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INSE

Chapter 3

Appendices

Summary of FY 2013 Financial Statement Audit and Management Assurances

Table 1. Summary of Financial Statement Audit

Audit Opinion	<i>Unqualified (Unmodified)</i>				
Restatement	<i>No</i>				
Material Weakness	Beginning Balance	New	Resolved	Consolidated	Ending Balance
Total Material Weaknesses	0	-	-	-	0

Table 2. Summary of Management Assurances

Effectiveness of Internal Control over Financial Reporting (FMFIA § 2)					
Statement of Assurance	<i>Unqualified</i>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Material Weaknesses</i>	0	-	-	-	0
Effectiveness of Internal Control over Operations (FMFIA § 2)					
Statement of Assurance	<i>Unqualified</i>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Material Weaknesses</i>	0	-	-	-	0
Conformance with Financial Management System Requirements (FMFIA § 4)					
Statement of Assurance	<i>Systems conform to financial management system requirements</i>				
	Beginning Balance	New	Resolved	Consolidated	Ending Balance
<i>Total Non-Conformances</i>	0	-	-	-	0
Compliance with Federal Financial Management Improvement Act (FFMIA)					
	Agency			Auditor	
1. System Requirements	<i>No noncompliance noted</i>				
2. Accounting Standards	<i>No noncompliance noted</i>				
3. U.S. Standard General Ledger at Transaction level	<i>No noncompliance noted</i>				

National Science Foundation
FY 2013 Improper Payments Elimination and Recovery Act (IPERA)
Reporting Details

NSF is providing the following information about the first stage of a new two-year effort to update NSF's implementation of IPERA. For additional information about NSF IPERA reporting see Management's Discussion and Analysis, page I-23.

I. Risk Assessment. Briefly describe the risk assessment(s) performed (including the risk factors examined, if appropriate) subsequent to completing a full program inventory. List the risk susceptible programs (i.e., programs that have a significant risk of improper payments based on OMB guidance thresholds) identified by the agency risk assessments. Include any programs previously identified in the former Section 57 of OMB Circular No. A-II. Highlight any changes to the risk assessment methodology or results that occurred since the last report.

NSF revised its risk assessment methodology in conjunction with OMB coordination. The revised risk assessment methodology better aligns with the single NSF program, Research and Education Grants and Cooperative Agreements, identified in the former Section 57 of OMB Circular No. A-11.

The risk assessment, testing, and reporting of results is a two-year effort. The risk assessment results will feed into the risk-based testing of FY 2013 data. These testing results will be reported in the FY 2014 *NSF Agency Financial Report* (AFR). The risk-based testing is a four quadrant internal and external assessment approach for both the agency and grant recipients. The NSF risk assessment will leverage the OMB Circular A-123 internal control reviews and focus on the agency's contract invoice payment process. The assessment of the external recipients of grants will focus on cash requests and vendor payment processes and will use an assessment questionnaire.

The risk assessment factors include dollar amount and count pertaining to payments. The dollar amount criteria consider drawdowns, expenses, and cash-on-hand. The count criteria consider number of drawdowns annually and number of grants per recipient. The risk assessment also considers payment types— grants, cooperative agreements, and contracts— in determining risk.

II. Statistical Sampling. Any agency that has programs or activities that are susceptible to significant improper payments shall briefly describe the statistical sampling process conducted to estimate the improper payment rate for each program identified with a significant risk of improper payments. Please highlight any changes to the statistical sampling process that have occurred since the last report.

Not applicable. NSF is in the first phase of IPERA reporting related to the Risk Assessment above.

III. Corrective Actions: Describe the corrective action plans for:

- a. **Reducing the estimated improper payment rate and amount for each type of root cause identified. Agencies shall report root cause information (including error rate and error amount) based on the following three categories: Administrative and Documentation errors; Authentication and Medical Necessity errors; and Verification errors.**
- b. **What the agency has accomplished in the area of funds stewardship past the primary recipient. Discussion shall include the status of projects and results of any reviews.**

Not applicable.

IV. Improper Payment Reduction Outlook

Not applicable.

V. Recapture of Improper Payments Reporting: Discuss payment recapture audit (or recovery auditing) efforts, if applicable. Describe the payment recapture audit program; the actions and methods used to recoup overpayments; a justification of any overpayments that have been determined not to be collectable; and any conditions giving rise to improper payments and how those conditions are being resolved (e.g., the business process changes and internal controls instituted and/or strengthened to prevent further occurrences).

Not applicable.

VI. Accountability: Describe the steps the agency has taken and plans to take (including time line) to ensure that agency managers (including the agency head) are held accountable for reducing and recovering improper payments.

Not applicable.

VII. Agency Information Systems and Other Infrastructure

- a. **Describe whether the agency has the information systems and other infrastructure it needs to reduce improper payments to the levels the agency has targeted.**

Not applicable.

- b. **If the agency does not have such internal controls, human capital, and information systems and other infrastructure, describe the resources the agency requested in its most recent budget submission to Congress to establish and maintain the necessary internal controls, human capital, and information systems and other infrastructure.**

Not applicable.

Appendix 2: Improper Payments Elimination and Recovery Act Reporting

VIII. Barriers: Describe any statutory or regulatory barriers, which may limit the agency's corrective actions in reducing improper payments and actions taken by the agency to mitigate the barriers' effects.

Not applicable.

IX. Additional Comments: Discuss any additional comments, if any, on overall agency efforts, specific programs, best practices, or common challenges identified, as a result of IPERA implementation.

Not applicable.



National Science Foundation • 4201 Wilson Boulevard • Arlington, Virginia 22230
Office of the Inspector General

November 5, 2013

MEMORANDUM

To: Dr. Dan E. Arvizu
Chair, National Science Board

Dr. Cora Marrett
Acting Director, National Science Foundation

From: Allison Lerner *Allison Lerner*
Inspector General, National Science Foundation

Subject: Management Challenges for NSF in FY 2014

In accordance with the Reports Consolidation Act of 2000, I am submitting our annual statement summarizing what the Office of Inspector General considers to be the most serious management and performance challenges facing the National Science Foundation (NSF). We have compiled this list based on our audit and investigative work, general knowledge of the agency's operations and evaluative reports of others, including the Government Accountability Office and NSF's various advisory committees, contractors, and staff.

We have focused on eight issue areas that reflect fundamental program risk and are likely to require management's attention for years to come. They are:

- Establishing Accountability over Large Cooperative Agreements
- Improving Grant Administration
- Strengthening Contract Administration
- Managing the U.S. Antarctic Program
- Moving NSF Headquarters to a New Building
- Managing Programs and Resources in Times of Budget Austerity
- Ensuring Proper Stewardship of ARRA funds
- Encouraging Ethical Conduct of Research

We have also identified implementation of NSF's new financial management system, iTRAK, as an emerging management challenge.

If you have any questions, or need additional information, please call me at 703-292-7100.

CHALLENGE: Establishing Accountability over Large Cooperative Agreements

Overview: A federal agency can use a cooperative agreement (CA) when entering into a relationship with a recipient when the primary purpose is to transfer a thing of value to carry out a public purpose of support or stimulation, and substantial involvement between the federal agency and the recipient when carrying out the agreement is expected.¹ A CA is not subject to the same rigor and reporting mechanisms as a contract, and does not have the same level of transparency over transactions as a contract.

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

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

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

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

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

¹ 31 United States Code §3605

proposal and accounting system audits prior to awarding new high-dollar, high-risk cooperative agreements.

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

Another ongoing challenge for NSF is the management and oversight of contingency costs in proposed budgets for its large construction projects. Contingency comprises a significant portion (up to 30%) of the budget of most large construction CAs. In total, recent audits have identified more than \$223 million in unallowable contingency costs out of total proposed costs of over \$1.1 billion. More than any other category of the budget, contingency funds are prone to being improperly used as discretionary reserve funds, if not properly overseen. Because NSF's awardees are not required to separately track the expenditure of contingency funds, these funds are vulnerable to unauthorized use without detection. The challenge for NSF is to correct this management control weakness by placing the requirement to track contingency expenditures in all applicable awards.

