

Audits & Reviews

Audits performed this semiannual period identified improvements needed in the internal controls of NSF as well as its grantee organizations. Internal control is commonly defined as a process implemented by management that is designed to provide reasonable assurance that the organization's operations are effective and efficient, financial reporting is reliable, and applicable laws and regulations are followed. Consequently, the OIG's recommendations are intended to promote efficiency and effectiveness and to minimize the risk of inaccurate financial statements and non-compliance with laws and regulations. During this semiannual period, we also reviewed 115 annual single audits of NSF awardees that reported a total of 165 findings and worked with NSF to resolve findings and recommendations issued in prior periods.

Significant Audits Internal to NSF

FY 2008 FISMA Report Affirms NSF Security Program But Identifies Improvements Needed

The Federal Information Security Management Act (FISMA) requires agencies to adopt a risk-based approach to improving computer security that includes annual security program reviews and an independent evaluation by the Inspector General. Under a contract with the OIG, Clifton Gunderson LLP conducted this independent evaluation for FY 2008. Clifton Gunderson reported that NSF has an established information security program and has been proactive in reviewing security controls and identifying areas that should be strengthened. NSF corrected four of the six findings identified in the prior year's independent evaluation, but the auditors repeated two previous findings on the United States Antarctic Program's need to 1) replace an outdated and difficult to secure suite of applications and 2) develop, document, and implement a disaster recovery plan. The auditors also reported one new finding relating to improving the review of network accounts to detect and remove inactive accounts. NSF management concurred with the report and will provide a corrective action plan for the new recommendation. NSF's corrective action plan for the repeat findings, which we have accepted, includes implementation of corrective actions at the end of FY 2010 for the application replacement and the end of FY 2009 for the disaster recovery plan. Implementation status will be reviewed as part of the FY 2009 independent evaluation.

HIGHLIGHTS

Significant Audits Internal to NSF	13
Significant Audits of Grants & Contracts	15
A-133 Audits	19
Audit Resolution	22
Work in Progress	26

Cooperative Agreements for Large Facilities Operations Need Strengthening to Ensure Facilities Accomplish Programmatic Goals

An audit report found that the terms and conditions included in NSF's cooperative agreements for the management and operation of its large facilities need to be strengthened for NSF to fully ensure its facilities accomplish their programmatic goals and objectives. Only two of the six large facility cooperative agreements reviewed include terms and conditions addressing all four of the primary components of a robust program evaluation and measurement system: 1) clear and agreed upon goals; 2) performance measures and, where appropriate, performance targets; 3) periodic reporting; and 4) evaluation and feedback to assess progress.

With NSF's large facilities funded at over \$1 billion annually, it is important that NSF have a process to ensure that all large facility agreements contain each of the four performance evaluation and measurement components. However currently, NSF has no overarching policy in place to ensure that the agreements for large facilities contain terms and conditions to address these performance components. Instead, the success that some of the facilities have achieved has been primarily due to the diligence and dedication of program officers who identified the need for performance evaluation systems and, through a process of trial and error, incorporated performance evaluation terms and conditions into the cooperative agreements over time. Auditors believe the absence of an agency-wide policy contributed to the inconsistency among agreements in addressing all of the critical elements.

To ensure all current and future large facility operation agreements include all four performance components, we recommended that NSF: 1) establish clear authority and resources in NSF's Large Facility Office to oversee all phases of the large facility life cycle; 2) develop and train NSF staff on policies and procedures for including performance evaluation and measurement terms and conditions in all facility cooperative agreements; and 3) provide a mechanism for knowledge transfer among program officers with responsibility for currently operating large facilities. NSF staff generally concurred with our recommendations.

This review is the first of a series of audits OIG is conducting to determine whether the terms and conditions included in NSF's cooperative agreements for the management and operation of its large facilities are sufficient for NSF to provide stewardship over these important and sizeable programs and assets. Using a representative sample of six currently operating facilities, we are assessing the sufficiency of NSF's cooperative agreements to ensure: 1) accomplishment of programmatic goals; 2) financial and administrative accountability; 3) protection of NSF assets; and 4) compliance with laws and regulations. The second audit, assessing the sufficiency of the terms and conditions related to financial and administrative accountability, should be complete in early 2009.

Significant Audits of Grants & Contracts

The OIG is performing a series of reviews at NSF's top-funded universities to assess the adequacy of accounting and reporting processes for labor costs charged to federal awards. During this reporting period, reviews of two more universities with significant NSF and federal funding were completed. These reviews identified significant weaknesses in the documentation, certification and accuracy of labor effort reports supporting approximately \$33 million of research salaries charged to NSF awards.

