National Science Foundation

Office of Inspector General

Semiannual Report to Congress

September 2010

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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 35,000 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.

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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 for the six months ending September 30, 2010. During this period, our investigative staff closed 29 civil/criminal investigations, had five research misconduct cases result in findings by NSF, and recovered $2,891,973 for the government. In addition, seven audit reports were issued, two of which questioned $585,000, and one of which identified $88 million of unallowable contingency costs in a non-profit's proposed budget. Over $34 million of the contingency costs were America Recovery and Reinvestment funds. Our work reflects our sustained commitment to our mission to prevent and detect fraud, waste, and abuse within NSF and by individuals or entities that receive NSF funding.

During the last six months, we completed several cases with significant monetary recoveries for the government. A joint investigation of a public broadcasting company for alleged False Claims Act violations led to a settlement agreement under which the company returned $950,000 to the government; agreed to a five-year compliance plan; and forfeited and deobligated more than $1 million associated with awards from each of the three agencies. Expenses charged by the company to its NSF grant included gifts and alcohol. In another case, a company and former CEO that obtained a Small Business Innovation and Research grant by making false statements about the success of the project, each agreed to pay back $467,000 to the government and to be bound by a five-year compliance plan.

Audits completed during the past six months, disclosed that a non-profit that was receiving NSF funds was improperly allocating contingency funds for uses such as consultant fees, travel, and beverages and snacks for employees.

In addition, my office has a leadership role in two new oversight initiatives—the Suspension and Debarment Working Group and the Small Business Innovation Research (SBIR) Program Working Group. The Suspension and Debarment Working Group, which I chair for the Council of Inspector's General on Integrity and Efficiency's (CIGIE) Investigative Committee, is focused on promoting awareness and expanding the use of suspension and debarment as an effective and powerful mechanism to safeguard taxpayer dollars from contractors and grant recipients who commit fraud, behave unethically, or nor presently responsible. The SBIR Working Group, which I lead as part of CIGIE's Research Misconduct Working Group, is focused on addressing Congress's concerns about the persistence of fraud in the SBIR program. This group has made progress on developing standard certifications, detecting duplicative funding, and sharing best practices and fraud indicators across agencies.

Finally, a working group which the NSF Deputy Director and I initiated developed a more effective process for resolving audit recommendations for entities that receive NSF funds. The new policy not only addressed some long-standing challenges that had impeded our ability to resolve audits, but also served as an outstanding model of collaboration which recognizes our shared commitment to stewardship of federal funds. I would also like to thank Dr. Steven Beering and Dr. Dan Arvizu for their service on the National Science Board. I look forward to a continued partnership with NSF in furthering our shared mission of safeguarding federal tax dollars awarded by the Foundation.

Allison C. Lerner

Report Highlights

- A company and CEO made false claims about their project's success to obtain a Phase II Small Business Research Innovation Program grant. Following a joint investigation, the company and CEO entered into a settlement agreement under which they each agreed to pay back $467,000 to the government and enter into a five-year compliance plan.

- Three universities returned funds that had been mischarged to NSF awards. One of these universities reimbursed over $85,000 to NSF and instituted new policies and procedures to strengthen its financial administration of NSF awards.

- An audit identified $88 million of unallowable contingency costs in a non-profit's proposed budget. Over $34 million of the contingency costs were America Recovery and Reinvestment funds. The audit did not find any controls or technical barriers to prevent the organization from drawing down contingency funds and spending them without NSF approval.

- The OIG and NSF management developed a more effective audit resolution process to provide robust stewardship of NSF funding provided to grantees.

- The OIG is leading an effort to protect taxpayer dollars through expanded and more effective use of suspension and debarment. The Inspector General is also working with the IG community on initiatives to combat waste, fraud, and abuse in the Small Business Innovation Research Program.

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Civil and Criminal Investigations

We investigate violations of federal civil and criminal statutes by applicants for and recipients of NSF funds, as well as NSF employees and contractors. When we find substantial evidence of wrongdoing, we refer cases to the Department of Justice for prosecution and recommend administrative action of NSF in appropriate circumstances.

Our investigations yielded significant results during this reporting period including a company and CEO paying over $900,000 for False Claims Act violations and the return or forfeiture of $1.9 million by a public broadcasting company.

Joint Investigation Results in the Return or Forfeiture of $1.9 Million

We conducted a joint investigation with the OIGs of the National Endowment for the Arts (NEA) and the National Endowment for the Humanities (NEH), of a New York public broadcasting company for allegedly submitting false claims in violation of the civil False Claims Act. In response to our subpoena for records, the company was unable to provide sufficient documentation for the $1.5 million NSF grant because it combined NSF funds with non-NSF funds in its accounting system. The documents that the company did provide showed expenses for gifts for the talent, alcohol, and costs unrelated to the program that were charged to the NSF award. Based on our concerns with this grant, we reviewed the general ledgers for four other seasons of the same educational program and determined that the company had been requesting reimbursements in excess of its actual expenses. For one award, the difference totaled $476,000. NEA OIG and NEH OIG conducted similar reviews of their awards and found similar issues to the ones we identified.

The broadcasting company had not discretely accounted for its federal grant funds; had not segregated unallowable expenses from the project accounts; and drew down funds in excess of expenditures. We referred the matter to the U.S. Attorney's Office, Southern District of New York. A civil settlement was reached that resulted in a five-year compliance plan, the return of $950,000 and the forfeiture and deobligation of more than $1 million associated with awards from each of the three agencies.

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Company and CEO Pay Over $900,000 for False Claims Act Violation

Our investigation, initiated pursuant to a whistleblower lawsuit, disclosed that the former CEO of a Maryland based biotechnology company caused material false statements to be made regarding experiments conducted under an SBIR Phase I award. NSF awarded this company a Phase I SBIR award in 2005. In 2006, NSF awarded the company a Phase II award of $467,000 based on the company's false claims in its Phase II proposal. The investigation also revealed several material false statements the company submitted in its annual project reports for the Phase II award.

The false statements greatly exaggerated the success of the experiments performed under both awards. For example, the Phase I report stated that six full-scale experimental runs of the process under investigation produced high-quality results that were "robust," "replicated," and "validated," when in fact the runs were all small-scale, none was repeated, and the results varied widely. Similarly, an interim Phase II report stated that a "critical" project objective was "almost completed"—but the subsequent final report, submitted by the company after learning of our investigation, admitted that that objective "was not accomplished to our satisfaction."

The company entered into a settlement agreement which required the company and its former CEO to each pay back half of $934,000 to the U.S. Government. As part of the settlement agreement, the company agreed to be bound by a five-year compliance plan monitored by our office, and the former CEO voluntarily excluded himself from receiving federal funds for five years.

Former University Employee Convicted for Purchase Card Abuse

Our investigation disclosed that a former business manager at an Arizona university charged nearly $17,000 for personal items, such as gift cards and a video game, to an NSF award. We also identified nearly $18,000 of additional charges on her purchase card which the university could not confirm were properly charged to the NSF award. The investigation also revealed that she had charged personal purchases to other federal and state grants.

The former manager pled guilty to one count of felony theft and was sentenced to three years probation and ordered to pay $75,000 restitution to the university. The university reimbursed $51,688 to NSF and made significant changes to its policies and procedures for purchase card use to strengthen oversight of NSF funds in the future.

NSF Terminates a Graduate Research Fellowship and Recovers $69,000

Our investigation revealed that an Alabama student who was awarded a graduate research fellowship had intentionally made a false certification on her application when she stated that she was not delinquent on any federal debt. After she began receiving fellowship funds, she disclosed to NSF that she was

in fact delinquent on student loans and she had knowingly misrepresented her status on her application. NSF terminated the fellowship award and recovered approximately $69,000.

We determined that, although the student made the false certifications intentionally, it was unclear whether the certification was still legally required or considered by NSF to be an important precondition to the award of fellowships. We recommended that NSF determine whether the certification was still required by law, regulation, or policy. NSF concluded that the certification was no longer legally required; amended the certification page accordingly, and moved the certification page to the front of the fellowship application so that applicants are aware of all requirements before applying.

PI Receives Funding from Three Federal Agencies for the Same Project

A PI at a Florida university received funding from three federal agencies for the same proposal. The PI was originally accused of plagiarizing in a proposal submitted to NSF and a progress report submitted to the Air Force Office of Scientific Research. Our joint investigation with the Air Force determined that the PI first submitted a proposal, which included plagiarized text and figures, through his wife's small business to the Air Force's Small Business Technology Transfer program.

The Air Force notified the PI that his proposal was approved for funding, and he then submitted a proposal for the same project through his university to NSF's Small Grants for Exploratory Research program, without disclosing to NSF that the Air Force had already approved funding for the project. NSF approved the project for funding, and the PI then submitted the same proposal through his wife's business to DARPA, without disclosing either the Air Force or NSF award. DARPA also approved funding for the project. All three proposals contained the same significant plagiarism. The Air Force made a finding of plagiarism and took actions against the PI.

The United States Attorney's Office declined to prosecute the duplicative funding, in part because of the small amount of NSF funding the PI had spent before we learned of his scheme and the availability of a strong administrative remedy. Accordingly, we recommended that NSF debar the PI and his wife's company for three years, and NSF's decision is pending.

Three Universities Return Mischarged Funds to NSF

Three universities returned funds that had been mischarged to their NSF awards. An Ohio university reimbursed $85,511 to NSF and instituted new policies and procedures to strengthen financial administration of NSF awards in the future. The university had drawn down excessive funds, charged costs incurred after the award's expiration date, and transferred costs to the award without supporting documentation. An Oregon university repaid $54,928 to NSF for unsupported and ineligible costs charged to its NSF award.

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A New York university returned $19,736 to NSF. After a PI at the university completed activities set out in his NSF proposal, he requested NSF permission to spend the remaining funds on other activities. However, he did not submit a proposed budget to NSF as directed and spent the remaining funds on costs that were unallowable and/or lacked supporting documentation.