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

CHALLENGE: Improving Grant Administration

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

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

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

Recent proposed changes by OMB could further challenge NSF's ability to exercise adequate grants management. Single Audits are an important oversight tool in part because they identify internal control weaknesses that warrant additional scrutiny. If enacted, the proposed increase from \$500,000 to \$750,000 in the threshold to trigger a Single Audit means that NSF will have to do more to ensure appropriate oversight of awards from \$500,000 to \$750,000 as they will no longer be subject to Single Audits. In addition, proposed changes to the labor effort reporting requirements could make it more difficult to determine the allowability of salaries and related costs. Collectively, these and other changes could contribute to an increased workload for NSF's Division of Grants and Agreements staff.

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

CHALLENGE: Strengthening Contract Administration

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

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

In addition, there are significant issues outstanding with NSF's prior USAP contract issued in 1999 that have yet to be resolved. Annual incurred cost audits of the prior USAP contract are currently in process; however, the annual revenues from the USAP stores have not been credited in the incurred costs

submitted by the contractor. NSF's full recovery of questioned costs sustained and uncredited revenues will depend on the completion of the audits that are currently ongoing. Final settlement of all contract claims may be some years in the future.

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

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

Finally, NSF management should continue to implement its remaining planned corrective actions to ensure that it maintains adequate control over cost reimbursement contracts. The agency is still obtaining audits of its largest contracts, including millions of dollars in costs incurred from 2009 – 2012 by the former USAP contractor. These final audits will determine the resolution of at least \$10.4 million in unallowable sustained costs that previous audits have found that the contractor owes NSF, and should determine whether or not USAP revenues totaling \$24 million were properly credited against contract costs.

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

As a result of the GAO report on NSF contracting, the agency is also working to develop new guidance for increasing lead times for acquisition, but the agency's draft response doesn't indicate how long it will need to prepare or implement the guidance. In response to GAO's second recommendation to fund audits of major contracts, NSF has placed the responsibility on the individual Program Offices to determine if an

audit is needed and to provide the funding. However we are concerned that Program Offices may not take the initiative to request an audit, particularly if they must fund it.

CHALLENGE: Management of the U.S. Antarctic Program

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

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

The extreme Antarctic environment and the short period of time during which access to the continent is possible, strain the effort to provide logistical support for the USAP. Logistical support activities include communications, health and safety programs, and vehicle and equipment maintenance. In July 2012, a Blue Ribbon Panel, commissioned by the Office of Science and Technology Policy and NSF, issued its report on infrastructure and logistical challenges in the Antarctic.

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

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

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

of the award fee based on a panel recommendation. Absent input from an external, independent entity, it may be a challenge for NSF to objectively evaluate the contractor's performance.

Another challenge for NSF is to control the cost of the USAP and to ensure adequate oversight of payments to the USAP contractor. Our audit of the medical screening process for travelers to Antarctica found that NSF's medical review panel has made recommendations that could reduce the cost of this process, but NSF has not implemented these recommendations. For example, for the last five years the panel recommended that NSF base required medical tests on factors such as how long an individual will be in Antarctica, and what their duty station and job responsibilities will be. Revising the number of medical tests performed to reflect these criteria could lower costs of the screening process, which currently totals approximately \$860 per person.

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

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

CHALLENGE: Moving NSF Headquarters to a New Building

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

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

The primary challenge for NSF will be planning and managing the details of its space requirements and relocation. The Alexandria building has to meet the requirements set out in the lease agreement; but that agreement does not specify detailed design specifications that may be needed by individual directorates. Thus, NSF, GSA, and the building owner must negotiate a number of design issues that are not included

in the original space requirements. The agency will need to make timely and prudent decisions to ensure the building meets its objectives with minimal delay and cost. If NSF's requested changes will cost more money, the agency will have to determine whether to use part of the move allowance, make a trade off, or forego the change. Unused portions of the allowance may be applied to the rent to save the government money.

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

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

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

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

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

CHALLENGE: Managing Programs and Resources in Times of Budget Austerity

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

Recently OIG has initiated several reviews to identify possible cost savings. For example, OIG is currently performing an audit of purchase cards and has found that NSF's controls over the purchase card

program needed to be strengthened to uncover and, if possible, prevent inappropriate purchases. During our audit, NSF issued a revised purchase card policy and improved training for cardholders. The Government Charge Card Abuse Prevention Act of 2012 requires all federal agencies to implement internal controls to prevent waste, fraud, and abuse of purchase cards, travel cards, and centrally billed accounts. In FY 2012, NSF incurred expenditures of approximately \$5.5 million for its purchase cards, \$1.0 million for its individually billed travel cards, and \$13.7 million for its centrally billed travel card account.

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

Challenge for the Agency: There are many opportunities to conserve money within a \$7 billion dollar organization like NSF without compromising the accomplishment of the agency's core mission. The agency is therefore challenged to identify opportunities to streamline processes and cut costs where it can, in order to send a clear message to its employees and stakeholders that strong, sound management practices are being applied; reasonable ideas to reduce spending are welcome and will be implemented; and at a time of hardship for so many Americans, the public's continued financial support for science is not taken for granted.

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

CHALLENGE: Ensuring Proper Stewardship of ARRA funds

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

At the time, NSF had about 700 awards expiring in FY 2013 that could be extended past September 30, 2013, using no-cost extensions. In response to OMB's directive, NSF amended those awards to remove

awardees' ability to unilaterally grant no-cost extensions past the new deadline. NSF subsequently obtained waivers from OMB from the deadline for 512 other awards. As of October 21, 2013, the remaining active awards with OMB waiver requests have collectively expended 74.1% of their ARRA funding. There are also 1,886 awards without OMB waiver requests that are still active that have thus far expended 97.3% of their ARRA funding.

Challenge for the Agency: At each stage of the award administration process, the additional ARRA funds that NSF received in 2009 have posed significant challenges for NSF's business model. Even as most ARRA awards wind down, post-award administration challenges remain. They include: 1) ensuring awardees' timely, complete, and accurate reporting on Federal Reporting.gov and; 2) monitoring the awards, especially those made to high-risk institutions, to ensure the funds are not subject to fraud, waste, and abuse. Assessing the accuracy of recipients' reporting has been a particular challenge, as it requires independent reviews or audits of additional corroborating data from ARRA awardees.

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

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

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

Challenge: Encouraging the Ethical Conduct of Research

Overview: Congress passed the America COMPETES Act in 2007 to increase innovation through research and development, and to improve the competitiveness of the United States in the world economy. Amid indications of a decline in the ethics of those new to research, one important aspect of the law was to promulgate new proposal requirements that advance the professional and ethical development of young scientists, such as mentoring plans for all postdoctoral positions, and plans to provide training on the responsible conduct of research to undergraduates, graduate students, and

postdoctoral researchers. However, information collected from our site visits and investigations suggests that many institutions are not implementing these requirements effectively, thereby undermining the public's confidence in the research enterprise and potentially placing NSF funds at risk. At a time when opinion surveys indicate that more Americans are becoming distrustful of scientific findings, it is important that the conduct of research not be tainted by instances of misrepresentation or cheating.

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

The NSF Act² places responsibility on NSF to “strengthen scientific [and engineering] research potential at all levels in ... various fields”. NSF's research and related training programs reach individuals at all levels of academic pursuit who are ultimately employed by academia, industry, and government, and could have a broad and positive impact on the US science, engineering and education workforce. Based on our focused proactive reviews, we believe that over 2,000 of the 45,000 proposals NSF annually receives are at risk for containing plagiarism and/or falsified data. While NSF has been responsive to the recommendations contained in our research misconduct investigation reports, those actions only address incidents that occur after the fact. Since NSF funds research in virtually every non-medical research discipline, the agency is in a unique position to lead the government response addressing these disturbing trends at all levels of education.

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

² 42 USC Chapter 16 § 1862.

