chicago Zoological Society - IL	$0	$0
13-4-094	12-12 Horizon Research, Inc. - NC	$0	$0
13-4-095	12-12 Missouri Botanical Garden - MO	$0	$0
13-4-096	12-12 Santa Fe Institute - NM	$0	$0
13-4-097	6-12 SoundVision Productions - CA	$0	$0
13-4-098	6-12 Ecological Society of America - DC	$0	$0
13-4-099	8-12 American Bar Foundation - IL	$0	$0
13-4-100	12-12 BIOS Bermuda Institute of Ocean Science - NY	$0	$0
13-4-101	12-12 Institute of Global Environment and Society - MD	$0	$0
13-4-102	12-12 REJECTED Institute of Broadening Participation - ME	$0	$0
13-4-103	9-12 IODP Management International, Inc. - DC	$152,390	$152,390
13-4-104	12-12 National Geographic Society - DC	$0	$0
13-4-105	12-12 New England Wild Flower Society - MA	$0	$0
13-4-106	12-12 Samuel Roberts Noble Foundation, Inc. - OK	$0	$0
13-4-107	12-12 American Mathematical Society - RI	$0	$0
13-4-108	6-12 KanREN, Inc. - KS	$0	$0
13-4-109	12-12 AAAS American Association for the Advancement of Science - DC	$0	$0
13-4-110	12-12 Field Museum of Natural History - IL	$0	$0
13-4-111	12-12 Pisgah Astronomical Research Institute - NC	$0	$0
13-4-112	12-12 START International, - DC	$0	$0
13-4-113	12-12 TERC Technical Education Research Centers, Inc. - MA	$0	$0
13-4-114	12-12 AAPT American Association of Physics Teachers - MD	$0	$0
13-4-115	12-12 Marine Biological Laboratory - MA	$0	$0
13-4-116	12-12 Mobile Area Education Foundation - MS	$0	$0
13-4-117	6-12 Rancho Santa Ana Botanic Garden - CA	$56	$0
13-4-118	6-12 REVISED The Filmmakers' Collaborative - MA	$0	$0
13-4-119	12-12 Association for Institutional Research - FL	$0	$0

13-4-120	12-12 Carnegie Institute - PA	$0	$0
13-4-121	9-12 California Institute of Technology - CA	$0	$0
13-4-122	12-12 CUAHSI Consortium for the Advancement of Hydrologic Science - MA	$0	$0
13-4-123	12-12 Hope Mountain Foundation - MT	$0	$0
13-4-124	12-12 AIM American Institute of Mathematics - CA	$0	$0
13-4-125	12-12 American Educational Research Association - DC	$0	$0
13-4-126	12-12 American Geophysical Union - DC	$0	$0
13-4-127	12-12 Astrophysical Research Consortium - WA	$0	$0
13-4-128	12-12 Biological Sciences Curriculum Study - CO	$0	$0
13-4-129	6-12 New Jersey Academy for Aquatic Sciences, Inc. - NJ	$0	$0
13-4-130	12-12 Rocky Mountain Biological Laboratory - CO	$0	$0
13-4-131	12-12 Boyce Thompson Institute for Plant Research - NY	$0	$0
13-4-132	12-12 SCOR Scientific Committee for Oceanic Research - DE	$0	$0
13-4-133	12-12 UNAVCO, Inc. - CO	$9,000	$0
13-4-134	9/12 Aleut International Association - AK	$0	$0
13-4-135	12-12 CUREE Consortium of Universities for Earthquake Engineering - CA	$0	$0
13-4-136	12-12 American Chemical Society - DC	$0	$0
13-4-137	12-12 The Franklin Institute - PA	$0	$0
13-4-138	12-12 The Mathematical Association of America - DC	$0	$0
13-4-139	12-12 REVISED Institute for Broadening Participation - ME	$0	$0
13-4-140	6-12 REVISED Rancho Santa Ana Botanic Garden - CA	$0	$0
	Total:	**$161,446**	**$152,390**