The university returned the funds to NSF and removed the PI from his position as an academic center director. The university also updated its no-cost extension policy to require PIs to submit a signed request form to the university before obtaining an extension from NSF. In addition, we sent the PI a letter admonishing him to adhere to applicable grant conditions and to reply promptly to requests from NSF program officers.

Father Misuses NSF Logo to Fake Daughter's Science Award

A news article reported that a 4th grader won a national science fair hosted by NSF. The story was accompanied by a photo of the student, her father, and her principal. The student was holding a trophy, a medal, and a plaque allegedly from NSF. The story also reported that the girl received a letter of congratulation from NSF stating she had won an all-expenses-paid trip to Space Camp. We examined the letter which contained the NSF logo and had purportedly been signed by a NSF program officer.

NSF does not host a national science fair. When we interviewed the father, he admitted that he created the fake NSF letter and ordered the trophy, medal, and plaque. He said he never intended the publicity, and he subsequently sent an email to the newspaper admitting to the "hoax," which the newspaper reported. The case was declined for prosecution, and we concluded that no further action was necessary.

PI Charges Personal Purchases to NSF Awards

A PI at a Utah university charged nearly $9,000 in personal purchases to two NSF awards, private foundation grants, and university overhead accounts. The university terminated the PI and refunded the inappropriate charges. This PI is currently employed at a Massachusetts university. In order to further protect the interests of the public and NSF, we recommended that NSF debar him for one year. NSF's decision is pending.

NSF Acts on Debarment Recommendations

Based on our recommendations, NSF debarred two individuals for fraudulent actions:

- A former accounts payable clerk at a Wisconsin college pled guilty to a felony theft charge and was ordered to pay $22,000 of restitution.[1] NSF agreed with our recommendation and debarred the employee for three years.

[1] March 2010 Semiannual Report, p.26.

- An assistant director for an NSF-funded institute at a North Carolina university charged personal expenses to an NSF award and was subsequently terminated. The assistant director's responsibilities included management, oversight and easy access to millions of dollars of federal award funds. We recommended that NSF debar this individual for one year. NSF agreed with our recommendation and debarred her for one year.

Research Misconduct Investigations

Research misconduct damages the research enterprise, is a misuse of public funds, and undermines the trust in government-funded research. 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. 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.

During this reporting period, we referred six cases to NSF which are summarized below. NSF's decisions are pending in all six cases.

Student Fabricates Figures in Research Publication and Ph.D Dissertation

A doctoral student at a North Carolina university fabricated a figure in a research publication that cited NSF support. The university investigation determined that the student used image manipulation software to create an image of an electrophoretic gel with bands placed at the appropriate lane positions. The fabricated image appeared in a publication that was later retracted. The investigation also revealed that multiple improperly created or manipulated images appeared in the student's Ph.D. dissertation. After making a finding of misconduct, the university initiated action to rescind the student's Ph.D. degree.

We concurred with the university's conclusions and recommended that NSF: make a finding of research misconduct; send a letter of reprimand; debar the individual for three years; require certifications and assurances for three years after debarment ends; prohibit service as a reviewer of NSF proposals for six years; and require completion of a course in ethics training within one year of the finding of research misconduct. NSF's decision is pending.

PI Violates Merit Review and Plagiarizes in Three NSF Proposals

A PI who is an associate professor at a California university plagiarized text and references into three declined proposals he submitted to NSF. One of the sources was an NSF proposal he received for confidential merit review. The university concluded that the PI's actions did not constitute plagiarism, but took actions against him including: placing the investigation report in his personnel file; requiring him to develop a chapter on plagiarism for the university's Undergraduate Student Booklet; and prohibiting him from receiving grants for approximately one year.

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We did not concur with the university's assessment and initiated our own investigation. We concluded that the PI knowingly plagiarized and his actions were a significant departure from accepted practices. We recommended that NSF: make a finding of research misconduct; send a letter of reprimand; debar him for one year; require certifications and assurances for three years after the debarment period ends; prohibit him from serving as a merit reviewer for three years; and require certification of attending an ethics class within one year. NSF's decision is pending.

PI Submits Three Proposals to NSF Containing Substantive Plagiarism

A PI, who was an assistant professor at a Virginia university, plagiarized text and references from eighteen sources into three proposals he submitted to NSF. The PI's university concluded that the PI recklessly committed plagiarism, and it placed a letter of reprimand in the PI's personnel file and authorized his department chair to review his proposals for five years.

We concurred with the university's assessment and recommended that NSF: make a finding of research misconduct; send a letter of reprimand; require certifications and assurances for three years; and require certification of attending an ethics class within one year. NSF's decision is pending.

Professor Plagiarizes from Research Colleague into NSF Proposal

A professor at a North Carolina university copied text into her NSF proposal from several sources, including a publication of a research colleague with whom she regularly shared preprints and publication copies. The professor contended that copying extended sections of text without the use of quotation marks was accepted practice in her research community, but her university disagreed, making a finding of research misconduct and requiring training in the responsible conduct of research.

We concurred with the university's assessment and recommended that NSF: make a finding of research misconduct; require certifications and assurances for three years; prohibit service as a reviewer for three years; and require the individual to complete a course in responsible conduct of research within one year of the finding of research misconduct. NSF's decision is pending.

PI Partially Blames Students for Plagiarism in Two NSF Proposals

A PI who was an assistant professor at a California university plagiarized text and figures into two proposals he submitted to NSF. The PI accepted responsibility for some of the plagiarized text but also claimed he did not adequately review background materials provided to him by his students. The PI's university concluded the PI was solely responsible and his actions constituted intentional plagiarism. The university made a finding of research misconduct and placed a letter of reprimand into the subject's personnel file.

We concurred with the university's assessment and recommended NSF: make a finding of research misconduct; send a letter of reprimand; require certifications and assurances; and require certification of attending an ethics class within one year. NSF's decision is pending.

PI Plagiarizes into Three NSF Proposals

A PI who was a professor at a Mississippi university plagiarized substantive amounts of text from two dozen sources into three proposals he submitted to NSF. The PI's university concluded that the PI committed plagiarism, which was a significant departure from accepted practices. It required the PI to take courses in scientific writing and research ethics and to hire a professional editor to review his writing for at least one year. It also required the PI's academic department to mandate biannual certifications for scientific ethics.

The university's assessment of the subject's level of intent was unclear. Based on our analysis of the evidence, we concluded the PI's actions were knowing and they constituted a significant departure from accepted practices. We recommended that NSF: make a finding of research misconduct; send a letter of reprimand; require certifications and assurances for one year, and require certification of attending an ethics class within one year. NSF's decision is pending.

Actions by NSF Management on Previously Reported Research Misconduct Investigations

NSF has taken administrative action to address our recommendations on five research misconduct cases reported in our March 2010 report. In each case, NSF made a finding of research misconduct, issued a letter of reprimand, and required completion of a course on research ethics. NSF also took additional significant actions in response to our recommendations as summarized below.

- NSF required a university professor who plagiarized text, including text from a confidential NSF proposal, into multiple proposals, to provide certifications and assurances for three years and prohibited the professor from serving as a merit reviewer for five years.[2]

- A professor who plagiarized into several of his proposals was required by NSF to provide certifications and assurances for three years.[3]

- NSF required a university professor who plagiarized text from web sources into his NSF proposal to provide certifications for two years.[4]

- A professor at a university who plagiarized into his proposal and blamed his students was required by NSF to provide certifications and assurances for two years.[5]

[2] March 2010 Semiannual Report, p.30.
[3] March 2010 Semiannual Report, pp.29-30.
[4] March 2010 Semiannual Report, p.31.
[5] March 2010 Semiannual Report, p.31.

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- NSF required a university professor who plagiarized text into a proposal, which she subsequently withdrew, to provide one year of certifications and prohibited her from serving as a merit reviewer for one year.[6]

- A PI at a small business who plagiarized text into multiple proposals was required by NSF to provide certifications for one year.[7]

Management Implication Reports

Inadequate Oversight Plans for Projects Involving International Subawardees

We initiated an investigative review of the proposals submitted to a program providing support to international participants through subawards. The international collaboration program required Oversight Plans for the lead institution to ensure subawardee compliance with regulations related to financial accountability, biological oversight, Bioterrorism Act, and responsible conduct of research (RCR).

We reviewed half of the 168 proposals submitted under the program, and all of the 15 awarded proposals. We found that the proposals with foreign subawardees had incomplete and/or rudimentary Oversight Plans that did not demonstrate collaboration between the U.S. institution awardee and foreign subawardee in writing the Oversight Plans. We found only one of the fifteen proposals selected for award had submitted an Oversight Plan that substantively addressed all of the relevant criteria.

After selecting the fifteen proposals that would be awarded, the NSF program officers requested information from the PIs for those proposals, including expanded information on the Oversight Plans. While most of the PIs expanded on the information provided in the submitted proposal's Oversight Plan, we found only two of the fifteen made substantive changes.

We recommended that NSF require U.S. institutions to develop Oversight Plans in conjunction with international collaborators, ensure heightened awareness for RCR training and research misconduct reporting, and develop more detailed guidance for Oversight Plans for future international cooperative awards. NSF's response is pending.

Review of Travel Expenditures by Temporary Program Staff

We reviewed the use of Independent Research/Development (IR/D) travel by temporary NSF program staff appointed under the Intergovernmental Personnel Act, Visiting Scientists, Engineers, and Educators and permanent staff. IR/D provides an important benefit to NSF staff as it provides travel funds for participation in research and for scientific conferences. IR/D participants must

[6] March 2010 Semiannual Report, pp.31-32.
[7] March 2010 Semiannual Report, p.29.

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submit IR/D plans containing information specified in NSF's Personnel Manual, including proposed starting and ending dates as well as expected dates or frequency of specific IR/D activities and itemized NSF costs, identifying their purposes, type of funding, and any other funding arrangements. This information is required to ensure approved IR/D plans are consistent with the actual IR/D travel.