Emerging Challenge: Implementing a New Financial Management System

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

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

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



OFFICE OF THE
DIRECTOR

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VA 22230

November 22, 2013

MEMORANDUM

TO: Allison Lerner
Inspector General, NSF

FROM: Acting Director, NSF

SUBJECT: Acknowledgement of the Inspector General's FY 2014 Management Challenges Memorandum and Transmittal of NSF's Progress Report on the FY 2013 Management Challenges

This serves to acknowledge receipt of your memorandum dated November 5, 2013, regarding continuing and potential emerging management challenges for NSF in FY 2014. These challenges include ongoing responsibilities such as establishing accountability over large cooperative agreements, improving grant administration, strengthening contract administration, managing the U.S. Antarctic Program, moving NSF headquarters to a new building, managing programs and resources in times of budget austerity, ensuring proper stewardship of Recovery Act funds, and encouraging the ethical conduct of research. In addition, you have noted implementation of NSF's new financial management system, iTRAK, as an emerging management challenge. As in past years, your memorandum will be shared and discussed with the Foundation's executive and senior officers to ensure continuing and collaborative, cross-agency attention to addressing these issues.

In addition, NSF's progress report that highlights the significant actions taken in FY 2013 on the management challenges outlined in your October 15, 2013, memorandum is attached. The report also provides anticipated next steps, which will serve as a prospective guide for many of the actions planned for FY 2014.

As always, the Foundation remains committed to serving the research community effectively, to continually improve stewardship across the agency, and to safeguard federal funds awarded by NSF in support of the mission. We look forward to continuing to work with your office to achieve these goals.

A handwritten signature in blue ink that reads 'Cora B. Marrett'.

Cora B. Marrett

Attachment

cc: Chair, National Science Board
Chair, National Science Board Audit and Oversight Committee

National Science Foundation (NSF) FY 2013 Progress Report on OIG Management Challenges

CHALLENGE: Establishing Accountability over Large Cooperative Agreements

NSF Overview: This OIG challenge relates to NSF’s use of cooperative agreements to construct and fund the operations and maintenance of large research facilities. The Foundation currently utilizes end-to-end cost surveillance policies and procedures for its cooperative agreements to ensure adequate stewardship over federal funds. These activities are carried out via the decisional and governing responsibilities of the Office of the Director and the National Science Board, respectively, and through the management and oversight responsibilities of the sponsoring Science and Engineering Directorates and Offices and the NSF Chief Financial Officer (CFO), Office of Budget, Finance and Award Management (BFA). Additionally, the Major Research Equipment and Facility Construction (MREFC) Panel, comprised of NSF Senior Management representatives from across the agency, provides governance of the overall MREFC process, reviews specific cases as presented by the originating program office, and defines the specific implementation processes utilized by NSF to oversee, assess, prioritize, and fund major research infrastructure projects that utilize the MREFC account. Within BFA, the CFO relies on the Large Facilities Office (LFO) to develop policy related to large facilities, to advise NSF management on large facility issues, and to coordinate with and advise program offices on large facility management and oversight. Other BFA units, including the Budget Division (BD) and the Acquisition and Cooperative Support Division’s Cooperative Support Branch (DACS/CSB), are engaged in budget and award development and monitoring related to large facilities. NSF is currently planning and implementing enhancements to its pre-award and post-award budget and cost review processes for large research facility cooperative agreements to include additional analysis of awardee proposal budget information and the utilization of incurred cost audits, to the extent appropriate, to strengthen the review of billed costs. These strengthened procedures will include a mandatory requirement for independent assessment of potential awardee’s proposed cost estimates that will be performed separately from internal reviews conducted by the cognizant NSF project office or the current independent panel review process coordinated through the cognizant project office.

a. Ensure proper accountability for large cooperative agreements by strengthening pre- and post-award monitoring and cost surveillance policies and procedures.

NSF’s Significant Actions Taken in FY 2013

- Issued a report to the NSF Director assessing agency processes, policies, and mechanisms for supporting large research facilities from conception through construction and operation to sun-setting. A working group under the MREFC Panel endorsed five of the six report recommendations.
- Completed a review of NSF large facilities policy to: (i) determine consistency with federal and NSF-wide assistance policy, (ii) evaluate consistency between current practice and stated policies, (iii) identify subject matter presently unaddressed or requiring additional policy guidance, and (iv) consider if the NSF large facilities policy needs to be further developed or clarified.
- Initiated actions under Corrective Action Plans (CAPs) for two outstanding OIG reports: NSF OIG Alert Memo (Report No. 12-6-001) on *NSF’s Management of Cooperative Agreements*, and *Audit of NSF’s Management of Contingency in the EarthScope Awards* (Report No. 12-2-010).

NSF’s Anticipated Next Steps

- Convene additional working groups to be charged with developing agency policy to facilitate implementation of the report recommendations endorsed by the MREFC Panel.
- Utilize the results of the large facilities policy review for consideration in updating the agency’s large facilities policy and subsequent revisions to the Proposal and Award Manual (PAM).
- Accomplish corrective actions outlined in the CAPs with the goal of completing these tasks in FY 2014.

b. Improve oversight and

NSF’s Significant Actions Taken in FY 2013

<p><i>management for contingency in large construction projects.</i></p>	<ul style="list-style-type: none"> • Ensured that awardees of large construction projects were managing their risks and properly accounting for contingency by reviewing the project’s risk management process, monitoring the allocation of contingency to mitigate risk, and addressing resolution tasks in the project’s monthly report. • Assessed compliance performance of large facility awardees by conducting Business System Reviews (BSRs) and related post-BSR monitoring activities. • Initiated work under the CAP for improving traceability of budgeted funds allocated from and returned to contingency. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue review by LFO and program offices of contingency allocation and accounting through monthly reports and yearly progress reviews. • Provide training by LFO to facility program officers on risk management and the appropriate allocation and accounting of contingency for MREFC projects. • Continue BSR activities. • Accomplish action outlined in agency CAP to improve traceability of budgeted funds allocated from and returned to contingency. • Support NSF’s annual update of the PAM to address NSF-sponsored large facilities construction and operation and to ensure the PAM aligns correctly with OMB’s new guidance on <i>Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles and Administrative Requirements</i> expected to be published in Quarter 1 FY 2014.
<p>CHALLENGE: Improving Grant Administration</p> <p>NSF Overview: In the last quarter of FY 2013, NSF was managing 43,354 active awards, representing \$29.0 billion in obligated funds to 3,100 unique institutions. Management and oversight of this portfolio fully engages NSF research and administrative offices and spans the entire project life-cycle from program planning, proposal review, award decision and processing, post-award monitoring, and dissemination of results to close-out. In FY 2013, NSF completed its transition to a new awardee payment process, Award Cash Management Service (ACM\$), which has enabled NSF to obtain award-specific data based on real-time cash transactions, and thus has increased the agency’s focus on transparency and accountability in the stewardship of Federal funds. Throughout FY 2013, NSF continued to align its policies and business practices with changes in federal regulations, legislative mandates, and agency-specific requirements. In addition to its own standardization and streamlining efforts, NSF has made major contributions to efforts of the Office of Management and Budget (OMB) Council on Financial Assistance Reform (COFAR) in its development of uniform guidance on cost principles for federal research awards. Anticipating continued resource constraints, NSF’s administrative divisions have begun a comprehensive assessment of resource deployment in support of its core processes by applying risk assessment to prioritize operations, eliminating unnecessary duplication of functions, and strengthening the professional development of staff. This activity complements NSF’s continued efforts to upgrade and leverage technology to address growing demands for accountability and the resulting increase in workload.</p>	
<p><i>a. Improve oversight and monitoring by minimizing delays in resolving open audit recommendations.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Reduced the number of days needed to resolve and close OMB Circular A-133 audits from an average of 128 days to just 73 days for the 240 resolved audits, representing a decrease of 43 percent in the time taken for resolution and close-out. • Developed, jointly with the OIG, audit templates to strengthen documentation requirements for questioned costs. The underlying motivation for this effort under the NSF-OIG Stewardship Collaborative was to bring clarity to reasons underlying the audit findings in order to expedite the NSF audit resolution process by specifically addressing the condition, criteria, cause, and effect.