Among other significant reviews performed, an audit at a school district found the records supporting charges to the NSF award to be unauditible. Also, audits of three NSF contractors identified inadequate monitoring of \$6.7 million of subaward costs, noncompliance with federally disclosed cost accounting practices, and \$324,472 of overcharges for indirect costs.

University of California, San Diego Needs Better Oversight of its Decentralized Labor Effort Reporting System

An audit of the payroll distribution and effort reporting system used by the University of California, San Diego (UCSD) found that UCSD generally had a well established and sound federal grants management system, but identified significant weaknesses in UCSD's support of time reporting and certification processes affecting over 60 percent of the sampled salary and wages selected from a total population of \$28.7 million of salary charged to NSF awards.

UCSD operates a decentralized labor effort system in which the primary responsibility for many grants management functions rests with the individual research academic departments. The deficiencies cited in the report were the result of UCSD's failure to adequately oversee the activities of these departments. For example, auditors found that more than 60 percent of the \$1.2 million in sampled FY 2006 salary charges were certified after the due date set by the University. Also, some Personnel Activity Reports (PARs) were not signed or did not include proper confirmation of the reported labor effort, and four employees incorrectly charged NSF for 5 to 20 percent of labor expended on unrelated administrative activities. Without timely or appropriate controls for certifying labor effort reports, assurance that the certifications are reliable and reasonably support the substantial amounts of salaries and wages charged to NSF's sponsored projects is compromised.

The weaknesses in UCSD's labor effort reporting system occurred because the University had not: 1) established sufficient detailed written guidance for all PAR processes to ensure full compliance with federal requirements; 2) effectively communicated University policies and procedures to all staff involved in the PAR process; or 3) performed adequate monitoring to ensure all UCSD departments complied with established PAR policies and procedures. Furthermore, the University had not conducted an independent internal evaluation of sufficient scope to ensure the effectiveness of the payroll distribution and effort reporting system, thus missing an opportunity to identify and address needed improvements.

The report's recommendations aim to address these weaknesses and to improve UCSD's internal control structure for PAR management and oversight. The University generally concurred with the audit findings and recommendations and agreed to make the necessary changes to its policies and procedures. UCSD has also completed implementation of an automated labor effort reporting system, which should facilitate the adoption of our recommendations.

Vanderbilt University Needs to Ensure Accurate Reporting of Labor Charges and Effort on Sponsored Projects

Vanderbilt University did not approve effort reports timely and/or document certification dates in a majority of the records sampled. As a result, Vanderbilt's labor effort certifications did not always ensure that over 70 percent of the sampled items selected from a total of \$4.2 million of salary and wages charged to NSF grants, reasonably reflected actual work performed on sponsored projects. The auditors found that principal investigators (PIs) did not review and approve labor effort reports within six months of the end of the reporting period for 12 of the 68 reports reviewed, representing 16 percent of total salaries tested. Furthermore, they could not determine whether another 41 reports, representing 60 percent of the sampled NSF salary charges were approved timely because of missing certification dates. In addition, five of the 30 sampled employees interviewed reported actually working 10 to 50 percent less on NSF grants than the time certified on their labor effort reports.

Late certifications diminish the reliability of Vanderbilt University's after-the-fact confirmation of NSF labor costs because certifying officials are relying on their memory, in some cases as long as a year later, to validate the reported labor effort. For example, we found that certifying officials authorized \$17,955 (3 percent) of salary for five employees who did not work sufficient time to justify the salary charged to the NSF projects. Without documented certification dates, Vanderbilt cannot determine whether the labor effort confirmations were timely or not. The systemic nature of these control weaknesses raises concerns about the reasonableness and reliability of the remaining \$3.6 million in FY 2006 labor costs that Vanderbilt University charged to NSF grants and the labor costs claimed on \$300 million of other federal grants.

In addition, the audit found that Vanderbilt needs to provide for accurate reporting of voluntarily committed labor effort devoted by faculty members on federal projects. Unreported voluntary committed PI effort comprised approximately 3 percent of the total \$298,646 of labor costs charged to NSF awards by the 15 faculty members reviewed. Because Vanderbilt had over 2,800 full-time faculty members, the amount of unreported voluntary committed effort could be significant. As such, NSF has less assurance that PIs actually devoted the level of effort promised in their grant proposals to accomplish project objectives. Furthermore, as required by federal regulations, the unrecorded voluntary committed time should have been included in the organized research base Vanderbilt uses to calculate its indirect cost rate, thus reducing the amount of indirect costs the University charges to the federal government.