We found that some participants used IR/D funds for trips and conferences that were not referenced in the plans, took more trips or longer trips than proposed, failed to provide detail on conference travel, used IR/D funds for activities not related to the IR/D plan, and spent more on travel than proposed. We also determined that there is no centralized means to review IR/D plans or budgets, and therefore no convenient means to compare actual expenditures to budgets.

To ensure that funds are appropriately expended and to improve the efficiency and oversight of the IR/D program, we recommended that NSF examine all IR/D plans and associated travel records for the past 12 months to determine if the travel was IR/D related, within the scope of the plan, and whether the actual travel costs are consistent with what was proposed. NSF's response is pending.

In addition, we concluded that the issues we identified during our review raised significant internal control concerns with respect to training, financial control, and oversight involving the IR/D program. Accordingly, we referred the issues discussed above to the Office of Audit for further work.

Follow-Up Review of Awards for Research Involving Human Subjects

In 2005, we reviewed compliance with the requirements for human subjects research by awards from an NSF program that makes many such awards.[8] We found that many awards lacked the required information on the proposal cover sheet concerning human subjects research, had incomplete internal NSF proposal processing forms that did not mark research as involving human subjects, and some required institutional approvals were not filed until after the award date. NSF took numerous remedial actions in response to our recommendations.

In this reporting period we reviewed awards from the same program that involved human subjects research and determined that significant improvements have been made. We noted several administrative matters that can be easily corrected, such as awardees' failure to include all necessary information on proposal cover sheets.

We also concluded that the current system of reporting changes to human subjects work in project reports does not adequately identify awards as using human subjects. To ensure the protection of any individuals that take part in NSF-sponsored research, we recommended that NSF ensure proposal cover

[8] March 2006 Semiannual Report, pp.35-36.

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sheets are properly and fully completed, and modify the reporting requirements in project reports. NSF agreed with our recommendations and stated that it would strengthen language in the program solicitation regarding cover sheet requirements and its annual report guidelines for project report requirements.

Office of Investigations Operations in Compliance with CIGIE Guidelines

An external peer review of the Office of Investigations (OI) is conducted every three years by another Office of Inspector General. In addition, OI conducts an internal peer review of its operations. During the last six months, an internal peer review concluded that OI operations were consistent with CIGIE guidelines for investigations as well as those for Offices of Inspectors General.

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Significant Contracts and Other Award Audits

During this semiannual period seven reports were issued, one of which contained a total of $88 million in questioned proposed costs. We also continued our efforts to ensure that the $3 billion that NSF received under the American Recovery and Reinvestment Act (ARRA) was managed effectively and in accordance with the Act's requirements and goals.

Deficiencies Remain in Administration of Cost Reimbursement Contracts and Other Awards

We continue to monitor NSF's process to address the significant deficiency in monitoring cost reimbursement contracts reported in NSF's FY 2009 Financial Statement audit. We also reviewed a $400 million cooperative agreement that included over $100 million in ARRA funds.

In our last semiannual report[9], we identified significant deficiencies in NSF's administration of contract and awards with a non-profit organization, Consortium for Ocean Leadership (COL). COL is a non-profit organization that manages ocean research and education programs. Following is a summary of four audits related to COL which were issued during this reporting period.

Non-Profit's Budget Included $88 Million of Unallowable Contingency Costs

The audit of COL's $386 million budget to construct the Ocean Observatories Initiative project questioned $88.1 million allocated for contingency costs.[10] This figure represents 22.7 percent of COL's proposed budget. Further, over $34 million of these contingency costs were ARRA funds.

The audit disclosed that COL incorrectly classified contingency costs in the proposed budgets as equipment costs. COL officials stated to the auditors that the contingency costs would only be used if the awardee overran the budget due to unforeseeable factors. It is important to note that the audit concluded that COL can draw down the contingency funds as advanced payments in the same manner as other funds in its budget in advance of the contingencies occurring. The audit did not find any controls or technical barriers

[9] March 2010 Semiannual Report, p. 10.
[10] Costs questioned in a proposed budget are classified as Funds Put to Better Use.

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to prevent COL from drawing down contingency funds and spending them without NSF approval. It was recommended that NSF require COL to remove unallowable contingency provisions from its proposed budgets and to discontinue its practice of funding contingencies in this fashion.

The second audit found that COL's accounting system was adequate; however, NSF had not provided COL with a determination as to whether the organization's CAS Disclosure Statements were adequate and in compliance with federal requirements. An approved CAS Disclosure Statement is essential because it is the basis for COL classifying and billing costs to NSF. Further, the audit disclosed that NSF approved, and COL used, a non-compliant method to allocate indirect costs to all COL's contracts and awards. As a result, indirect costs were incorrectly charged to NSF awards. We recommended that NSF require COL to changes its accounting practice to a compliant method. The OIG and NSF will work to address these matters during the audit resolution process.

Audit of Contract with Non-Profit Identifies Over $500,000 in Questioned Costs

Cost reimbursement contracts are considered to be high-risk because of the potential for cost escalation. Cost reimbursement costs that are paid in advance are considered a higher risk because contractors are paid prior to providing the required goods and services. Since COL has a cost reimbursement contract with NSF that has advance payment provisions, an incurred cost audit was conducted of costs claimed by the Joint Oceanographic Institution, which was merged with another entity to form COL in May 2007.

The audit questioned costs for unsupported consultant fees and for other unallowable costs. Specifically, the auditors questioned over $324,000 in consultant fees because of inadequate supporting documentation. The auditors also questioned more than $19,000 in costs for beverages and snacks. In addition, more than $32,000 in reorganization costs and $15,000 in unreasonable rent costs, were questioned. For the four months subsequent to the merger, the audit questioned costs of more than $195,000, including $80,000 for consultant fees that lacked adequate support and over $112,000 costs including unallowable reorganization, travel, beverages and snacks.

COL disagreed with the questioned costs, asserting that it had adequate documentation for the consultant costs and citing the importance of beverages and snacks to employee morale. We recommended that NSF resolve the questioned costs identified in the audit.

Adequate Property Controls at Non-Profit's Subawardee

The fourth COL audit was a review at Texas A&M Research Foundation, a subawardee under COL's contract with NSF. The audit found that property controls over COL's government-owned equipment, valued at over $38 million, were adequate for accounting and tracking equipment purchased with federal funds.

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Non-Profit's Monitoring of Subrecipients Needs Improvement

Incorporated Research Institutions for Seismology (IRIS) is a non-profit organization comprised of a consortium of over 100 educational and seismology research member institutions. NSF awarded two cooperative agreements valued at a total of $80 million to IRIS.

An audit of the accounting system for IRIS disclosed four material weaknesses. First, subrecipient monitoring was inadequate because IRIS did not ensure that subrecipients were completing OMB required audits within nine months of year end or adequately monitoring the subrecipients during the award period. This is significant because over one-third of the revenue that IRIS earned in 2008 and 2009, was attributed to costs charged to NSF by IRIS subrecipients.

Second, IRIS did not maintain files to document the basis for subrecipient selection, to justify the lack of competition when competitive bids were not obtained, or to document cost and price analyses and the basis for the award costs.

Third, the auditors identified several labor accounting issues, including a method of allocating employees' leave time that could result in inaccurate payroll costs being charged to NSF and the approval of timesheets that did not support the actual hours worked. It is essential for the labor accounting system to be sound for NSF to have assurance that labor charges it pays are for work that benefited the NSF program.

Finally, the IRIS accounting manual does not provide a procedure for accumulating and billing indirect costs. IRIS generally agreed with the audit's recommendations.

Associated Universities, Inc. Agrees to Document Planning Process

Associated Universities, Inc. is the management organization for the NSF's National Radio Astronomy Observatory and other astronomical observatories, including the Atacama Large Millimeter Array, which is under construction. An audit was conducted to determine whether AUI's short- and long-term planning and budget preparation processes, used to prepare AUI's $458 million budget for the next five years, were adequate to ensure proper stewardship of NSF funds. The audit found that the processes to prepare for the budget and performance plan were adequate. However, the auditors recommended that AUI prepare a single document that consolidates and describes all of its planning process. AUI agreed to provide an outline of its planning process by March 2011.

Deficiencies in Contract Monitoring

We issued an alert memo relating to NSF's contract with Integrated Ocean Drilling Program Management International, Inc (IODP-MI). The contract is valued at over $337 million and provides management and planning for NSF's ocean drilling program.

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Monitoring deficiencies identified include the lack of timely and adequate incurred cost submissions by the contractor and the lack of an NSF determination that IODP-MI's accounting system is adequate for billing costs to the government. As a result, NSF risks paying unallowable costs on this contract.

OIG Continues To Monitor Antarctic Support Contract Competition

NSF is in the process of selecting a contractor to manage the United States Antarctic Program (USAP) for the next 13.5 years. The current contract is NSF's largest and is currently valued at approximately $1.6 billion over eleven years.

The OIG continues to recommend that NSF ensure that Defense Contracting Audit Agency (DCAA) audits are obtained of business and financial systems along with cost proposals submitted by bidders. These audits should be conducted for all the bidders selected for inclusion in the competitive range in order to reduce the risk of excessive costs being billed to the government. Such audits would determine whether business and financial systems are capable of ensuring that government funds are properly allocated and billed and that costs proposed are reasonable and allowable charges. It is important that NSF obtain these audits in a timely manner so additional delays do not occur in the award of the new contract. Continuing delays in making a new contract award have resulted in NSF negotiating with the incumbent for a second extension of the Antarctic Support Contract.

Monitoring ARRA Funds

Efforts to Oversee ARRA Compliance Continue

NSF received $3 billion in ARRA funds. During this period we reviewed NSF's oversight of one of these ARRA-funded projects. We also reviewed the completeness and accuracy of 10 awardees' quarterly ARRA reports.