	<p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Streamline NSF audit resolution functions without compromising quality and maintaining timeliness given increases in workload and anticipated resource constraints. • Collaborate with the OIG to integrate data analytics into audit and audit resolution processes in order to gain experience with its application in actual audit resolutions and to identify any need for potential process changes. • Continue staff training to ensure understanding and further standardize implementation of audit resolution procedures.
<p><i>b. Strengthen oversight through more aggressive follow up to AMBAP desk reviews to assess awardees’ business systems, policies and procedures, and adequacy of corrective actions for redressing deficiencies.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Focused on eliminating the backlog of open follow-up actions to Award Monitoring and Business Assistance Program (AMBAP) desk reviews and completed follow-up of 99% of all open activities for desk reviews conducted prior to FY 2012. Follow-up activities assure NSF that awardees understand the concerns related to business systems, policies, and procedures, which were identified during desk reviews, and that they are taking necessary actions to address these concerns. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Prioritize and streamline cost analysis, advanced monitoring, and audit resolution functions without compromising NSF’s capacity for aggressive follow-up on AMBAP desk reviews given anticipated resource constraints.
<p><i>c. Maintain strong program of award oversight in the face of budgetary constraints that could compromise the conduct of NSF’s advanced monitoring under AMBAP.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Completed the annual risk assessment used to prioritize AMBAP Site Visits (SVs) for FY 2013 and assessed risk levels to determine suitability of institutions for Virtual Site Visits (VSVs). • Performed 30 AMBAP SVs (23 on-site and 7 virtual)—expanding the number of VSVs in FY 2013 mitigated challenges associated with availability of travel funds and staff workload. • Conducted a comparative review of the quality of business assistance provided during a VSV versus a traditional AMBAP SV. No differences were discerned with respect to awardee participation, coverage of core modules, review/collection of artifacts, and level of analysis. Benefits accruing to VSVs include: direct access of VSV staff to NSF subject-matter experts in program and awarding divisions; reduced travel costs; and savings in staff time otherwise lost in travel status. • Provided training for the Budget, Finance and Award Management staff conducting AMBAP SVs and addressed special considerations for conducting VSVs. • Continued “in-reach” to NSF staff and outreach to external stakeholders to strengthen understanding of NSF’s risk assessment process and advanced monitoring performed under AMBAP. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Perform the FY 2014 risk assessment and select 30 institutions for SVs or VSVs after adjusting the FY 2014 risk profile to account for factors such as the accelerated spend-out of American Recovery and Reinvestment Act (ARRA) awards. • Continue to strengthen the quality of business assistance provided through NSF site visit activities (on-site and virtual). • Prioritize and streamline cost analysis, advanced monitoring, and audit resolution functions without compromising NSF’s conduct of advanced monitoring under AMBAP given anticipated staff and resource constraints.

	<ul style="list-style-type: none"> • Complete development of a webpage as a resource to assist awardees in effective preparation for AMBAP advanced monitoring.
<p><i>d. Improve subrecipient oversight and monitoring efforts to minimize inadequately supported and unallowable costs from being charged to awards.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Included subrecipient oversight and monitoring requirements in outreach directed at all phases of the award process and conducted outreach to program and administrative staff across NSF, as well as with awardees and potential awardees at grants conferences and coincident with AMBAP site visits. • Developed a “fact sheet” for prime awardees explaining their responsibilities and providing references to appropriate OMB guidance. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue relevant outreach to NSF awardees to underscore their responsibilities. • Complete necessary upgrades to policy and procedures for NSF staff and awardees that might be precipitated by the release of OMB’s <i>Reform of Federal Policies Relating to Grants and Cooperative Agreements; Cost Principles and Administrative Requirements (Including Single Audit Act)</i>.
<p>CHALLENGE: Strengthening Contract Administration</p> <p>NSF Overview: Contract administration remains a critical function for NSF. As such, the Foundation continues to take a comprehensive approach to improving in this area. NSF has taken steps to strengthen contract administration through policy, procedure, and training initiatives. Specifically, NSF issued new guidance on Price Negotiation Memorandums and achieved certifications for all of the agency’s acquisition staff. NSF has also received incurred cost audits (ICAs) and taken affirmative action to receive additional ICAs on its largest contract.</p>	
<p><i>a. Correct deficiencies in contract administration that have been identified in NSF’s financial statement audit and increase use of firm-fixed price contracts.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Issued new guidance in the NSF Acquisition Manual along with appropriate forms for completion of Price Negotiation Memorandums, which are designed to ensure that the following are properly documented in the contract file: (1) cost realism analysis and price reasonableness determinations; (2) required pre-award determination of the adequacy of the contractor’s accounting system for all cost-reimbursement contracts; and (3) required pre-award determination of the adequacy of the contractor’s Cost Accounting System (CAS) Disclosure Statement for all CAS covered contracts. • Actively monitored the completion and resolution of any audits received on cost reimbursement contracts. • Continued to emphasize during acquisition planning the importance of utilizing fixed price contracts, where appropriate. • Released annual agency-wide notice to remind all administrative staff of the importance of using correct object class codes on funding commitment documents and held mandatory training to ensure proper implementation of this requirement for accounts payable. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to monitor the completion and resolution of any audits received on cost reimbursement contracts.
<p><i>b. Continue to improve the effectiveness of NSF’s policies, practices, and contracting professionals.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Achieved 100% certification of its acquisition workforce in accordance with Federal requirements for Federal Acquisition Certification (FAC) in Contracting (FAC-C), for Contracting Officer Representatives (FAC-COR), and for Program/Project Managers (FAC-P/PM) programs. • Provided prompt notification of the availability of free acquisition training offered by the Federal Acquisition Institute (FAI) or other

	<p>agency sponsored events to the appropriate community (FAC-C, FAC-COR and/or FAC-P/PM certified staff) to maintain a trained and professional acquisition workforce in today’s constrained budget environment.</p> <ul style="list-style-type: none"> • Sponsored a basic COR training class in January 2013 for NSF staff seeking initial FAC-COR certification. • Issued answers for Frequently Asked Questions (FAQs) for all NSF certified CORs to describe FAC-COR related training or other eligible activities available for FAC-COR recertification credit. • Updated NSF’s evaluation process guide to provide templates and best practice language on crafting solicitations and evaluation plans for competitive best value award actions in accordance with the Federal Acquisition Regulation (FAR) 8.4 and 16.5 procedures. • Participated in new on-boarding process training for NSF COR community to ensure proper processing of contractor employees working in NSF space or accessing NSF IT systems. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Actively monitor FAC-C, FAC-COR and FAC-P/PM certification expiration dates to ensure proper and timely required recertification is achieved. • Continue to provide basic COR or COR-related continuing education courses through the NSF Academy as funding permits.
<p><i>c. Complete incurred cost audits and close-out of the U.S. Antarctic Program (USAP) contract and decide on the Disclosure Statement to be used for the performance of these audits.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Obtained determination of adequacy and compliance from the Defense Contract Audit Agency (DCAA) on the Disclosure Statement for the audit of the Raytheon Antarctic Logistics Support Contract (RTSC Polar). • Received notification that DCAA commenced audit of RTSC incurred cost submissions for FY 2008/2009/2010. • Initiated weekly conference calls with DCAA to facilitate audit of RTSC Polar incurred cost submissions and resolution of audit issues on a real time basis. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Initiate prompt resolution of costs questioned by DCAA upon receipt of ICA reports for RTSC.
<p><i>d. Obtain disclosure statements and incurred cost audits for NSF’s largest contracts and promptly resolve any questioned costs that arise.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Actively pursued audit completion for required CAS Disclosure Statements. • Promptly reviewed and resolved any ICA issues raised in such audits. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to ensure that all accounting systems and CAS Disclosure Statements are determined adequate for all covered contracts and that supporting documentation is contained in the contract file for all new contracts as appropriate.
<p>CHALLENGE: Ensuring Proper Stewardship of American Recovery and Reinvestment Act (ARRA) Funds</p> <p>NSF Overview: The Foundation continues to actively manage its ARRA portfolio. As part of this effort, NSF has leveraged its risk-based approach to portfolio management by assigning higher risk to awardees with ARRA funding and the agency’s advanced monitoring efforts now include an ARRA review. Over the past fiscal year, NSF implemented an aggressive outreach strategy to ensure that as many awardees as possible that had not been granted a waiver pursuant to OMB’s</p>	

