

# Audits & Reviews

Twenty four audit reports were issued during this reporting period. Five of these audits contained a total of \$4 million in questioned costs, including nearly \$59,000 in cost-sharing shortfalls. One audit of a proposed budget also found \$62 million of unallowable contingency costs. We recommended that NSF, in consultation with the OIG, resolve the audits' recommendations with the awardees.

## ***NSF Needs to More Effectively Address Recommendations for Workforce Management Change***

The Senate Committee Report accompanying NSF's 2011 appropriations bill, requested that the OIG analyze "NSF actions to improve workforce management and the work environment for employees." Congress, OPM, the OIG, and NSF management and staff have all expressed concerns about workforce management and the work environment at NSF in recent years. NSF's response to these concerns generally has been to assemble working groups of NSF staff to assess the issues and recommend needed corrective action.

Between September 2009 and August 2010, internal and external efforts to identify workforce management improvements resulted in NSF management having 102 recommendations relevant to our audit objectives. As of December 1, 2010, NSF had completed action on only 11 of the 102 recommendations.

We found that NSF does not have an effective process for implementing the workforce management changes called for in the recommendations it received. The Foundation's process for addressing workforce management change is informal, undocumented, and ad-hoc. Specifically, NSF senior management has not accepted or rejected; prioritized; tracked; managed; or implemented the bulk of the recommendations for improvement. NSF's workforce management change process also suffers because it lacks a champion with both the time and the authority to lead in this area.

NSF's failure to make decisions to improve workforce management has led to continued attention from Congress and may have contributed to a decline in employee satisfaction at the Foundation. We recognize that it is not reasonable to expect NSF to implement 102 recommendations simultaneously, and we are not saying that it should have done so. However, it is reasonable to expect NSF management to set priorities and milestones and implement an action plan in a structured approach to address workforce issues.

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An effective process and structure, combined with strong leadership on the part of the champion for this change, would help NSF identify and implement those actions that should result in the most effective improvements in its workforce management and work environment for employees.

We recommended that NSF develop and document policies and procedures and utilize a structured approach to manage and implement workforce and workplace change. NSF generally agreed with our recommendation and has outlined steps it has begun to take to address the issues surrounding its management of human capital. Among other things, NSF stated that while it is experimenting with how best to implement the role of the Chief Human Capital Officer (CHCO), the CHCO will work with the Deputy Assistant Directors and Executive Officers (DADEO) group to implement human capital management recommendations. NSF stated that by August 2011, it would make a decision on the effectiveness of using the DADEO group in human capital management planning and decision making.

We are concerned that involving so many people in the process will impede, rather than enhance, the speed of change. To have a clear, objective basis by which to judge this effort in August, NSF should articulate how it will gauge the success or failure of this endeavor now, so that all involved will know what is expected of them during this trial period.

### ***Audits of NSF Awards and Awardees Identify \$62 Million of Funds Put to Better Use and \$4 Million of Questioned Costs***

Of the 24 audit reports OIG issued during this semiannual period, the following audits of NSF awards and awardees included \$62 million of unallowable contingency costs in a proposed budget and \$4 million in questioned costs on funded NSF awards. In addition, these reports noted significant weaknesses in awardees' internal controls. In one case, the accounting system was not adequate to manage \$765 million of NSF funds. We also reviewed quarterly reports, required by the Recovery Act, at seven NSF awardees and found several areas in which data were not correctly reported.

### ***\$62 Million in Unallowable Contingency Costs in AURA's Unauditable Construction Proposal for Advanced Technology Solar Telescope***

An audit of the \$298 million cost proposal by the Association of Universities for Research in Astronomy (AURA) to construct the Advanced Technology Solar Telescope disclosed significant deficiencies that rendered the proposal unacceptable for audit. As a result, NSF does not have assurance that the proposal presents an acceptable basis for funding. The inadequate proposal was based on unsupported and outdated estimates for materials and subcontracts. It included \$62 million in unallowable contingency costs and an undetermined amount of contingency escalation costs built into the material and subcontract estimates. In addition, the proposal included unsupported direct labor and indirect costs.

In response to the audit, AURA stated that, prior to submitting the proposal, NSF had reviewed and accepted its budgeted costs, including the contingencies. However, the contingencies were unallowable, according to federal regulations.

It was recommended that NSF request that AURA resubmit an adequate construction cost proposal without budgeted contingencies, have the proposal audited, and base NSF funding on the results of audit. It was also recommended that NSF internally control contingency funds, and not award such funds until evidence of a demonstrated need is provided.