OIG Survey Provides Information about NSF's Oversight Plan for Construction of Alaska Region Research Vessel

NSF awarded $148 million in Recovery Act funds to the University of Alaska Fairbanks for construction of the Alaska Region Research Vessel, Sikuliaq, which will replace the oldest ship in the national Academic Research Fleet. The Sikuliaq will operate year-round in the ice-choked waters around Alaska and the polar region; contain extensive research instrumentation, scientific equipment, and laboratories; and will be available to scientists and students in a variety of disciplines through the University-National Oceanographic Laboratory System scheduling process.

Our survey of NSF's oversight plan for the vessel's construction indicated that at this point, NSF appears to have an adequate oversight structure for overseeing the Sikuliaq construction project. Specifically, NSF has assigned staff with extensive experience in ship construction to this project and has put

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ongoing monitoring practices in place. Additionally, the agency is reviewing the University of Alaska Fairbank's business systems supporting administrative management of the Sikuliaq construction.

Construction of the Sikuliaq is slated to begin in October 2010, and we plan to continue to monitor construction progress to enable us to review critical issues as they arise and provide timely feedback and recommendations to NSF.

Quarterly Reports from ARRA Recipients Were Generally Accurate and Complete

Recipients of Recovery Act funds are required to submit quarterly reports that include data related to the projects funded and the impact of these projects on job creation. Our review covered several specific data elements required in quarterly reports including: number of jobs, amount of ARRA funds received, ARRA expenditures, and project status. We examined this data as reported by five institutions that received ARRA funds: the California Institute of Technology, the California State University Fresno Foundation, George Mason University, University of Colorado – Boulder, and University of Kentucky. We concluded that these institutions had generally established appropriate processes for compiling and reporting quarterly data in compliance with ARRA reporting requirements.

However, we identified five areas where these NSF recipients were not consistently, accurately, or completely reporting data in their quarterly reports. These areas were: ARRA jobs for NSF fellowship, scholarship, and training grants; job estimates for sub-awards and vendor contracts, jobs reported in the proper quarter, grant activities, and sub-awardee and contractor debarment and suspension status. If the Recovery Act's goals of accountability and transparency are to be met, it is critical for this information to be accurate. It is important to note, however, that we believe that awardees will address the reporting issues we identified as they refine their ARRA reporting procedures.

To improve reporting accuracy, we recommended that NSF perform additional outreach to its recipient community and/or work with the Office of Management and Budget (OMB) to enhance its reporting guidance to promote consistent and accurate recipient reporting. Key recommendations included that NSF provide clarification on whether ARRA job creation and retention estimates should be reported for NSF fellowships, scholarships, and training grants and for vendor contracts under $25,000. We also recommended that NSF conduct more outreach to emphasize the importance of reporting job information in the quarter in which the work was performed. Further, we recommended that recipients take steps to ensure that they do not award ARRA funds to entities that have been debarred or suspended from receiving Federal money.

NSF generally agreed with the findings and recommendations and has taken or proposed appropriate actions to address the recommendations. In general, each recipient agreed to implement the suggested corrective actions to establish and/or enhance processes to improve the quality and accuracy of its quarterly ARRA data.

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We also reviewed five additional ARRA recipients, in conjunction with four other Offices of Inspector General, as part of Recovery Accountability and Transparency Board project. This review covered the same five data elements as our separate review, and there were 29 ARRA recipients examined by the Inspectors General involved in this project. These reviews also noted difficulties with jobs reporting, concluding that only seven of 29 recipients reported their jobs data consistent with federal guidance.

During this reporting period, as part of an effort coordinated by the Recovery Board, we, along with five other OIGs, contributed to an audit of agencies' internal controls over ARRA recipient reporting. The OIGs found that generally, agencies had complied with OMB guidance for oversight of recipient reporting. Our report on NSF's effectiveness in overseeing recipient reporting will be issued in the next semiannual period.

Audit Resolution

NSF Agrees to Take Steps to Address Challenges of Rotating Executive Workforce

NSF's rotating executive workforce presents challenges to effective personnel management because assignees under the Intergovernmental Personnel Act (IPAs) are not included in the performance management system and because IPAs generally do not have prior experience with federal management processes. In response to our audit assessing NSF's rotating executive workforce, the agency has agreed to implement a performance management process for IPAs next year. NSF is also continuing to develop and expand its orientation and management development programs for IPAs.

National Science Board Is Improving Compliance with Sunshine Act

The National Science Board has agreed to complete all actions recommended in our 2010 audit to improve compliance with the Government in Sunshine Act by the end of this year. The Board has hired legal counsel to help ensure compliance with the Act and has drafted checklists to help staff comply with numerous Sunshine Act requirements. Further, the Board is upgrading the recording technology it uses to ensure complete recordings of each closed meeting.

Civilian Research Development Foundation (CRDF) Strengthens Controls over Sub-recipients Funds

To address our audit recommendations, CRDF agreed to implement stronger internal controls and procedures to oversee sub-recipients, including an improved time keeping system, required mandatory audits, and a more objective cost allocation methodology. Further, CRDF agreed to provide training and to develop additional guidance on allowable expenses to prevent their employees from charging unallowable costs to NSF awards.

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Washington University in St. Louis Enhances Implementation and Oversight of Labor Effort Reporting System

In response to our February 2010 audit, Washington University has taken several steps to enhance implementation and oversight of its new labor effort reporting system, including requiring mandatory effort reporting training for all faculty and conducting periodic evaluations of its effort reporting processes.

NSF will continue to work with the University to require additional actions including expanding mandatory effort reporting training to all staff charging labor cost to federal awards and documenting that comprehensive evaluations of the effort reporting system have been implemented.

NSF Sustains Nearly $700,000 in Questioned Fringe Benefit Costs

In response to audit recommendations, NSF sustained nearly $700,000 in questioned fringe benefit costs claimed by Raytheon Polar Services Company.

More Effective Audit Resolution Process

In response to our December 2009 audit of the process for resolving audit recommendations directed at NSF grantees and following up to ensure that corrective actions are implemented, the Inspector General and NSF's Acting Deputy Director formed a working group to consider new strategies to improve this process. A robust audit resolution process is critical to ensure that institutions receiving funds from NSF take the necessary corrective action to properly manage those funds.

Through a collaborative process, the OIG and NSF developed a new audit resolution process to create more effective stewardship over federal funds awarded by NSF. The new process was put into place in September, and the OIG and NSF senior management who developed the process have formed a Stewardship Collaborative. The purpose of this group is to monitor and refine the audit resolution process and to provide a forum to discuss emerging issues. The anticipated outcome is achieving the shared mission of proper stewardship of the taxpayers' investment in science, engineering, and education.

A-133 Audits

Single Audits Identify 225 Findings and $1.4 Million in Questioned Costs At 70 NSF Awardees

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

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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.

For the 143 audit reports reviewed and referred to NSF's Cost Analysis and Audit Resolution (CAAR) Branch this period,[11] covering NSF expenditures of $10.8 billion[12] during audit years 2006 through 2009, the auditors identified 225 findings at 70 NSF awardees. Three awardees received qualified opinions on their financial statements and 14 awardees received qualified opinions on their compliance with federal grant requirements, including 3 awardees who received qualified opinions on compliance for programs which included NSF ARRA expenditures. The auditors identified material weaknesses and/or significant deficiencies in 50 reports (71 percent of reports with findings), indicating substantial concerns about the awardees' ability to manage NSF funds. 28 findings identified by the auditors resulted in $1.4 million in questioned costs to NSF awards, of which $1.1 million were cause by lack of adequate supporting documentation of the amounts charged to NSF awards. 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.

We also examined 74 management letters accompanying the A-133 audit reports and found 12 deficiencies that affected NSF. Auditors issue these letters to identify internal control deficiencies that are not significant enough to include in the audit report, but which could become more serious over time if not addressed. The deficiencies included inadequate tracking, managing, and accounting for NSF costs, and ineffective segregation of duties. These deficiencies affected control processes that are essential to ensuring stewardship of NSF funds and preventing fraud and abuse.

We provided the results of each audit report to NSF and, where appropriate, highlighted our concerns related to opinions or findings. In certain instances, such as reports which contained significant deficiencies or material weaknesses repeated for three or more consecutive years and/or reports which identified $100,000 or more in questioned costs to NSF awards, we requested that NSF coordinate with us during the audit resolution process. NSF coordinated with us as requested prior to completing resolution of 3 reports.

Audit Timeliness and Quality Deficiencies Continue to Plague Single Audits

The audit findings in A-133 reports are useful to NSF in planning site visits and other post-award monitoring. Because of the importance of A-133 reports to this oversight process, the OIG reviews all reports for which NSF is the cognizant or oversight agency for audit, and provides guidance to awardees and auditors

[11] We reviewed 2 reports but rejected them due to audit quality issues. One report was revised and resubmitted during the period, and is included in this summary. Once we receive the second revised report, we will review it, and if acceptable, refer it to NSF for resolution.
[12] Amount includes $4.5 million in NSF ARRA expenditures.

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for the improvement of audit quality in future reports. In addition, OIG returns reports that are deemed inadequate to the awardees to work with the audit firms to take corrective action.

We reviewed 61 audit reports[13] for which NSF was the cognizant or oversight agency for audit, and found that 29 fully met federal reporting requirements.

Thirty-one reports reviewed had timeliness and quality issues. Audit quality issues 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, including 2 reports which failed to accurately identify ARRA expenditures. Of the 13 reports which included audit findings, 9 reports failed to adequately present the required elements of the finding to assist auditee management in correcting the reported deficiency. Six reports were submitted after the submission deadline. In addition, there were 10 reviews that contained quality issues which had been previously identified for the same awardees and auditors.

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, or the error did not materially affect the results of the audit. However, we rejected two reports due to substan¬tial non-compliance with federal reporting requirements. 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.