<p>Memorandum M-11-34 would complete their projects on or before September 30, 2013. NSF’s ARRA portfolio includes over 5,000 awards to more than 1,000 awardees totaling almost \$3.0 billion and its narrowly tailored waiver request included only about 10% of its ARRA-funded awards. In consideration of efforts to encourage awardee acceleration of expenditures, NSF estimated that less than 5% of total ARRA funds obligated for the awards identified in the waiver request to OMB would remain unexpended at the end of FY 2013. Throughout communications with awardees regardless of their status on receiving a waiver, NSF continued to emphasize <i>responsible</i> acceleration of ARRA expenditures in accordance with the terms and conditions of the award and allowable pursuant to the applicable cost principles. Closeout of ARRA awards 90 days after award expiration has so far resulted in recovering less than 2% of obligated funds.</p> <p>In addition, NSF’s exemplary ARRA recipient reporting data quality review process, which resulted in an average reporting compliance rate of 99.65% during FY 2013, continues to be effective with final reporting as awardees complete their projects and close their awards. In FY 2014, recipient reporting for non-waiver awards will wind down with only awards granted waivers to M-11-34 continuing to report.</p>	
<p>a. <i>Ensure that ARRA funds are not subject to fraud, waste, and abuse.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Continued to employ the ARRA review module as part of the AMBAP advanced monitoring to ensure that ARRA awardees have processes to effectively segregate financial information in their accounting systems, as well as report that information as required. • Worked with awardee to ensure transparency of MREFC expenditures for the Advanced Technology Solar Telescope (ATST) through monthly reporting to OMB. • Required ARRA and non-ARRA funded awardees of MREFC projects to report on earned value management and milestone status. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to oversee ARRA-related processes for institutions with active ARRA awards as part of NSF’s advanced monitoring activities for all awardees.
<p>b. <i>Continue to encourage ARRA awardees that are able to accelerate spending by the end of FY 2013.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Finalized the Foundation’s waiver request for submission to OMB on November 21, 2012, which identified 304 Faculty Early-Career Development Program (CAREER) awards and 149 awards from various programs that met the criteria for waiver due to contractual commitments, environmental review or special circumstances, including those projects that were long-term by design. This included two MREFC awards—ATST and the Alaska Region Research Vessel, which account for over \$294 million of ARRA funds. • The 53 Robert Noyce Teaching Scholarship awards included in NSF’s waiver request were determined by OMB to be statutorily authorized and therefore exempt from the requirements of M-11-34. • Implemented an aggressive communication strategy to notify ARRA awardees of the status of NSF’s waiver request submitted to OMB, to encourage continued responsible acceleration, and to provide reminders on liquidating expenditures and to close awards, as appropriate. • Provided internal outreach to program offices on acceleration and status updates on active ARRA awards, including release of the Acceleration Module under the ARRA Reporting Database, which enables program staff to access details on their ARRA awards, as well as run custom or standard reports on their entire ARRA portfolio. • Amended awards that did not receive waivers as necessary, and monitored non-waiver awardee requests for no-cost extensions to ensure awardees completed their ARRA-funded efforts on or before September 30, 2013. • Issued new guidance through the posting of FAQs on NSF’s Recovery Act external site on close-out of non-waiver awards and related

	<p>acceleration issues, as well as implemented an expenditure monitoring initiative for all ARRA awards with a focus on spend out of non-waiver awards by the September 30, 2013, deadline.</p>
	<p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue monitoring expenditures and facilitate close-out of all waiver and non-waiver ARRA awards in accordance with standard NSF and ARRA-specific policies and procedures. • Communicate with NSF program officials, senior management, the OIG, OMB, and ARRA awardees as appropriate.
<p>CHALLENGE: Managing the U.S. Antarctic Program</p> <p>NSF Overview: NSF funds and manages the U.S. Antarctic Program (USAP) through its Division of Polar Programs in order to support research and national policy goals in the Antarctic. The extreme environment and the short period of time during which regular access to the continent is possible presents significant challenges for providing the necessary logistics and operational support, including stations, laboratories, field camps, airlift and vessels. In addition, there are environmental, health and safety issues unique to the remote location. In July 2012, a Blue Ribbon Panel, tasked to conduct a review of the logistics and infrastructure needs of the USAP, issued its report. The Panel found that the logistics system was badly in need of repair and that failure to upgrade the system would continue to increase costs and squeeze out funding for scientific research. The report also identified a number of single point failure risks that could jeopardize functioning of the entire system. In response to the Panel’s recommendations, NSF has taken steps to prioritize logistical support needs, developed contingency plans, and is working towards establishing a long-range strategy to address the critical needs.</p>	
<p><i>Develop an action plan and long range strategy for overhauling the logistics system to address issues involving capital budgeting, alternatives to McMurdo station, icebreakers, transportation on the continent, a hard surface ice runway, energy, communications, and safety/health of personnel in Antarctica.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Chartered a Tiger Team composed of senior managers within NSF to assist in developing a response to the recommendations of the Blue Ribbon Panel and to review proposed action plan. • Briefed the National Science Board to obtain approval of the proposed action plan. • Issued a public response to the recommendations of the Blue Ribbon Panel in March 2013 and developed an internal document to track progress of planned actions. The OIG reviewed the internal action plan and provided suggestions for improving the format of the document. • Participated with the U.S. Coast Guard to oversee bringing the Polar Star icebreaker back into service. As a result, it is expected that the Polar Star will conduct the McMurdo resupply mission in the 2013-14 season and perhaps for the next 7-10 years. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Continue to implement actions associated with the Blue Ribbon Panel’s recommendations. Progress will be contingent on funding and subject to other priorities that may arise.
<p>CHALLENGE: Implementing Recommendations to Improve Workforce Management and the Workplace Environment</p> <p>NSF Overview: The Foundation uses the Intergovernmental Personnel Act (IPA) of 1970 as its primary method to bring in top scientists, engineers, and educators from universities and industry on temporary rotational assignments, referred to as IPAs, to maintain its world-class scientific workforce. Challenges related to the use of IPA appointments in executive-level positions continue from past years. In the <i>Audit of Cost Associated with NSF’s Use of Intergovernmental Personnel Act Assignees</i>, Report No. 13-2-008, dated March 20, 2013, the OIG raised specific management challenges on the cost of IPA assignments. NSF has been addressing the OIG’s recommendations and continues to enhance its orientation for program and performance management of rotators with particular attention on rotating executives.</p>	

<p>In addition, NSF has successfully addressed numerous workforce management and workplace environment recommendations from internal staff groups, as well as from the Office of Personnel Management (OPM), Congress, and the OIG. Many of the recommendations described in the <i>Audit of NSF's Actions to Improve Workforce Management and the Work Environment for Employees</i>, Report No. 11-02-006, dated March 17, 2011, have been resolved while others are in various stages of planning and action. Consistent progress in addressing past recommendations, as well as in responding to new or modified recommendations as they arise from internal or external sources, has been aligned with the NSF Human Capital Strategic Plan, the NSF Diversity and Inclusion Strategic Plan, and within the context of NSF's Strategic Plan, as well as the annual Government Performance and Results Act (GPRA) Modernization Act performance goals.</p>	
<p>a. <i>Take appropriate action to evaluate the ways the costs of using IPAs can be reduced.</i></p>	<p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Provided data and analyses on IPA costs in support of the OIG Audit Report No. 13-2-008. • Responded with a Corrective Action Plan (CAP) for OIG Audit Report No. 13-2-008 and initiated the following actions related specifically to IPAs: (i) study expanded use of telework; (ii) explore greater salary cost sharing by home institutions; (iii) evaluate limiting salary authorization to the federal pay rate; and (iv) review high fringe benefit rates.
	<p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Complete the evaluations and assessments cited in the CAP by November 30, 2013. • Inform the OIG of NSF's decision on what changes it plans to make in early 2014.
<p>b. <i>Continue to prepare and integrate its rotating executives into the federal government workplace and ensure new executives have the full set of skills (scientific, administrative, and leadership) necessary to lead the agency.</i></p>	<p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Updated the Executive Leadership Retreat, which is designed to prepare all new executives for their work at NSF, with added emphasis on rotators in executive positions. • Continued to require all executives to have an Executive Development Plan that incorporates the mandatory training requirements for new and continuing executives. • Initiated a review to evaluate the completion of mandatory training requirements for new and continuing executives. • Completed a review of the effectiveness of the IPA performance management process.
	<p>NSF's Anticipated Next Steps</p> <ul style="list-style-type: none"> • Share lessons learned and best practices on IPA performance management with the agency as a whole; update policies as needed. • Initiate a more formal suite of leadership development activities, as financial resources permit.
<p>c. <i>Finish implementing the remaining recommended workforce management changes identified by the working groups that were assembled to assess the issues.</i></p>	<p>NSF's Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Completed a Diversity and Inclusion (D&I) Action Plan following wide discussion within NSF of an initial draft. NSF is currently implementing high priority elements and has created a dashboard so that all employees and managers can track progress. An implementation working group meets weekly, and an executive-level steering committee meets bi-weekly. OPM lauded NSF's transparency in ensuring all employees were given an opportunity to review and comment on the D&I action plan. • Posted the FY 2012 and FY 2013 agency-wide Federal Employee Viewpoint Survey (FEVS) data on the agency's intranet to make it available to all staff. All FY 2012 data were summarized by directorate and office, and in most cases down to the division level, as well as stratified by various categories of employees.