The problems with contingencies in this award are in addition to those discussed in our September 2010 semiannual. In that case, we reported that a non-profit organization, Consortium for Ocean Leadership (COL), proposed a \$386 million budget with \$88 million of unallowable contingency costs, which were included, at NSF's direction, for its Ocean Observatories Initiative cooperative agreement. As a result of these two audits, in the last two semiannual periods, we have disclosed a total of at least \$150 million of unallowable contingency costs in proposed budgets for two awardees' construction projects.

### ***Significant Compliance and Internal Control Deficiencies Lead to Nearly \$1.9 Million in Questioned Costs***

An audit of four awards totaling \$18.6 million NSF-funded costs and \$8.1 million of cost share claimed by the Louisiana Board of Regents (LBR) and its sub-awardees, disclosed significant compliance and internal control deficiencies in LBR's financial management of NSF grant funds. These deficiencies resulted in nearly \$1.9 million in questioned NSF-funded costs and more than \$152,000 of unsupported cost sharing. These findings are particularly significant because as of March 2009, LBR had six awards from NSF totaling over \$23.7 million. If the practices that contributed to the questioned costs are not corrected, unsupported and unallowable costs could continue to be claimed on current and future NSF awards.

Internal control deficiencies led to labor charges that were claimed on NSF awards for work performed on other projects, inadequately supported subaward costs, and NSF-funded equipment that was not used. Recommendations included that LBR consider expanding on-site monitoring visits to sub-awardees and that LBR improve its effort reporting system. The LBR generally concurred with the recommendations and agreed to expand its monitoring system to include additional sub-awardees, improve its timekeeping system, and return or credit funds inappropriately charged to NSF awards. However, it disagreed with the questioned costs from a sub-awardee.

### ***Weaknesses in Financial Management Result Approximately \$1.7 Million in Questioned Costs***

An audit of three awards totaling \$17.5 million at Ohio State University (OSU) found five significant compliance and internal control deficiencies. These findings are particularly critical because in 2009, OSU had 382 active NSF awards

totaling over \$160 million. The auditors questioned approximately \$1.7 million as a result of the deficiencies identified. Specifically, the audit disclosed that OSU: lacked an effective system for monitoring costs claimed by subawardees; did not adequately monitor cost share commitments; did not identify participant support costs; did not consistently have effort reports certified in a timely manner by individuals with sufficient knowledge to ensure the reports' reliability; and did not provide adequate training to ensure that personnel were aware of compliance requirements for NSF awards.

Recommendations included that OSU expand its sub-awardee risk assessment and monitoring processes and train employees who certify time spent on federal awards. Although OSU did not agree with the questioned costs, it generally agreed with the internal control recommendations and has implemented procedures to correct its most significant effort reporting deficiencies.

### ***Inadequate Sub-Awardee Monitoring Leads to Approximately \$400,000 in Questioned Sub-Award and Cost Sharing Costs***

An audit of one NSF Center award representing nearly \$27.8 million in costs and \$8.7 million in cost sharing claimed by the Trustees of Boston University questioned \$412,400 in sub-award costs and identified \$174,397 in unallowable sub-award cost sharing. Questioned sub-awardee costs included unallowable moving expenses, management fees, unapproved foreign travel that included side trips to resort areas, and conference give-aways, such as calculators and mouse pads. These findings are particularly significant because Boston University is a major NSF grant recipient with 228 active awards totaling nearly \$140 million.

The auditors identified three major compliance and internal control deficiencies: inadequate sub-award monitoring, inadequate internal controls over cost share, and inadequate controls over payments to terminated Center personnel and maintenance of sick leave balances. The University generally agreed with the recommendations to improve its procedures for sub-award monitoring and recording cost share and employee sick leave balances.

### ***Inadequate Controls Result in More Than \$350,000 in Questioned Costs***

We conducted an audit to determine whether North Carolina Central University (NCCU) had adequate internal controls to ensure accountability and stewardship of NSF funds. The audit concluded that the University's controls for monitoring costs, compliance with travel regulations, equipment purchases, and charges for payroll and fringe benefits to NSF grants, were inadequate. As a result, the auditors questioned \$351,340, or 31 percent, of the \$1,119,675 total costs NCCU claimed in one fiscal year. In addition, the auditors identified \$4,193 of cost sharing requirements not met.

We recommended that NSF resolve the questioned costs and follow up to ensure that NCCU adequately addresses the deficiencies identified. The University agreed that it had not applied the proper indirect cost rate to NSF awards.