Efforts in Response to National Single Audit Sampling Project, Recovery Act, and Improper Payments Improvement Act

We previously reported ongoing efforts to improve the quality and oversight of single audits in response to the recommendations of the National Single Audit Sampling Project and on our participation in OMB workgroups.[14]

The Council of Inspectors General on Integrity and Efficiency (CIGIE) approved revisions to the standards for conducting quality control reviews and desk reviews. Our participation in the OMB workgroup established in response to Executive Order 13520, "Reducing Improper Payments," led to several recommendations which would, if implemented, enhance and streamline the Single Audit process to better support the overall effort to improve federal program accountability and reduce improper payments.

[13] The audits were conducted by 41 independent public accounting firms.
[14] Previously reported in September 2007 Semiannual Report, p. 17, and September 2009 Semiannual Report, p.18.

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Outreach

Outreach is a vital component toward accomplishing our mission to prevent and detect fraud, waste, and abuse and to promote economy, efficiency, and effectiveness at in NSF programs and operations. To this end we undertake a number of proactive activities such as educating NSF awardees about their financial and programmatic responsibilities.

With the Director of the National Procurement Task Force, the Inspector General is leading a Suspension and Debarment Working Group under the auspices of CIGIE's Investigations Committee. The group includes representatives from the Recovery Accountability and Transparency Board, as well as the OIGs for eight other federal agencies.

This group is focused on ways to protect taxpayer dollars through expanded and more effective use of suspension and debarment. The group has formulated a comprehensive survey of agencies and their OIGs to gather baseline information about agency and OIG suspension and debarment practices and plans to develop informational materials and presentations for agencies and prosecutors to promulgate best practices, dispel common misperceptions, and enable well-coordinated parallel proceedings.

Recognizing that enhanced utilization of suspension and debarment authorities would better safeguard government interests, the Suspension and Debarment Working Group will hold a workshop in October to raise awareness of this powerful tool. The workshop will feature case presentations, training, and materials on suspension and debarment best practices, and will bring together OIG auditors, investigators, and attorneys along with agency suspension and debarment officials.

In addition to the suspension and debarment working group, the Inspector General is continuing efforts to address Congress's concerns about the persistence of fraud in the Small Business Innovation Research (SBIR) program through a working group under the auspices of CIGIE's Research Misconduct Working Group.

In August 2009, the Inspector General testified before the Senate Committee on Commerce, Science and Transportation on the subject of waste, fraud, and abuse in the SBIR program. The Inspector General's testimony highlighted the importance of certifications in preventing and prosecuting fraud against the SBIR program. Certifications establish that the applicant was aware that providing false statements to the government is a federal crime. The SBIR group

HIGHLIGHTS

Outreach 27

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is focusing on several initiatives, such as developing a common set of certifications and a coordinated approach to using specific certifications throughout the lifecycle of SBIR awards.

Our office is recognized as a leader in research misconduct investigations, and we receive numerous requests from universities and others in the research community to provide training on the prevention, detection, and investigation of research misconduct. This subject has been increasingly recognized throughout the national and international research communities as critically important to the scientific enterprise. In July, the Inspector General made a presentation on research integrity challenges in a plenary session of the Second World Conference on Research Integrity which was attended by officials from over 50 nations. The Assistant Inspector General for Investigations made a presentation on research misconduct and research integrity and organized a full-day workshop on conducting research misconduct investigations.

Our audit staff continues to be involved in extensive outreach efforts. Most notably, our participation in the OMB workgroup formed in response to Executive Order 13520, “Reducing Improper Payments,” led to several recommendations to enhance and streamline the Single Audit process to better support the overall effort to improve federal program accountability and reduce improper payments. The Single Audit process addresses accountability in several ways including identifying internal control weaknesses and areas of non-compliance and following up on corrective action for audit findings.

International outreach continues to be an important component of our outreach efforts. The Inspector General and NSF’s Chief Financial Officer gave a joint presentation, “Challenges of Managing, Overseeing, and Auditing American Recovery and Reinvestment Act Funds”, at the 2010 International Workshop on Accountability Challenges. The presentation described the challenges of implementing recent legislation in the U.S. to combat the crisis in financial markets and to stimulate the U.S. economy. One of the primary challenges was to process additional research and education awards with no increase in administrative funding.

The primary purpose of the workshop was to discuss strategies to address accountability challenges, and attendees included individuals with responsibility for operating programs to administer oversee and/or prevent and detect fraud, waste, and abuse in government-funded science and engineering programs as well as government funding agencies and research universities and institutions.

Both auditors and investigators participated in a number of outreach activities covering a range of issues such as grant fraud, research integrity and misconduct, compliance programs, and projects related to the Recovery Accountability and Transparency Board. Presentations on these issues were provided to organizations including the National Academy of Science, the Society of Research Administrators, the Association of College and University Auditors, the Society of Corporate Compliance and Ethics, the Council of Graduate Schools, and the National Council of University Research Administrators, as well as NSF grantees, colleges and universities.

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New Assistant Inspector General for Audit

Dr. Brett M. Baker assumed the duties of Assistant Inspector General for Audit in June. Dr. Baker currently serves as Vice Chair of the Federal Audit Executive Council. Dr. Baker is also leading an effort, in collaboration with the Recovery Accountability and Transparency Board, to develop a framework for OIG grant oversight.

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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		$1,153,497
B.	Recommendations that were issued during the reporting period		$88,184,480
C.	Adjustments related to prior recommendations		$0
Subtotal of A+B+C			$89,337,977
D.	For which a management decision was made during the reporting period		$1,153,497
	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	$1,153,497
E.	For which no management decision had been made by the end of the reporting period		$88,184,480
For which no management decision was made within 6 months of issuance			$0

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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	33	$62,769,734	$2,553,659
B.	That were issued during the reporting period	17	$2,053,924	$1,540,132
C.	Adjustment related to prior recommendations			
Subtotal of A+B+C			$64,823,658	$4,093,791
D.	For which a management decision was made during the reporting period	7	$614,602	$35,400
	i) dollar value of disallowed costs ii) dollar value of costs not disallowed	N/A N/A	$52,880 $561,722	N/A N/A
E.	For which no management decision had been made by the end of the reporting period	43	$64,209,056	$4,058,391
For which no management decision was made within 6 months of issuance		26	$62,155,132	$2,518,259

Audit Reports Involving Cost-Sharing Shortfalls

		Number of Reports	Cost-Sharing Promised	At Risk of Cost Sharing Shortfall (Ongoing Project)	Actual Cost Sharing Shortfalls (Completed Project)
A.	Reports with monetary findings for which no management decision has been made by the beginning of the reporting period:	2		$136,263	$510,718
B.	Reports with monetary findings that were issued during the reporting period:	1	$0	$0	$225,884
C.	Adjustments related to prior recommendations	0	$0	$0	$0
Total of reports with cost sharing findings (A+B+C)		3		$136,263	$736,602
D.	For which a management decision was made during the reporting period:	0	$0	$0	$0
	1.Dollar value of cost-sharing shortfall that grantee agreed to provide	0	$0	$0	$0
	2.Dollar value of cost-sharing shortfall that management waived	0	$0	$0	$0
E.	Reports with monetary findings for which no management decision has been made by the end of the reporting period	3		$136,263	$736,602

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Status of Recommendations that Involve Internal NSF Management Operations

Open Recommendations (as of 09/30/2010)	
Recommendations Open at the Beginning of the Reporting Period	52
New Recommendations Made During Reporting Period	0
Total Recommendations to be Addressed	52
Management Resolution of Recommendations[1]	
Awaiting Resolution	3
Resolved Consistent With OIG Recommendations	49
Management Decision That No Action is Required	0
Final Action on OIG Recommendations[2]	
Final Action Completed	10
Recommendations Open at End of Period	**42**

Aging of Open Recommendations

Awaiting Management Resolution:	
0 through 6 months	0
7 through 12 months	1
More than 12 months	2
Awaiting Final Action After Resolution	
0 through 6 months	0
7 through 12 months	24
More than 12 months	15

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

List of Reports

NSF and CPA Performed Reviews					
Report Number	**Subject**	**Questioned Costs**	**Unsupported Costs**	**Better Use of Funds**	**Cost Sharing At-Risk**
10-1-010	Audit of COL's Government Owned Equipment	$0	$0	$0	$0
10-1-011	Audit of COL's Accounting System	$0	$0	$0	$0
10-1-012	COL OOI Proposed Budget	$0	$0	$88,184,480	$0
10-1-013	AUI Internal Controls Long & Short Term Planning	$0	$0	$0	$0
10-1-014	JOI 20 Month Incurred Cost	$392,309	$324,500	$0	$0
10-1-015	COL 4 Month Incurred Cost	$195,937	$80,000	$0	$0
10-1-016	IRIS Accounting System	$0	$0	$0	$0
10-6-004	Alert Memo IODP IMI Contract Administration	$0	$0	$0	$0
10-6-006	ARRA-ARRV Construction Planning Survey	$0	$0	$0	$0
10-6-007	ASC Alert Memo Antarctic Support Contract	$0	$0	$0	$0
10-6-008	ARRA Alert Memo Additional NSF Outreach & Guidance	$0	$0	$0	$0
10-6-008-A	California Institute of Technology	$0	$0	$0	$0
10-6-008-B	California State University - Fresno	$0	$0	$0	$0
10-6-008-C	George Mason University	$0	$0	$0	$0
10-6-008-D	University of Colorado - Boulder	$0	$0	$0	$0
10-6-008-E	University of Kentucky	$0	$0	$0	$0
	Total:	**$588,246**	**$404,500**	**$88,184,480**	**$0**