	<ul style="list-style-type: none"> • Developed an NSF-wide FEVS Employee Engagement Action Plan based on analyses of the FY 2012 FEVS results and subsequently updated with action plans at the directorate and office level. The plan was shared with employees and made available to OPM and OMB. NSF has prioritized actions for implementation and developed a dashboard to track progress. • Commenced a practice whereby NSF’s Chief Human Capital Officer (CHCO) meets monthly with the leadership of American Federation of Government Employees (AFGE) Union Local 3403, in conjunction with the Labor Relations Officer and others with interests in human capital management. In addition, there are more frequent, informal, focused discussions between union and management personnel on topics of mutual interest. • Enhanced internal employee communications through use of focus groups on specific workforce issues, held three diversity and inclusion Town Halls hosted by the CHCO and Head of the Office of Diversity and Inclusion, expanded employee events to encourage engagement through the first employee appreciation event during Public Service Recognition Week, and activities such as Take Our Daughters and Sons to Work Day. • Extended the period during which employees may earn credit hours and continued negotiations with the AFGE Local 3403 to complete revisions to NSF’s telework policy that would include the ability to earn credit hours while teleworking. • Established a schedule for updating the Personnel Manual and to ensure that the needed approval process is in place. • Provided quarterly updates to NSF senior managers on the progress on human capital management priorities through the HRStat process and utilized the annual GPRA goals related to human capital management as the basis for the presentation. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Expand coverage of human capital issues in the HRStat process to be consistent with developing priorities in the strategic plan. • Resolve the issue of earning credit hours while teleworking and revise NSF’s telework policy as needed. • Track progress on the D&I and FEVS Employee Engagement Action Plans; report regularly to NSF employees and managers; hold leadership accountable for implementation. • Incorporate workplace and workforce recommendations in planning for the move of NSF Headquarters to Alexandria as appropriate. • Finalize analysis of 2013 FEVS data and incorporate in the FEVS action plan and dashboard to track progress.
<p>CHALLENGE: Encouraging the Ethical Conduct of Research</p> <p>NSF Overview: The responsible and ethical conduct of research is critical to ensure excellence, as well as public trust, in science and engineering. Moreover, the globalization of science and engineering research and education poses unique challenges and risks due to variations in international codes of conduct. Recognizing the importance of the Responsible Conduct of Research (RCR) in accordance with the America COMPETES Act of 2009 (ACA), NSF requires that each institution submitting a proposal certify that it has a plan to provide appropriate training and relevant oversight in the ethical conduct of research to all undergraduates, graduate students, and postdoctoral researchers who will conduct NSF-sponsored research and to have the plan available for review upon request. NSF implementation of ACA promotes awareness of RCR in NSF staff, as well as U.S. and international scientific research and education communities. In addition, RCR is addressed in policy guidance, incorporated into program funding opportunities, and emphasized through the development of resources to enhance the quality of such training provided by research institutions.</p>	
<p><i>a. Ensure that awardees implement credible RCR</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Included RCR coverage in NSF outreach materials and presented material at research administration conferences.

<p><i>programs.</i></p>	<ul style="list-style-type: none"> • Issued a new solicitation under the Ethics Education in Science and Engineering (EASE) program to expand on the RCR work completed at the University of Illinois at Urbana-Champaign and elsewhere. Ten proposals were submitted and reviewed by a panel of experts and the EASE working group recommended one five-year award. In addition, NSF awarded 10 grants under the EASE program for projects to develop ethics education materials for the research community that NSF supports, and to test the efficacy of those materials. • Held Principal Investigator (PI) meeting on September 23-24, 2013, which involved approximately 35 PIs representing 24 projects, and provided an opportunity for disseminating findings, building community, addressing new directions for the field. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Draft a new EASE solicitation for FY 2014-16 in response to the new directions identified at the PI meeting. • Continue to emphasize the importance of RCR in outreach opportunities with NSF staff, as well as U.S. and international scientific research and education communities.
<p><i>b. Continue efforts to further the tenets of research integrity.</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Actively participated in the activities of the Global Research Council. Assisted in the organization of Regional Meetings in Japan, Mexico, Belgium, Saudi Arabia and Ethiopia where research integrity was discussed. Helped draft a Statement of Principles on Research Integrity that was endorsed by more than 60 Heads of Research Councils from around the world at the 2nd Annual Meeting of the Global Research Council held in Berlin, Germany, in May 2013. <p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Sponsor 2nd Annual International Funding Agency Seminar (IFAS) in spring 2014. Approximately 20 representatives from funding agencies worldwide will meet in Washington to study best practices for funding agencies, including discussion of research integrity.
<p>CHALLENGE: Managing Programs and Resources in Times of Budget Austerity</p> <p>NSF Overview: NSF has made significant progress towards reducing certain administrative costs by identifying and implementing efficiencies, prioritizing work, and exploring new ways of getting the job done. In FY 2013, travel costs were reduced by approximately \$12.1 million below the FY 2010 baseline—a reduction of 38 percent. Efforts are underway to reduce telecommunications costs by participating in a GSA strategic sourcing initiative. In addition, approval and reporting procedures have been implemented to closely monitor the costs of major conferences.</p>	
<p><i>Identify opportunities to streamline processes and cut costs where it can in order to send a clear message to its employees and stakeholders that strong, sound management practices are being applied, reasonable ideas to reduce spending are welcome and will be acted</i></p>	<p>NSF’s Significant Actions Taken in FY 2013</p> <ul style="list-style-type: none"> • Merit Review Business Practice: <ul style="list-style-type: none"> ○ Successfully undertook a large-scale pilot of the use of synchronous virtual peer review panels as an alternative to face-to-face review panels. By investing in the development of training for panel moderators, deploying virtual meeting technology and providing human resources to support the use of that technology, NSF expanded its previous small-scale trial use of virtual panels and demonstrated the practicality of this tool as a review mechanism for small groups of proposals across NSF. ○ Conducted two small-scale pilots to explore whether an online asynchronous reviewer discussion forum could contribute to improving the efficiency of the peer review process. The results, including feedback from reviewers about the process, demonstrated the potential utility of this approach while highlighting the need to improve the technological approach used. ○ Increased the percentage of merit review panels that were wholly virtual from five percent in FY 2012 to over 20 percent in