These weaknesses occurred because Vanderbilt had not established adequate internal controls to provide for proper administration and oversight of its payroll distribution and labor effort reporting system. Specifically, the University had not: 1) established comprehensive effort reporting policies and procedures; 2) provided adequate employee training to ensure clear campus understanding of the effort reporting process; and 3) performed sufficient monitoring to ensure campus implementation and compliance with established University and federal effort reporting policies and procedures. Vanderbilt generally agreed with our recommendations.

Significant Internal Control Weaknesses at School District of Philadelphia Persist and Result in Disclaimer of Opinion

OIG auditors found the records supporting two awards to the School District of Philadelphia (SDP) to be unauditible and therefore could not determine whether approximately \$13 million of direct and associated indirect costs and \$3.2 million of cost sharing claimed by SDP to NSF were allowable, allocable, and reasonable. This occurred because SDP failed to address significant internal control weaknesses in its financial management of NSF awards reported in a prior audit.

The auditors issued a disclaimer of opinion because they were unable to test material portions of SDP's grant and cost sharing expenses. Of the limited amounts the auditors were able to test, they questioned \$4 million, or 31 percent, of total costs SDP claimed to NSF. In addition, SDP did not have: 1) an adequate record retention and retrieval system; 2) an adequate system to account for, monitor, and report cost sharing; or 3) adequate policies, procedures, or a system for the monitoring and accounting of subawardee costs. SDP also did not track or monitor the costs it incurred for its grants by NSF budget category, as required. These deficiencies were cited in a January 2000 OIG audit report in response to which SDP indicated it had taken corrective action. In fact, the deficiencies had become more egregious over time.

Due to the significant and repetitive nature of the internal control weaknesses at SDP, OIG recommended that NSF make no future awards to SDP until NSF has verified that SDP has taken corrective action. We further recommended that SDP develop and implement the systems, policies, procedures, and plans needed to address all of its internal control weaknesses. SDP disputed all the findings and recommendations in the audit report but stated that since 2005 it has enhanced its policies and procedures and internal controls. We forwarded the audit report to NSF's Division of Institution and Award Support to resolve all questioned costs and to ensure corrective action on all internal control weaknesses.

Previously Identified Control Weaknesses Persist at WestEd

At NSF's request, OIG audited \$11 million of costs claimed by WestEd, a non-profit educational research organization, and identified four significant internal control weaknesses in WestEd's financial management that resulted in approximately \$1 million in questioned costs. Three of the four weaknesses were cited in prior OIG and OMB Circular A-133 audit reports.

The most serious deficiency cited was that WestEd did not adequately monitor subaward costs amounting to \$6.7 million or 61 percent of the total costs charged to the NSF award. This occurred because WestEd did not effectively implement the policies and procedures that it established in response to recommendations made in prior audit reports. In order to validate the subaward charges, the auditors performed additional audit work at subawardee locations to verify costs claimed, which resulted in approximately \$15,000 in overstated labor and indirect costs and misclassified travel costs. Required routine subaward monitoring could prevent or identify additional unallowable claimed subaward costs.

In addition, WestEd lacked adequate documentation to support its required cost sharing obligations, incorrectly recorded participant support costs, and erroneously charged unallowable sales tax on alcoholic beverages. As a result, WestEd could not adequately support \$1.25 million in cost sharing contributions that it claimed was provided by a third party, leading the auditors to question over \$988,000 of NSF-funded costs. Over \$7,000 in overstated indirect costs and sales tax costs were also questioned.

While WestEd indicated that it has made progress to develop improved control policies and procedures, implementation and adherence are needed to prevent continued reoccurrence of these problems. We have forwarded the audit report to NSF's Division of Institution and Award Support to resolve the questioned costs and ensure corrective actions.

NSF Contractor Overcharges Indirect Costs

An audit of four contracts with \$2.74 million in costs claimed in 2003 revealed that Abt Associates (Abt), a for-profit research and consulting firm, may be incorrectly recording \$2.5 million in employee pension costs resulting in overcharging indirect costs to its government contracts. Also, Abt changed its method of accounting for indirect costs without prior government approval. Both of these accounting issues are Cost Accounting Standard (CAS) violations that will be resolved by Abt's federal cognizant contracting agency, U.S. Agency for International Development (AID).

The audit was the second of a series of three audits that the OIG contracted with the Defense Contract Audit Agency (DCAA) to perform on costs that Abt claimed on NSF contracts for 2002 through 2004¹. DCAA qualified its opinion on the FY 2003 costs claimed because the CAS violations may result in additional questioned costs that cannot be determined until the issues are resolved. Finally, Abt did not include \$316,470 in its indirect cost allocation base for two indirect cost rates, which resulted in Abt overcharging NSF \$1,710 in indirect costs.