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NSF-Cognizant Reports

Report Number	Subject	Questioned Costs	Unsupported Costs	Cost Sharing At-Risk
10-4-082	12-07 REVISED DOSSEC Drilling, Observation & Sampling of the Earth's Continental Crust, Inc. & Subsidiary – UT	$0	$0	$0
10-4-086	12-06 REVISED DOSSEC Drilling, Observation & Sampling of the Earth's Continental Crust, Ind. & Subsidiary – UT	$0	$0	$0
10-4-105	6-09 SoundVision Productions - CA	$0	$0	$0
10-4-106	6-09 QEMN Quality Education for Minorities Network – DC	$0	$0	$0
10-4-107	9-09 UCAR University Corporation for Atmospheric Research – CO	$0	$0	$0
10-4-108	9-09 Fermi Research Alliance LLC – IL	$0	$0	$0
10-4-109	12-08 REVISED Center for Severe Weather Research – CO	$0	$0	$0
10-4-110	9-09 NEON National Ecological Observatory Network, Inc. – CO	$0	$0	$0
10-4-111	9-09 Northern California Public Broadcasting, Inc. – CA	$0	$0	$0
10-4-112	6-09 REJECTED Michigan State University – MI	$0	$0	$0
10-4-113	2-07 REVISED Astronomical Society of the Pacific – CA	$0	$0	$0
10-4-114	12-09 ICSI International Computer Science Institute – CA	$0	$0	$0
10-4-115	2-09 REJECTED Astronomical Society of the Pacific – CA	$0	$0	$0
10-4-116	9-09 AUI Associated Universities, Inc. – DC	$0	$0	$0
10-4-117	6-09 Carnegie Institution of Washington – DC	$0	$0	$0
10-4-118	9-09 Concord Consortium, Incorporated – MA	$0	$0	$0
10-4-119	6-09 The Children's Museum (Boston) – MA	$0	$0	$0
10-4-120	6-09 American Museum of Natural History – NY	$0	$0	$0
10-4-121	9-09 Museum of Science and Industry, Inc. – FL	$0	$0	$0
10-4-122	6-09 Museum of Science – MA	$0	$0	$0
10-4-123	12-09 American Physical Society – MD	$0	$0	$0
10-4-124	6-09 Liberty Science Center, Inc. – NJ	$0	$0	$0
10-4-125	6-09 MPC Corporation – PA	$0	$0	$0

10-4-126	6-09 New York Botanical Garden – NY	$0	$0	$0
10-4-127	6-09 WNET.ORG / Educational Broadcasting Corporation – NY	$0	$0	$0
10-4-128	6-09 WNYC Radio – NY	$0	$0	$0
10-4-129	6-09 The Queens Borough Public Library – NY	$0	$0	$0
10-4-130	CORD, Inc. – TX	$0	$0	$0
10-4-131	12-09 Hopa Mountain Foundation – MT	$0	$0	$0
10-4-132	9-09 Chabot Space and Science Center – CA	$0	$0	$0
10-4-133	12-09 Missouri Botanical Garden – MO	$0	$0	$0
10-4-134	9-09 Botanical Society of America, Inc. – MO	$0	$0	$0
10-4-135	9-09 NEES Consortium, Inc. – CA	$0	$0	$0
10-4-136	12-09 Academy of Natural Sciences of Philadelphia – PA	$0	$0	$0
10-4-137	9-09 TMT Observatory Corporation – CA	$0	$0	$0
10-4-138	12-09 BIOS Bermuda Institute of Ocean Sciences FKA Bermuda Biological – NY	$0	$0	$0
10-4-139	9-09 COL Consortium for Ocean Leadership – DC	$0	$0	$0
10-4-140	8-09 Spokane School District No 81 – WA	$0	$0	$0
10-4-141	9-06 AURA Association of Universities for Research in Astronomy, Inc. – DC	$0	$0	$0
10-4-142	9-07 AURA Association of Universities for Research in Astronomy, Inc. – DC	$0	$0	$0
10-4-143	9-09 IMI IODP Management International, Inc. – DC	$0	$0	$0
10-4-144	12-09 American Astronomical Society – DC	$0	$0	$0
10-4-145	12-09 Association for Institutional Research, Inc. – FL	$0	$0	$0
10-4-146	12-09 Monterey Bay Aquarium Research Institute – CA	$0	$0	$0
10-4-147	12-09 TERC Technical Education Research Centers, Inc. – MA	$0	$0	$0
10-4-148	12-09 AAAS American Association for the Advancement of Science – DC	$0	$0	$0
10-4-149	6-09 REVISED Michigan State University	$0	$0	$0
10-4-150	12-09 Field Museum of Natural History – IL	$0	$0	$0
10-4-151	9-09 AURA Association of Universities for Research in Astronomy, Inc. – DC	$0	$0	$0
10-4-152	9-09 California Institute of Technology	$0	$0	$0

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10-4-153	12-09 Marine Biological Laboratory – MA	$0	$0	$0
10-4-154	9-09 WIYN Consortium, Inc. – AZ	$0	$0	$0
10-4-155	12-09 The Samuel Roberts Noble Foundation, Inc. – OK	$0	$0	$0
10-4-156	12-09 Boyce Thompson Institute for Plant Research, Inc. – NY	$0	$0	$0
10-4-157	3-09 Decision Science Research Institute, Inc. – OR	$0	$0	$0
10-4-158	12-09 AGU American Geophysical Union – DC	$0	$0	$0
10-4-164	2-08 REVISED Astronomical Society of the Pacific – CA	$0	$0	$0
10-4-165	12-08 Barrow Arctic Science Consortium – AK	$22,314	$22,314	$0
10-4-166	9-09 LSST, Inc. – AZ	$0	$0	$0
10-4-168	6-09 REVISED IUP Research Institute – PA	$0	$0	$0
10-4-169	12-09 Franklin Institute – PA	$0	$0	$0
	Total:	**$22,314**	**$22,314**	**$0**

Other Federal Audits

Report Number	Subject	Questioned Costs	Unsupported Costs	Cost Sharing At-Risk
10-5-082	6-09 Sisseton-Wahpeton College – SD	$132	$0	$0
10-5-084	6-09 State of Florida	$3,710	$3,710	$0
10-5-086	6-09 Harvard University – MA	$20,905	$0	$0
10-5-089	6-08 Howard University – DC	$549,532	$287,766	$0
10-5-093	6-09 Polytechnic Institute of New York University – NY	$20,905	$0	$0
10-5-097	6-09 Wildlife Trust, Inc. & Wildlife Preservation Trust International, Inc. – NY	$114	$114	$0
10-5-098	6-09University of Richmond and Its Affiliates – VA	$5,760	$5,760	$0
10-5-117	6-09 Central Michigan University – MI	$619,489	$619,489	$0
10-5-122	6-09 Trustees of Amherst College – MA	$78	$0	$0
10-5-123	6-09 Chicago State University – IL	$32,443	$32,443	$0
10-5-126	6-09 Saint Louis University – MO	$18,324	$0	$0
10-5-130	6-09 Stevens Institute of Technology – NJ	$17,342	$17,342	$0
10-5-132	6-09 Howard University – DC	$144,209	$136,273	$0
10-5-142	6-09 State of Arizona	$10,421	$10,421	$0
	Total:	**$1,443,364**	**$1,113,318**	**$0**

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Audit Reports with Outstanding Management Decisions

This section identifies audit reports involving questioned costs, funds put to better use, and cost sharing at risk where management had not made a final decision on the corrective action necessary for report resolution with six months of the report's issue date. At the end of the reporting period there were twenty-six reports remaining that met this condition. The status of recommendations that involve internal NSF management is described on page 34.

Report Number	Subject	Questioned Costs	Unsupported Costs	Better Use of Funds	Cost Sharing At-Risk
05-1-005	RPSC Costs Claimed FY2000 to 2002	$33,425,115	$0	$0	$0
06-1-023	RPSC 2003/2004 Raytheon Polar Services	$22,112,521	$0	$0	$0
07-1-003	Triumph Tech, Inc.	$80,740	$1,192	$0	$0
07-1-015	Supplemental schedule to #06-1-023 RPSC	$560,376	$0	$0	$0
07-1-019	Abt Associates	$22,716	$0	$0	$0
09-1-010	Carnegie Institution of Washington	$25,718	$25,718	$0	$0
09-1-011	Wisconsin Ice Core Drilling Services	$2,475,308	$27,308	$0	$0
09-1-014	University of Michigan	$1,604,713	$1,418,889	$0	
09-4-088	12-07 AACC American Association of Community Colleges	$12,734	$0	$0	$0
09-5-048	8-07 College of the Mainland – TX	$110,629	$0	$0	$0
09-5-052	6-07 Howard University – DC	$1,125,491	$662,940	$0	$0
09-5-176	9-07 Fort Berthold Community College – ND	$75	$75	$0	$0
10-1-001	SUNY at Stony Brook Effort Reporting	$23,656	$0	$0	$0
10-1-003	University of Nevada-Reno Effort Reporting	$54,154	$0	$0	$0
10-1-008	University of Delaware Effort Reporting	$34,299	$0	$0	$0
10-4-004	12-08 Carnegie Institute – PA	$24,000	$0	$0	$0
10-4-012	8-08 WGBH Educational Foundation – MA	$791	$776	$0	$0
10-4-027	12-08 American Association of Community Colleges – DC	$41,400	$0	$0	$0
10-4-045	12-08 American Institute of Biological Sciences, Inc. – DC	$267,638	$267,638	$0	$0
10-4-094	6-09 Keck Graduate Institute of Applied Life Sciences – CA	$11,641	$0	$0	$0

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10-4-100	8-09 WGBH Education Foundation – MA	$1,881	$0	$0	$0
10-5-005	6-08 Northeastern University – MA	$6,125	$6,125	$0	$0
10-5-015	9-08 Oglala Lakota College – SD	$4,104	$4,104	$0	$0
10-5-016	6-08 State of Arizona	$71,858	$46,045	$0	$0
10-5-055	9-08 Fort Berthold Community College – ND	$1,356	$1,356	$0	$0
10-5-060	6-09 Cal State L.A. University Auxiliary Services, Inc. – CA	$56,093	$56,093	$0	$0
	Total:	$62,155,132	$2,518,259	$0	

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INVESTIGATIONS DATA
(April 1, 2010 – September 30, 2010)

Civil/Criminal Investigative Activities

Referrals to Prosecutors	4
Criminal Convictions/Pleas	0
Civil Settlements	4
Indictments/Information	0
Investigative Recoveries	$2,891,973.18

Administrative Investigative Activities

Referrals to NSF Management for Action	19
Research Misconduct Findings	5
Debarments	3
Administrative Actions	70
Certifications and Assurances Received[1]	28

Investigative Case Statistics

	Preliminary	Civil/Criminal	Administrative
Active at Beginning of Period	44	83	75
Opened	128	35	50
Closed	139	29	43
Active at End of Period	33	89	82

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. paragraph 552) and the Privacy Act (5 U.S.C. paragraph 552a). During this reporting period:

Requests Received	42
Requests Processed	39
Appeals Received	0

Response time ranged between 2 days and 20 days, with the median around 15 days and the average around 14 days.