<p><i>upon, and at a time of hardship for so many, the public's continued financial support for science is not taken for granted.</i></p>	<p>FY 2013.</p> <ul style="list-style-type: none"> ○ Realized benefits that include a reduction in the average time commitment necessary from individual panel reviewers and a reduction in NSF's expenditure on panelists' travel and flat-rate compensation costs; the agency is considering assessments on the quality of the results. ● Travel: Instituted FY 2013 travel targets (December 2012) to promote and monitor achievement of the \$3.9 million reduction goal established in response to OMB Memorandum M-12-12. In FY 2013, NSF has realized savings totaling \$12.1 million—reductions of 38 percent below FY 2010 travel obligations. Savings have been achieved across most travel categories, but the key driver is reduced travel costs associated with merit review panels. <ul style="list-style-type: none"> ○ NSF held 25 percent of merit review panels virtually in FY 2013. As a result, spending on panel travel was reduced by \$5.5 million—a reduction of 46 percent below FY 2010. ○ Encouraged the use of non-refundable airline tickets for meetings required by the Federal Advisory Committee Act (panels, advisory committee meetings, committees of visitors), as well as for staff travel. Airline tickets savings totaled \$1.26 million in FY 2013. ● Travel: Implemented revised policy (NSF Bulletin No. 13-08) requiring NSF travelers to submit travel vouchers within five working days after travel has been completed and to accelerate the time period when outstanding travel obligations are financially closed. This has minimized the amount of time funds remain obligated on completed travel orders. ● Conferences: Instituted a new policy (NSF Bulletin No. 12-19) to ensure that all conference costs are appropriate, necessary, and managed in a way that minimizes expenses. This policy established requirements related to conference planning, approval, and reporting. To ensure full transparency to the public of the agency's major conferences, published the NSF OMB M-12-12 Annual Report – FY 2012 on the NSF public website. This report provided details on conferences hosted by NSF that cost over \$100,000. ● Conferences: Implemented the conference reporting and notification requirements set forth in Section 3003 of the 2013 Continuing Appropriations Act (P.L. 113-6). Started to compile information on NSF-sponsored conferences costing over \$100,000 in order to prepare the required annual report and ensure consistency with conferences tracked under the NSF Bulletin No. 12-19 approval process. Provided reports to the OIG on conferences costing over \$20,000 to meet notification requirements of Section 3003. ● Printing: Completed the cost-benefit analysis related to central procurement and management of NSF's suite of printing devices, with the long-term objective of identifying ways in which the NSF can lower the cost of printing across the agency. ● Telecommunications: In support of the Federal Strategic Sourcing Initiative (FSSI) Telecommunications Expense Management (TEMS) effort, completed an assessment of the agency's wireless telecommunications requirements, including the types of devices and the service plans. Contracted with iSYS, LLC for wireless TEMS services, which will allow NSF to achieve cost savings identified in the assessment and to realize other efficiencies from the use of TEMS services. ● Mobile Devices Telecommunications: Instituted a policy (NSF Bulletin No. 13-05) that requires documentation of a business need and eligibility before a mobile communications device can be purchased for each individual. The policy, in conjunction with the TEMS initiative, will help drive down the cost of mobile devices. ● IPA Costs: Submitted agency's Corrective Action Plan (CAP) to the OIG, which was developed in close consultation with the OIG and Office of Information and Resource Management staff, in response to issued identified in the OIG's final report on the "Audit of Costs Associated with NSF's Use of Intergovernmental Personnel Act (IPA) Assignees." The CAP will examine various ways that the costs of IPAs may be reduced to include expanding use of telework, increasing cost sharing, limiting authorization of IPA salaries to
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	<p>the federal pay rate and lowering fringe benefit rates.</p> <ul style="list-style-type: none"> • Real Property: Developed a plan to limit the amount of leased office space to the FY 2012 square footage level in accordance with OMB Memorandum M-12-12 (Freeze the Footprint). • Office Reconfigurations, Furniture and Equipment: Instituted a moratorium limiting the reconfiguration of office space and the purchase of certain furniture and equipment (O/D Staff Memorandum 13-14) to ensure all uses of funds for these activities and items are prudent in light of the agency’s upcoming relocation to Alexandria, VA. • SAVE Award: Received four 2013 SAVE award ideas submitted by NSF staff via NSF’s IdeaShare website. The four ideas were reviewed and rated by NSF subject-matter experts. One SAVE award idea, already implemented at NSF, was recommended to OMB for government-wide implementation.
	<p>NSF’s Anticipated Next Steps</p> <ul style="list-style-type: none"> • Merit Review Business Practice: <ul style="list-style-type: none"> ○ Continue evaluating use of virtual panels when appropriate, support further investments in virtual meeting infrastructure, and provide training for virtual panel participants. Extend the virtual panel pilot activity to the review of Graduate Research Fellowship Program (GRFP) applications. ○ Conduct a second pilot of asynchronous reviewer discussion using a different approach. ○ Undertake outreach to proposing institutions to boost institutional proposal success rates by reducing the numbers of uncompetitive proposals submitted to NSF. • Travel: Continue to aggressively manage travel costs to meet the agency’s long-term travel reduction goals and streamline travel order and voucher procedures. Solicit feedback from NSF directorates and offices on proposed changes to improve timeliness of traveler submission of vouchers and implement changes to NSF travel reimbursement procedures. • Conferences: Continue to monitor per person costs of light refreshments purchased for on-site panel and advisory committee meetings. • Conferences: Continue to follow the conference planning, approval, and reporting requirements established to minimize the cost of conferences hosted and attended by NSF. • Mobile Devices Telecommunications: Through the use of initial pilots, work with the TEMS support contractor, iSYS, LLC, to optimize wireless rate plans and reduce the cost of mobile devices and cellular services. Evaluate the results of the TEMS pilots. • Printing: Develop a plan based on the results of the printing cost-benefit assessment to streamline the number and type of printers used by NSF staff as part of the planning efforts to relocate in Alexandria, VA. • IPA Costs: Complete the examination of IPA costs through the CAP by November 30, 2013, and provide an update to the OIG in early 2014 on the status of possible actions that may be implemented to manage IPA costs. • SAVE Awards: Notify employees that SAVE award ideas may be submitted throughout the year via NSF IdeaShare. This mitigates the limitations created by the brief SAVE Award submission window provided by OMB.

Undisbursed Balances in Expired Grant Accounts

In FY 2013, NSF funded research and education in science and engineering through grants and cooperative agreements to 1,922 colleges and universities and other institutions. NSF grants are funded in one of two ways: 1) the grant may be funded fully at the time of award, called a standard grant, or 2) the grant may be funded incrementally (one year at a time), called a continuing grant increment. In both cases, all costs on the grant must be incurred by the college, university, or institution during the term of the grant period. At NSF, grantees typically have 90 days after the grant expires to complete final drawdowns and expenditures.

The information provided here pertains to the agency's two grant making appropriation accounts: Research and Related Activities (R&RA) and Education and Human Resources (EHR). The data reported are based on the following definitions:

- An **expired grant** is a grant award that has reached the grant end date and is eligible for closeout. For NSF, this means grants whose period of performance has expired.
- **Undisbursed balances on expired grants** represent the unliquidated obligation amounts that remain available for expenditure on an expired grant award before it is closed out.

Once a grant has expired, NSF takes actions to close out the grant both administratively and financially. The financial closeout action takes place 90 days after the award expiration date when the undisbursed balances are de-obligated from the award. Administrative closeout is initiated after financial closeout is completed.

The methodology used to develop undisbursed balances on expired grant awards is consistent with the U.S. Government Accountability Office (GAO) conclusions documented in their April 2012 report, GAO-12-360, *Grants Management: Action Needed to Improve the Timeliness of Grant Closeouts by Federal Agencies*, along with discussion and clarifying information from GAO. The data reported here reflects the amount of undisbursed balances in grant accounts that have reached their end date and are eligible for closeout.¹

1. Details on future action the department, agency, or instrumentality will take to resolve undisbursed balances in expired grant accounts.

NSF continually monitors its grant awards throughout their lifecycle following a comprehensive post-award monitoring process. NSF grants are closed based on their period of performance end date. Ninety days after the grant period has expired, all unliquidated (or undisbursed) are de-obligated. Having small undisbursed balances at the end of the grant period is a routine occurrence, as not all grantees fully spend all of the funds obligated in the course of their research.

¹ The reporting methodology used in this report is the same methodology that was used in the prior year FY 2012 report. It is different from the methodology that was used in our *FY 2011 Agency Financial Report*. The data reported in FY 2011 reflected the amount of funding de-obligated as a result of successfully closing out grants. The change in NSF's approach reflects NSF's evolving interpretation of the statutory requirement and OMB reporting guidance, and is based on additional clarifying information from GAO.