### ***University Needs to Strengthen its Controls over Sub-recipient Monitoring***

An audit of four awards at Rice University found that the University needed to strengthen its internal controls over sub-recipient monitoring. The audit found that Rice needed to document the results of pre-award risk assessments and increase post-award oversight to ensure that costs claimed on NSF awards are reasonable and allowable.

In addition, Rice did not comply fully with the reporting requirements for invention disclosure and patent application. Therefore, NSF may not have current information regarding all inventions and patents developed, which is important for evaluating award progress.

The audit recommended that Rice implement ongoing risk-based monitoring of sub-awardees and procedures for invention disclosure and patent application.

Rice agreed with the finding on invention disclosure and patent application and is revising training in this area. The University stated that it is taking steps to strengthen sub-award monitoring but did not agree that this constituted a significant deficiency.

### ***Accounting System Used by AURA is Inadequate to Manage NSF Funds***

The Association of Universities for Research in Astronomy (AURA) receives and manages NSF awards totaling approximately \$765 million, on which the Association receives payments in advance of expenditures. The accounting system used by AURA on its NSF awards is managed by the National Optical Astronomy Observatory (NOAO), a division of AURA.

An audit of the accounting system used to generate AURA's proposals, including the \$298 million Advanced Solar Technology Telescope, disclosed eight significant deficiencies. These deficiencies included: lack of identification of the receipt of funds by project or as Recovery Act funds, inadequate purchase order and equipment files and lack of agreement between the amounts in AURA's equipment files and its financial accounting records. In addition, AURA lacked adequate policies and procedures for generating reliable proposals; monitoring subawardees; determining the allowability and reasonableness of its costs; and meeting cost sharing commitments.

As a result of these deficiencies, the audit concluded that NOAO should not receive additional NSF awards or advance payments until these deficiencies are corrected.

The audit recommended that NSF require AURA to take immediate action to correct the accounting system deficiencies identified and consider withdrawing AURA's ability to receive advance payments until AURA's accounting system meets federal standards for fund control and accountability.

### ***Quarterly Reports from Recipients of Recovery Act Funds Were Generally Accurate and Complete***

Recipients of Recovery Act funds are required to submit quarterly reports that include data related to the projects funded and the impact of these projects on job creation. Our review covered eight data elements required in quarterly reports: number of jobs, amount of ARRA funds received, ARRA expenditures, vendor payments, sub-award amounts, project description, project status, and final report. It is important for this information to be accurate to meet the Recovery Act's goals of accountability and transparency. The development of effective processes, internal controls, and oversight functions were important elements for ensuring data quality. We examined this data as reported by seven institutions that received ARRA funds.

We concluded that the larger institutions we examined -- University of Alaska-Anchorage, New Jersey Institute of Technology, University of Washington, and West Virginia University Research Corporation -- had generally established appropriate processes for compiling quarterly data in compliance with ARRA reporting requirements, but needed to improve their data quality review processes to prevent errors during the reporting process. We found that the smaller institutions we reviewed -- American Museum of Natural History, California Academy of Sciences, and the Institute of Global Environment and Society did not appear to have a clear understanding of ARRA reporting requirements, which affected the accuracy and completeness of their quarterly data.

We identified four areas where several of the seven NSF recipients were not accurately or completely reporting quarterly data that were important to ARRA accountability and transparency goals. These areas were: number of jobs created, vendor payments, expenditures, and funds received. It is important to note that the exceptions identified during our review occurred primarily because each institution was in the early phases of developing and implementing its ARRA reporting processes.

We also reviewed these institutions' procedures for ensuring that entities that have been suspended or debarred did not receive ARRA funds. While it is important to note that audit testing did not disclose that these institutions awarded ARRA funds to any such entities, we recommended that two of the institutions strengthen their procedures.

### ***Improvements Needed in Effort Reporting and Cost Sharing Processes***

A review of federal grant management processes at California State University-Fresno disclosed two areas that were not in compliance with Federal requirements—labor effort reporting and cost sharing. Fresno was using a manual,

paper-based effort reporting system. Given the manual nature of the process and the lack of established controls to validate the accuracy of employee-developed effort reports, there is a high potential for mistakes in the charging of labor costs to NSF and other sponsored projects. The control weaknesses in Fresno's system raised concerns about the reliability of the \$1.2 million of budgeted salary charges to NSF grants.

In addition, Fresno has not adequately tracked its cost sharing commitments as required by Federal grant regulations. Fresno concurred with the findings recommendations and is developing processes to address them.

## Financial Statement Audit Reports

Establishing and maintaining sound financial management is a top priority for the federal government because agencies need accurate and timely information to make decisions about budget, policy, and operations. The Chief Financial Officer's Act requires agencies to prepare annual financial statements which must be audited by an independent entity.