[1] 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.

Appendix

Acronyms

AD	NSF Assistant Director
AIG	Associate Inspector General
ARRA	American Recovery and Reinvestment
CAREER	Faculty Early Career Development Program
CAS	Cost Accounting Standards
CBA	Collective Bargaining Agreement
CIGIE	Council of Inspectors General on Integrity and Efficiency
CISE	Computer and Information Science and Engineering Directorate
COI	Conflict of Interest
COV	Committee of Visitors
DACS	Division of Acquisition and Cost Support
DCAA	Defense Contract Audit Agency
DD	Deputy Director
DGA	Division of Grants and Agreements
DIAS	Division of Institution and Award Support
DoD	Department of Defense
DoE	Department of Energy
DoJ	Department of Justice
ECIE	Executive Council of Integrity and Efficiency
EPSCoR	Experimental Program to Stimulate Competitive Research
FFRDC	Federally Funded Research and Development Centers
FISMA	Federal Information Security Management Act
GAO	Government Accountability Office
GAS	Government Auditing Standards
GPRA	Government Performance and Results Act
HHS	Department of Health and Human Services
IG	Inspector General
MIRWG	Misconduct in Research Working Group
MREFC	Major Research Equipment and Facilities Construction
NIH	National Institute of Health
NSB	National Science Board
NSF	National Science Foundation
OEOP	Office of Equal Opportunity Programs
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPP	Office of Polar Programs
OPM	Office of Personnel Management
PCIE	President's Council on Integrity and Efficiency
PI	Principal Investigator
PFCRA	Program Fraud Civil Remedies Act
SBIR	Small Business Innovation Research
STC	Science and Technology Centers
USAP	United States Antarctic Program

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CHALLENGE: Ensuring Proper Stewardship of ARRA Funds

Overview: The American Recovery and Reinvestment Act (ARRA), was enacted by Congress to create and save jobs through investments for long-term economic growth. ARRA provided $3 billion for the National Science Foundation (NSF) in February 2009 and NSF staff worked expeditiously to obligate $2.5 billion for 4,599 research grants within a matter of months. NSF recipients have conscientiously performed their reporting responsibilities and their ARRA reporting rate has been nearly 100 percent in each quarter. However, as of September 2010, just $597 million of NSF's ARRA funds have been expended, the lowest spending rate (or "burn rate") among federal agencies. The low burn rate, combined with the difficulties of measuring the economic impact of basic research, has made NSF appear to some to be ill suited to its role as an ARRA funding agency.

Challenge for the Agency: The primary challenge for the agency going forward will be to monitor ARRA awards to assure that grantees carry out their reporting responsibilities and that the funds are not subject to fraud, waste or abuse. An OIG review found that $108 million in ARRA funds were awarded to institutions that warrant more oversight. NSF will be hard pressed to provide needed oversight and monitor grantee compliance with both existing and new reporting requirements.

NSF has estimated that the ARRA awards will ultimately provide support to 40,000 additional researchers. An OIG review published in June indicated that one significant problem area for those reporting about their ARRA grants is estimating the number of jobs created or saved. For NSF to participate in future stimulus initiatives, and for those efforts to have broad public support and confidence, accurate reporting of their impact on the economy and employment is critical.

$400 million of NSF's ARRA funds were appropriated for MREFC projects. The facilities selected for funding include the Advanced Technology Solar Telescope, the Alaska Region Research Vessel (AARV), and the Ocean Observatories Initiative. We have consistently identified the planning and management of large, complex infrastructure projects such as these as a management challenge for NSF and a significant area of risk.

Finally, the agency's allocation of $200 million of ARRA funds in support of the Academic Research Infrastructure (ARI) Program, a program NSF has not been involved with for some time, poses

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a challenge. This program presents the same types of risk to NSF as a newly established program and will require the sustained involvement and attention of program officers and administrative staff for months to come.

OIG's Assessment of the Agency's Progress: NSF has been effective thus far in monitoring recipient reporting and the spending of grantees. In particular, without the agency's efforts to enforce the termination of awards that have no expenditures after 12 months, it is possible that the spending rate might even be lower. NSF has also been responsive to OIG recommendations made in a June report to improve the reporting of jobs created and saved.

To ensure the accountability and integrity of ARRA funds, NSF has incorporated special weighting factors for ARRA awards into NSF's Risk Assessment Model. The agency has also indicated that it has taken a number of steps to strengthen the administration and management of both the MREFC projects and the ARI program. An OIG survey undertaken earlier this year to better understand NSF's oversight of the construction process of the ARRV disclosed no obvious problems.

CHALLENGE: Improving Grant Administration

Overview: NSF fulfills its mission to promote science chiefly by issuing limited-term grants. Currently NSF funds about 10,000 new awards each year for research proposals that have been evaluated by objective merit review panels.

The success of NSF's mission and the achievement of its goals are therefore largely dependent on effective grant administration. The American Recovery and Reinvestment Act increases the need for effective grant management as the Act requires NSF to manage an unprecedented influx of funds while meeting economic stimulus goals and responding to increased reporting requirements without additional funding for staffing. Further complicating the responsibility for grants administration is the requirement that grantees receiving ARRA funds closely monitor subrecipients' use and accounting of funds.

Challenge for the Agency: Ensuring effective oversight throughout the life cycle of an award continues to be an accountability challenge. Prior OIG audits of NSF's operations have indicated that NSF needs to continue to improve its grant management activities including the oversight of awardees' financial accountability, programmatic performance, and compliance with applicable federal and NSF requirements.

In FY 2010, NSF performed 20 percent fewer Award Monitoring and Business Assistance Program site visits than it had planned. NSF indicated that this decrease is due to staffing constraints. These site visits are important for NSF to assess awardees' capability, performance, and compliance with award requirements for awards rated as high-risk. It will be a challenge for NSF to increase the number of site visits in the future. If NSF's budget continues to grow, the resulting increase in award funds, along with the need to monitor ARRA awards without an increase in staff, compounds this challenge.

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NSF also needs to ensure that awardees are providing sufficient oversight of sub-recipients. Recent grant audits found that two NSF awardees, a university and a non-profit, had material internal control deficiencies in subrecipient monitoring. It is imperative that awardees that pass federal funds through to subrecipients monitor them to ensure that their financial systems are adequate to manage the federal money they receive. If such monitoring is insufficient, NSF risks paying unallowable or even fraudulent costs.

OIG's Assessment of the Agency's Progress: In its progress report on the 2010 management challenges, NSF reported that it had taken several actions to improve awardees' oversight of subrecipients, including conducting outreach, site visits, and conferences to assist the prime awardees. In addition, NSF indicated that it had established teams which helped ensure effective management practices over Recovery Act funds and developed procedures to address and monitor ARRA quarterly recipient reporting requirements. Finally, a joint NSF/OIG work group developed a new external audit resolution policy to improve stewardship over federal funds.

CHALLENGE: Strengthening Contract Administration

Overview: In FY 2009, NSF obligated approximately $480 million for contracts for the delivery of products and services, including $361 million for cost reimbursement contracts. Of that amount, NSF made advanced payments of $270 million to three contractors with the majority going to the current United States Antarctic Program (USAP) contractor. In such situations, pre-and post-award audits are critical to preventing improper payments.

The only significant deficiency noted in NSF's 2009 financial statements audit focused on the monitoring of cost reimbursement contracts.[15] The finding cites delays by the agency in obtaining audits of NSF's largest and riskiest contracts, and states that contract oversight procedures, including evaluation of contractors' accounting systems prior to awarding cost reimbursement type contracts, are inadequate and ineffective. In addition, a September 2009 report issued by GAO concerning inadequate surveillance over cost reimbursement type contracts focused on problems at NSF as well as several other agencies.

These findings coincide with the ongoing recompetition of NSF's largest contract to provide logistical support to the USAP for 13.5 years. NSF has twice delayed its award of the contract and incurred additional expenses by extending the current one.

Challenge for the Agency: The long-term challenge for NSF is to continue to strengthen its management of contract administration. To accomplish that goal, auditors made 10 recommendations that include improvements to ensure that costs paid on contracts are reasonable and accurate, and that audits of the riskiest contracts, including the current USAP contract, are obtained as soon as possible. More immediate is the delicate challenge of bringing the recompetition

[15] Such contracts provide the reimbursement of allowable costs and a profit and therefore shift some of the risk of contract performance to the government.

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of the USAP contract to a successful conclusion. NSF must ensure that the process results in the selection of a contractor that can effectively support the needs of the science community while providing value to the government. The process should assure that: all offerors receive the same information and opportunities, their proposals are carefully analyzed and compared, and critical information is verified by auditors. The closeout of the existing USAP contract will also pose a challenge, as NSF must finally resolve any deferred past audit findings, as well as obtain audits of incurred costs for later contract years.

On a broader level, the administration is calling on agencies to reform their contracting organizations and practices to save money and increase efficiency. The President has set a goal of saving $40 billion in contracting annually by FY 2011 and the President's Management Council (PMC) has asked federal agencies to reduce their use of high-risk contracts, particularly those that feature cost reimbursement provisions. The PMC is also pressing agencies to shore up the capacity and capability of the acquisition workforce, an area of NSF that needs more attention. The challenges presented by the USAP contract transition, the need to correct NSF's existing contact administration deficiencies, and meeting the heightened expectations of the administration in this area, are significant.