2. The method that the department, agency or instrumentality uses to track undisbursed balances in expired grant accounts.

NSF completes financial closeout of expired grant awards on a monthly basis using a set of automated and manual activities. Eligibility for closeout for all NSF awards begins 90 days after the award expiration date. The NSF Financial Accounting System (FAS) closeout process automatically de-obligates any unliquidated (unspent) award balance, produces an award closeout transaction to flag the award as financially closed, and sends the financial closeout date to the NSF award management system. This initiates final administrative closeout procedures in the award management system.

The expected award closeout date is made available to awardees and staff through the Award Cash Management Service (ACM\$). ACM\$ is a new feature of Research.gov that went live for all grantees on July 1, 2013. ACM\$ is NSF's new approach to award payments and associated post-award processes. It requires the submission of award level payment amounts and expenditures each time funds are requested by awardees. ACM\$ allows NSF post-award monitoring at the individual award level throughout the lifecycle of the award.

3. Identification of undisbursed balances in expired grant accounts that may be returned to the Treasury of the United States.

When a grant is closed out, the unliquidated (or undisbursed) balances are de-obligated. The de-obligated grant balances are treated one of three ways:

- If the source appropriation is still active, the balances are recovered by NSF and remain available for valid new obligations until the source appropriation's expiration date.
- If the source appropriation has expired but funds have not yet been canceled, the grant balances are recovered by NSF and remain available for upward adjustments on other existing obligations within the source appropriation.
- If the source appropriation has been canceled, the grant balances are returned to the Treasury.

In reviewing the FY 2013 undisbursed balances in expired grant accounts, 474 grants totaling \$10,530,178 are in appropriations that will be canceled. These grant balances will be returned to Treasury.

4. In the preceding three fiscal years, details on the total number of expired grant accounts with undisbursed balances (on the first day for each fiscal year) for the department, agency, or instrumentality and the total finances that have not been obligated to specific project remaining in the accounts.

The number of expired grants with undisbursed balances for the preceding three fiscal years is provided in the table below. These numbers and balances reflect a point in time before they are closed out in our normal processes described above. The table shows that for FY 2013, there were 6,556 expired grants with undisbursed balances of \$118,371,186.

Appendix 4: Undisbursed Balances in Expired Grant Accounts

Status of Undisbursed Balances in Expired Grants			
	FY 2013 (as of 9/30/13)	FY 2012 (as of 9/30/12)	FY 2011 (as of 9/30/11)
Number of expired grants	6,556	7,986	7,154
Undisbursed balances prior to closeout	\$118,371,186	\$184,489,992	\$126,010,457

Awards to Affiliated Institutions

The following table lists the institutions affiliated with members of the National Science Board (NSB) in FY 2013.

Affiliated Institution ¹	Awards Obligated in FY 2013 (Dollars in thousands)
CURRENT MEMBERS	
American Association for the Advancement of Science	\$ 5,843
California Institute of Technology	88,612
Clemson University	14,614
Cornell University	120,018
Georgia Institute of Technology	72,667
Massachusetts Institute of Technology	72,937
Princeton University	52,929
Purdue University	82,999
Stanford University	66,418
Texas A&M University	29,394
Tufts University	17,295
University of California – Berkeley	104,500
University of Chicago	44,908
University of Colorado	78,014
University of Michigan	94,670
University of Missouri – Columbia	14,553
University of Oklahoma	10,765
University of Oregon	10,457
William Marshall Rice University	29,430
TOTAL	\$ 1,011,023

¹ This table is provided solely in interest of openness and transparency. NSB establishes the policies of NSF within the framework of applicable national policies set forth by the President and Congress. Federal conflict of interest rules prohibit NSB members from participating in matters where they have a conflict of interest or there is an impartiality concern without prior authorization from the designated agency Ethics Official. Individual NSF grant awards are made pursuant to a peer-review based process and most are not reviewed by the Board. With regard to matters that are brought to the Board, NSB members are not involved in the review or approval of grant awards to their affiliated institutions.

Patents and Inventions Resulting From NSF Support

The following information about inventions is being reported in compliance with Section 3(f) of the National Science Foundation Act of 1950, as amended [42 U.S.C. 1862(f)]. There were 1,760 NSF invention disclosures reported to the Foundation either directly or through NIH's iEdison database during FY 2013. Rights to these inventions were allocated in accordance with Chapter 18 of Title 35 of the United States Code, commonly called the "Bayh-Dole Act."

Acronyms

ACA	America COMPETES Act	FEVS	Federal Employee Viewpoint Survey
ACM\$	Award Cash Management Service	FFMIA	Federal Financial Management Improvement Act of 1996
AFGE	American Federation of Government Employees	FFR	Federal Financial Report
AFR	Annual Financial Report	FFRDC	Federally Funded Research and Development Center
AMBAP	Award Monitoring and Business Assistance Program	FMFIA	Federal Managers' Financial Integrity Act of 1982
AOAM	Agency Operations and Award Management	FNSF	Future NSF Headquarters Office
APR	Annual Performance Report	FTE	Full-Time Equivalent
ARI	Academic Research Infrastructure	FY	Fiscal Year
ARRA	American Recovery and Reinvestment Act of 2009	GAAP	Generally Accepted Accounting Principles
ASC	Antarctic Support Contractor	GAO	Government Accountability Office
ATST	Advanced Technology Solar Telescope	GPRA	Government Performance and Results Act
BFA	Office of Budget, Finance and Award Management	GSA	General Services Administration
BSR	Business Systems Review	ICA	Incurred Cost Audit
CA	Cooperative Agreement	ICASS	International Cooperative Administrative Support Services
CAP	Corrective Action Plan	I-Corps	NSF Innovation Corps
CAS	Cost Accounting System	IDR	Interdisciplinary Research
CFO	Chief Financial Officer	IG	Inspector General
CHCO	Chief Human Capital Officer	IIP	Industrial and Innovation Partnerships
COFAR	Council on Financial Assistance Reform	INSPIRE	Integrated NSF Support Promoting Interdisciplinary Research and Education
COTS	Commercial Off-the-Shelf	IPERA	Improper Payments Elimination and Recovery Act of 2010
CSRS	Civil Service Retirement System	IPA	Intergovernmental Personnel Act
D&I	Diversity and Inclusion	IV&V	Independent Validation and Verification
DAEO	Designated Agency Ethics Official	K-12	Kindergarten to Grade 12
DCAA	Defense Contract Audit Agency	LFO	Large Facilities Office
DOL	Department of Labor	MREFC	Major Research Equipment and Facilities Construction
DRB	Director's Review Board	NIH	National Institutes of Health
EEO	Equal Employment Opportunity	NSB	National Science Board
EEOC	Equal Employment Opportunity Commission	NSF	National Science Foundation
EESE	Ethics Education in Science and Engineering	OIG	Office of Inspector General
EHR	Education and Human Resources	OMB	Office of Management and Budget
EIS	Enterprise Information System	OPM	Office of Personnel Management
FAC-C	Federal Acquisition Certification in Contracting	PAM	Proposal and Award Manual
FAC-COR	Federal Acquisition Certification for Contracting Officer Representatives	PI	Principal Investigator
FAC-P/PM	Federal Acquisition Certification for Program/Project Managers	PP&E	Property, Plant, and Equipment
FAS	Financial Accounting System	R&D	Research and Development
FASAB	Federal Accounting Standards Advisory Board	R&RA	Research and Related Activities
FAQs	Frequently Asked Questions	RCR	Responsible Conduct of Research
FBWT	Fund Balance with Treasury	RFP	Request for Proposal
FECA	Federal Employees' Compensation Act	RTSC	Raytheon Antarctic Logistics Support Contract/Raytheon Technical Services Contract
FERS	Federal Employees Retirement System	SBR	Statement of Budgetary Resources

SES	Senior Executive Service
SFFAS	Statement of Federal Financial Accounting Standards
SOS	Schedule of Spending
STEM	Science, Technology, Engineering, and Mathematics
SV	Site Visits
TEMS	Telecommunications Expense Management
USAP	United States Antarctic Program
VSV	Virtual Site Visit