### *NSF Receives Unqualified Opinion on Financial Statements for the Thirteenth Consecutive Year, but Monitoring of Cost Reimbursement Contracts Should be Strengthened*

Under a contract with the OIG, Clifton Gunderson LLP conducted an audit of NSF's FY 2010 financial statements. Clifton Gunderson issued an unqualified opinion on the financial statements; however, the auditors repeated a significant deficiency in monitoring of cost reimbursement contracts. NSF obligated \$283 million for cost reimbursement contracts in FY 2010, of which \$204 million in contracts allowed advance payments for three contractors, with the majority going to one contractor. Cost reimbursement contracts are high-risk because of the potential for cost escalation. Advanced payment contracts are a higher risk because contractors are paid before the work has begun. Without improvements in these areas, NSF cannot ensure the reasonableness and accuracy of costs paid on these contracts.

Specifically, the auditors noted issues in the following areas:

- Delays in securing Incurred Cost Audits for NSF's largest and riskiest contracts.
- Problems monitoring the receipt, audit, and approval of Cost Accounting Standards (CAS) disclosure statements and incurred cost submissions.
- Implementation near the end of the fiscal year of contract oversight procedures, resulting in previously noted inadequate and ineffective procedures during the audit period, including the lack of NSF's evaluation of contractors' accounting systems prior to awarding cost reimbursement type contracts.

It is essential for NSF to improve in these areas in order to ensure the reasonableness and accuracy of costs paid on contracts, particularly on contracts considered to be high-risk.

The auditors also noted a Defense Contract Audit Agency report dated September 30, 2010 that questioned the allowability of \$88 million in contingency costs provided for in a proposed budget relating to a construction cooperative agreement proposal with a major NSF awardee. NSF began issuing incremental funding actions on this cooperative agreement proposal in September 2009. The allowability of these contingency costs will be determined during the audit resolution process. The auditors made seven recommendations for NSF to incorporate more comprehensive risk-based policies and procedures for contract monitoring and focus cost surveillance on cost reimbursement contracts. NSF agreed with the recommendations and developed a corrective action plan. We agreed with NSF's proposed corrective actions for the recommendations.

The auditors also issued a Management Letter in conjunction with the financial statement audit report. The purpose of this document is to communicate findings that are not included in the audit report but are important to ensuring a sound overall internal control structure and require management's attention.

The FY 2010 Management Letter identified four findings, some of which incorporated elements of prior years' findings related to NSF's operations and financial reporting controls. The Management Letter reported continuing improvements were needed to NSF's policies for awarding and administering grants. The auditors made several recommendations, including that NSF monitor audit resolution activity to ensure that the deadlines are met.

NSF generally concurred with the recommendations in the Management Letter and is working to resolve the findings. The FY 2011 financial statement audit will evaluate NSF's actions in response to the recommendations.

***NSF Corrects Weakness from 2009 FISMA Review, but Improvements Needed in IT Operating Environment and Disaster Recovery Plans for Antarctic Program***

The Federal Information Security Management Act (FISMA) requires an annual independent evaluation of an agency's information security program. Under a contract with the OIG, Clifton Gunderson LLP conducted this independent evaluation for FY 2010. Clifton Gunderson reported that NSF has an established information security program and has been proactive in reviewing security controls and in identifying areas to strengthen its controls; however, some improvements are needed. NSF concurred with the report and has made progress in addressing the findings. The agency provided a corrective action plan, which will be reviewed as part of the FY 2011 evaluation.

## A-133 Audits

### *Single Audits Identify Repeat Issues at 14 Percent of Awardees with Findings*

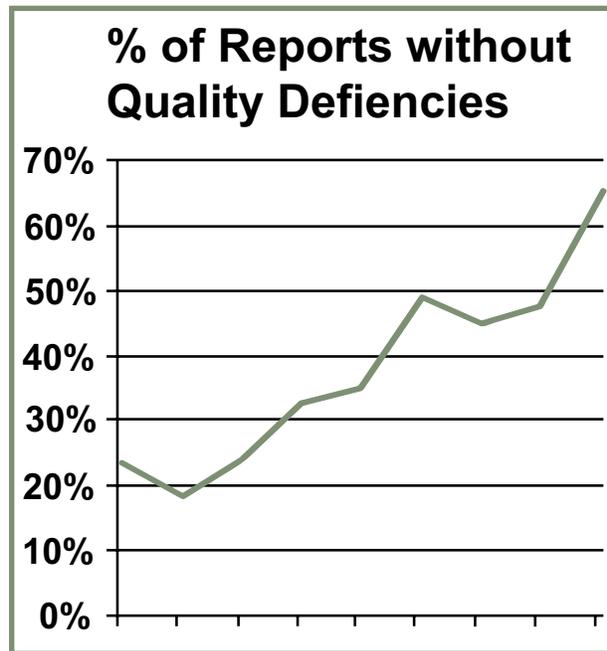
OMB Circular A-133 provides audit requirements for state and local governments, colleges and universities, and non-profit organizations receiving federal awards. Under this Circular, covered entities that expend \$500,000 or more a year in federal awards must obtain an annual organization-wide audit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