OIG's Assessment of Agency Progress: NSF has taken steps toward improving contract administration but has more work to do. A corrective action plan was prepared in response to the findings reported from the financial audit, and the auditors are currently evaluating the status of those actions. Meanwhile, a timely award of the new USAP contract is a priority of management, but the integrity of the process cannot be compromised. NSF has developed a plan to take the acquisition to award and has informed us that senior NSF managers are meeting regularly to assess the procurement's progress.

In preparation for closing out the current USAP contract, NSF and the Defense Contract Audit Agency (DCAA) signed an Interagency Agreement in late September for DCAA to conduct incurred cost audits of the USAP contract for 2005 through 2007. Over the past year, NSF has also completed a workload analysis of the acquisitions division and hired three additional staff as a result. It has also increased training offerings, primarily for Contract Officer's Technical Representatives. But current acquisition staffing may still not be adequate to perform necessary contract monitoring activities.

CHALLENGE: Becoming a Model Agency for Human Capital Management

Overview: World-class executive leadership and effective human capital management are vital to NSF's success as a high performing organization and to its goal of becoming a model agency for human capital management. In addition to its non-scientific and support staff, NSF's workforce includes more than 700 scientists and engineers, about half of whom are permanent government employees. To lead and maintain a world-class scientific workforce, NSF supplements its permanent, career employees with a variety of non-permanent staff. While these non-permanent personnel strengthen NSF's ties with the

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research community and provide the agency with executive leadership, talent and resources that are critical to accomplishing its mission, because most of them are new to the government, they are often unaccustomed to working in a federal environment.

Challenge for the Agency: Becoming a model agency for human capital management will require sustained management attention and commitment by the NSF Director and throughout the management structure at NSF. One of the most significant and long-standing challenges NSF faces is maintaining a rotating director model that capitalizes on rotators' scientific and technical expertise, while ensuring that they have the managerial knowledge and skills to ensure effective personnel management. Since rotating executives do not receive performance ratings, they are not held accountable as career executives are. Further, rotators generally do not have prior working knowledge of the federal government culture or of federal government management processes. NSF faces an ongoing challenge to provide adequate leadership and management training for its rotating executives and to address the challenges presented to its mission by frequent turnover in leadership positions. Recent staff changes in key human capital management positions may also present challenges to NSF's efforts to address its workforce issues, as does the fact that the agency does not have a full time Chief Human Capital Officer.

OIG's Assessment of Agency's Progress: NSF has taken several steps to address its workforce challenges. For example, it established a Human Resources Policies Working Group which has produced a number of workforce recommendations including ones directed at the role of rotators. In August, NSF received the results of OPM's review of its human capital management system which raised a number of significant concerns. In its response to OPM's recent human capital management evaluation, the Acting Director stated that she is committed to holding all managers and human resource officers accountable for meeting their human capital management responsibilities.

The agency has reported that it has also initiated planning to institute a performance management process for rotators serving at NSF under the Intergovernmental Personnel Act (IPAs) that will set clear performance expectations and ensure that IPAs are evaluated on a regular basis. Further, NSF has started the rollout of its New Executive Training Program to train new managers and to orient them to federal processes. NSF has also offered management training in a number of areas, including addressing performance problems, leadership skills, and managerial responsibilities which are targeted at the executives. NSF has stated that it intends to continue developing its training program, including adding a management development seminar for all new executives.

CHALLENGE: Encouraging Ethical Conduct of Research

Overview: Reports of scientists committing research misconduct violations or otherwise engaging in questionable research practices are on the rise due partly to the temptations presented by ever increasing amounts of information available on the internet combined with the development of more powerful search tools. The situation is further exacerbated by the growing number of

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research collaborations between American researchers and scientists and students from different nations: in such cases individual researchers are often unclear as to which country's set of rules applies, as there are differences between the various science communities concerning research ethics and the reporting and compliance regime to which they are subject. International organizations such as the OECD's Global Science Forum (GSF) have taken steps to bridge the differences on these issues and develop one framework that will apply in the area of research misconduct. According to studies, encouraging ethical conduct of research through expanded training offerings has the potential to make a significant difference in reducing the occurrence of questionable professional practices and research misconduct.

Challenge for the Agency: NSF's challenge is to strengthen the understanding of and adherence to recognized standards of ethical research conduct by scientists in the U.S. and the foreign partners who participate in the international collaborations it funds. It can address this challenge in part by complying with the America Competes Act, which requires NSF to ensure that each institution that applies for financial assistance describes its plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.

Like other science funding agencies, NSF is also grappling with the question of deciding how to implement a single framework for the investigation and resolution of research misconduct allegations made against a participant in a multinational collaboration. In April 2009, the Global Science Forum issued a report, *Research Integrity: Preventing Misconduct and Dealing with Allegations,* that provides a basis for research integrity frameworks in projects involving international partners. NSF must determine how to support this effort and to implement its recommendations.

OIG's Assessment of Agency's Progress: During the past year, NSF expanded its *Proposal & Award Policies and Procedures Guide* to provide guidance addressing research integrity in international collaborations. It also included a link to the April 2009 GSF report. NSF also helped to support an *International Responsible Conduct of Research Education Workshop* held in conjunction with the 2nd World Conference on Research Integrity in July 2010. Finally, it made several awards focused on improving ethics education. As next steps, NSF has made broad promises to continue to develop material and best practices, and enhance training and outreach activities related to accountability in the international context.

CHALLENGE: Effectively Managing Large Facilities and Instruments

Overview: NSF's Major Research Equipment and Facilities Construction received $400 million in Recovery Act funds to upgrade enhance research capabilities. Within this program, NSF funded the construction of three major facilities: the Alaska Region Research Vessel, Ocean Observatories Initiative, and the Advanced Technology Solar Telescope.

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Challenge for the Agency: Management of its large facilities presents several challenges for NSF. One challenge for the agency is project oversight and management to ensure that projects are on time, on budget, and meeting performance expectations. We have previously noted NSF's challenge in assessing the performance of awardees. The influx of Recovery Act funds and the accompanying additional transparency and reporting requirements compound this challenge.

OIG's Assessment of the Agency's Progress: NSF reported that it is continuing efforts to provide effective oversight of large facilities and that it has taken several actions, including providing monthly facilities status reports to the Budget, Finance, and Award Management Office and providing feedback to directorates on annual facility performance goals and metrics. NSF also stated that that it plans additional actions including reporting on visits to facility sites to provide feedback on project management/oversight issues.

An audit completed in the past six months identified a significant concern with NSF's funding of contingencies in a cooperative agreement for one of its large facilities. Specifically, the audit questioned $88 million, including more than $34 million in Recovery Act funding allocated for contingency costs in NSF's cooperative agreement with the Consortium for Ocean Leadership (COL). COL will manage the construction of the Ocean Observatories Initiative. Further, the audit disclosed that during the construction of the observatories, COL can draw down contingency funds as advances without NSF approval.

We also identified two emerging challenges that warrant NSF's close attention—implementation of the Open Government Directive and planning for NSF's next headquarters.

Implementing the Open Government Directive

The Open Government Directive was issued in December 2009 in response to the President's call to establish a system of transparency, public participation, and collaboration with the federal government. The directive requires agencies to: publish government information online; improve the quality of information; create and institutionalize a culture of open government; and create an enabling policy framework for open government. NSF has pledged in its Open Government Directive Plan that its key principle will be that "*unless shown otherwise, the default position shall be to make NSF data and information available in an open machine-readable format".*

Since much of NSF's research is not easily comprehensible to those outside the science community, it has been an ongoing challenge for the agency to describe its activities and their value to the public. The Directive presents NSF with an opportunity to reflect on how it communicates the work it funds and how it can improve the quality of the wide range of information that it disseminates. In particular, to foster greater transparency and accountability, NSF should review its financial and performance reports from the perspective of the public and ensure that they answer the basic questions that an interested stakeholder might ask.

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In the case of publishing research results, the agency has had to carefully navigate sensitive issues related to confidentiality and privacy. The primary challenge for NSF will be to reconcile the interests and prerogatives of the researchers and research publications with the right of the public to have access to taxpayer funded information. NSF is attempting to balance those two priorities through two new services available at Research.gov, which will provide long sought after details about research grants, including abstracts and publication citations. As agencies are expected to perform a number of recurring actions aimed at informing and engaging the public, NSF will also be challenged to ensure that it has adequate staffing to maintain its commitment to the Open Government Directive.

NSF's Open Government Directive Plan has a number of initiatives aimed at increasing the *quantity* of information available to the public, but little is written about improving the *quality* of information. We hope that as the plan evolves, NSF will give more attention to this issue. NSF has also enlisted a number of social media and other channels to increase public participation in and knowledge about its activities, which may help the agency to become more attuned to the needs of its users and the public.

Planning for the Next NSF Headquarters

NSF's leases for headquarter facilities in Arlington, Virginia expire in December 2013. In preparation for a new long-term lease, NSF developed criteria and goals through surveys and focus groups with NSF leadership and staff. In April 2010, NSF submitted a lease prospectus to the Office of Management and Budget (OMB) identifying future size and space requirements, expected number of staff, location, and rental rate information. After approval by OMB, GSA will send the prospectus to Congress. The competitive procurement for a new NSF lease could begin as early as the first quarter of FY 2011.

NSF has been in its current location since 1993 and planning for headquarters facilities that meet NSF's future needs presents a major challenge for the agency. Within the tight budget environment in which we are operating, NSF is seeking to design a space that incorporates technological advances, reflects sustainable and energy efficient design, and meets the need for flexible and collaborative meeting workspace since many panels and conference meet at NSF headquarters. The OIG plans to pay close attention to the lease procurement project because of the complexity and cost involved, as well as its implications for the next-generation NSF.

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About the Cover...

Original photo by OIG auditor, Laura Koren, taken at Spruce Knob, the summit of Spruce Mountain, the highest point in West Virginia (Elevation 4,863).

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