Other Federal Reports

Report Number	Subject	Questioned Costs	Unsupported Costs
13-5-086	6-12 Case Western Reserve University - OH	$5,920	$0
13-5-089	6-12 Georgetown University - DC	$16	$0
13-5-094	6-12 FBCC Fort Berthold Community College - SD	$36,344	$36,344
13-5-095	6-12 University of Chicago - IL	$23,075	$0
13-5-100	6-12 Princeton University - NJ	$328	$0
13-5-102	6-12 Bunker Hill Community College - MA	$390	$390
13-5-117	8-12 Northwestern University - IL	$300	$300
13-5-132	6-12 State of Connecticut	$12,051	$12,051
	Total:	**$78,424**	**$49,085**

Audit Reports With Outstanding Management Decisions

This section identifies audit reports involving questioned costs, and funds put to better use where management had not made a final decision on the corrective action necessary for report resolution within six months of the report's issue date. At the end of the reporting period there were 13 reports remaining that met this condition. The status of recommendations that involve internal NSF management is described on page 48.

Report Number	Subject	Questioned Costs	Unsupported Costs	Better Use of Funds
05-1-005	RPSC Costs Claimed FY 2000 to 2002	$12,334,824	$0	$0
06-1-023	RPSC 2003/2004 Raytheon Polar Services	$6,860,500	$0	$0
07-1-003	Triumph Tech, Inc.	$80,740	$1,192	$0
09-1-014	University of Michigan	$1,604,713	$1,418,889	$0
09-5-048	8-07 College of the Mainland - TX[5]	$110,629	$0	$0
10-1-012	COL OOI Proposed Budget	$0	$0	$88,118,848
11-1-001	REVISED ATST Price Proposal	$0	$0	$62,338,903
11-1-021	NEON National Ecological Observatory Network	$0	$0	$75,780,354
12-1-005	UCAL – Santa Barbara	$6,325,483	$0	$0
12-1-008	NEON Proposal Audit	$0	$0	$78,657,394
12-5-143	9-11 Fort Berthold Community College	$25,343	$24,659	$0
13-1-001	REVISED University of Wisconsin – Ice Cube	$2,134,379	$0	$0
13-1-002	Jackson State University	$943,475	$844,241	$0
	Total:	**$30,420,086**	**$2,288,981**	**$304,895,499**

24 This report was on hold at the request of OIG.

Investigative Data

Civil/Criminal Investigative Activities

Referrals to Prosecutors	3
Criminal Convictions/Pleas	3
Arrests	1
Civil Settlements	0
Indictments/Information	1
Investigative Recoveries	$504,095.71

Administrative Investigative Activities

Referrals to NSF Management for Action	40
Research Misconduct Findings	7
Suspensions/Debarments/Exclusions	4
Administrative Actions	44
Certifications and Assurances Received[25]	14

Investigative Case Statistics

	Preliminary	Civil/Criminal	Administrative
Active at Beginning of Period	24	149	126
Opened	27	31	32
Closed	41	38	48
Active at End of Period	10	142	109

Freedom of Information Act and Privacy Act Requests

Our office responds to requests for information contained in our files under the freedom of Information Act ("FOIA," 5 U.S.C. § 552) and the Privacy Act (5 U.S.C. § 552a). During this reporting period:

- Requests Received 11
- Requests Processed 9
- Appeals Received 2
- Appeals Upheld 2

Response time ranged between 4 days and 20 days, with the median around 19 days and the average around 17 days.

25 NSF accompanies some actions with a certification and/or assurance requirement. For example, for a specified period, the subject may be required to confidentially submit to OIG a personal certification and/or institutional assurance that any newly submitted NSF proposal does not contain anything that violates NSF regulations.

"The right to search for truth... implies also a duty; one must not conceal any part of what one has recognized to be true."

- Albert Einstein

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or abuse, call our hotline.
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