The 151 audit reports reviewed and referred to NSF's Cost Analysis and Audit Resolution (CAAR) Branch this period covered NSF expenditures of \$5 billion during audit years 2007 through 2010, and resulted in 157 findings at 78 NSF awardees. One awardee received a disclaimer of opinion on its financial statements and 12 awardees received qualified or disclaimers of opinions on their compliance with federal grant requirements, including 3 awardees who received qualified opinions on compliance for programs which included NSF ARRA expenditures. At 8 awardees, the auditors reported the same findings for 3 or more consecutive years, including one instance where a finding was reported for the 8th straight year. At an additional 3 awardees, the auditors reported the same findings for 2 consecutive years. The failure of these 11 awardees (14 percent of awardees with findings) to implement corrective actions undermines the integrity of the Single Audit process and could call into question their ability to manage NSF funds. 14 findings identified by the auditors resulted in \$630,000 in questioned costs to NSF awards, of which \$338,000 were caused by lack of adequate supporting documentation of the amounts charged to NSF awards. Awardees' lack of internal controls and noncompliance with federal requirements included: untimely and/or incorrect reporting of time and effort; inadequate support for salary/wages, equipment, travel, and indirect costs charged to awards; inadequate monitoring of subrecipients; inability to prepare the financial statements; and late submission of financial and/or progress reports.

We also examined 57 management letters accompanying the A-133 audit reports and found 7 deficiencies that affected NSF. Auditors issue these letters to identify internal control deficiencies that are not significant enough to include in the audit report, but which could become more serious over time if not addressed. The deficiencies included inadequate tracking, managing, and accounting for NSF costs, and ineffective segregation of duties. These deficiencies affected control processes that are essential to ensuring stewardship of NSF funds and preventing fraud and abuse.

### ***Desk Reviews Continue to Reflect Improvements in Single Audit Quality and Timeliness***

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



We reviewed 72 audit reports<sup>1</sup> for which NSF was the cognizant or oversight agency for audit, and found that 47 (65 percent) fully met federal reporting requirements. As shown in the chart, the percentage of reports without quality deficiencies in this period continues to reflect a positive trend in audit quality and timeliness over the past 4 years.

However, 25 reports reviewed, including 8 reports with ARRA expenditures, contained quality and timeliness issues. The quality issues we identified included 12 reports in which the Schedule of Expenditures of Federal Awards did not provide sufficient information to allow for identification of awards received from non-federal “pass-through” entities or did not adequately describe the significant accounting policies used to prepare the schedule. Of the 17 reports which included audit findings, 10 reports failed to adequately present the required elements of the finding to assist auditee management in correcting the reported deficiency, and 7 reports failed to adequately present the required elements of management’s plan to correct the deficiencies reported. In addition, 7 reports

<sup>1</sup> The audits were conducted by 50 independent public accounting firms.

contained errors on the Data Collection Form (Form SF-SAC), which provides a publicly available summary of the audit results. Finally, 4 reports were submitted after the due date required by OMB Circular A-133.

We contacted the auditors and awardees, as appropriate, for explanations of each of the potential errors. In most cases, the auditors and awardees either provided adequate explanations and/or additional information to demonstrate compliance with federal reporting requirements, or the error did not materially affect the results of the audit. We issued a letter to each auditor and awardee informing them of the results of our review and the specific issues on which to work during future audits to improve the quality and reliability of the report.

### ***Quality Control Review Demonstrates Compliance with Requirements for ARRA-related Single Audit***

We completed a quality control review of the 2009 single audit performed at Michigan State University by Plante and Moran, PLLC, a public accounting firm. Michigan State University expended \$55 million in direct NSF expenditures during the year. The audit was selected for review based on issues found during the desk review related to the reporting of ARRA expenditures. We found that the auditors properly planned, performed, and documented their work in accordance with the requirements of Generally Accepted Government Auditing Standards and OMB Circular A-133.