We suggested that NSF coordinate with U.S. AID to resolve Abt's CAS non-compliance issues and determine the amount of unallowable costs charged to NSF contracts. We forwarded the audit report to NSF's Division of Acquisition and Cooperative Support to resolve any questioned costs and ensure corrective actions are taken.

¹ We first reported on costs claimed in 2002 by Abt Associates in the September 2007 Semiannual Report, p. 16.

WHOI Claimed Employee Benefits Pension and Other Indirect Costs in Error

An audit of Woods Hole Oceanographic Institution's (WHOI) federal costs claimed for FY 2006 found that WHOI overcharged its customers approximately \$544,000 by including unallowable items in calculating its indirect cost rates. OIG contracted with DCAA to perform the audit, which was requested by NSF management. WHOI, a non-profit organization that manages and operates a number of research vessels and submersibles funded by NSF's Division of Ocean Sciences, incurred nearly \$102 million in costs on federal awards in FY 2006, \$59 million or 58 percent of which was provided by NSF.

The auditors concluded that WHOI properly charged direct costs to NSF awards using acceptable ship and submersible cost recovery rates. However, while WHOI correctly applied its fixed indirect cost rates to its federal awards, it improperly included approximately \$460,000 in unallowable pension costs and \$83,000 in unallowable software losses and social activity costs in determining two of its six indirect cost rates. As a result, WHOI overcharged its customers \$544,418 of which NSF was overcharged approximately \$315,762 on its FY 2006 awards.

We suggested that NSF coordinate with WHOI's cognizant federal agency, the Office of Naval Research, to ensure that WHOI records and claims pension costs and other unallowable costs in accordance with federal requirements. WHOI disagreed with most of the questioned costs. We forwarded the audit report to NSF's Division of Institution and Award Support for corrective action.

A-133 Audits

Single Audits Identify Material Weaknesses and Significant Deficiencies in 40 of 115 Reports

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 are required to obtain an annual organization-wide audit that includes the auditor's opinion on 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.



This photo of pink jellyfish from the order *Stauromedusae* was taken during a research voyage on the WHOI vessel *Atlantis*.

In the 115 audit reports reviewed this period, covering NSF expenditures of more than \$4.4 billion during audit years 2004 through 2007, the auditors issued 12 qualified opinions on awardees' compliance with federal grant requirements, on their financial statements, or on both. In particular, the auditors identified 92 of the 165 findings (in 40 of the 115 reports reviewed) as material weaknesses or significant deficiencies, indicating serious concerns about the auditee's ability to manage NSF funds and comply with requirements of major grant programs. Not correcting these deficiencies could lead to future violations and improper charges. As detailed in the table below, the most common violations were related to financial and award management and indirect costs.

Findings Related to NSF Awards

Category of Finding	Type of Finding			
	Compliance	Internal Controls	Monetary	Total
Financial and Award Management	31	18	4	53
Salary/Wages	17	1	2	20
Fringe Benefits	3	1		4
Subawards	11	1		12
Procurement System	14	6		20
Equipment	10	1		11
Cost-Sharing			1	1
Indirect Costs	21	1	1	23
Property Management System	1			1
Other Direct Costs	2	1	3	6
Travel	5		1	6
Program Income	1			1
General Areas (Information Technology)		7		7
TOTAL	116	37	12	165

We also examined 54 management letters accompanying the A-133 audit reports. Auditors use 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 letters disclosed a total of 62 deficiencies that could affect NSF awards in areas such as tracking, managing, and accounting for NSF costs and segregation of duties.

Single Audits Continue to Have Timeliness and Quality Deficiencies

The audit findings contained in A-133 single audit reports help to identify potential risks to NSF awards and are useful to both NSF and the OIG in planning site visits, post-award monitoring, and future audits. Because of the importance of A-133 reports to the process of overseeing awardees, the OIG returns reports that are deemed inadequate to the awardees to work with their audit firms to take corrective action.

Of the 45 audit reports² we reviewed in which NSF was the cognizant or oversight agency for audit,³ 30 (67 percent) did not fully meet federal reporting requirements. For example, we found that 10 reports (22 percent) were submitted late or the audit reporting package was incomplete. Also, for 16 reports (36 percent), the Schedule of Expenditures of Federal Awards did not provide sufficient information to identify federal funds that were received via non-federal “pass-through” entities, and another 13 reports (29 percent) either did not include a corrective action plan or the plan was incomplete to address the audit findings. Eleven reports (24 percent) did not adequately identify the federal award to which the findings applied, the criteria or regulatory requirement upon which the findings were based, and/or the cause and effect of the findings.

In addition, eight of the 45 reports we reviewed (18 percent), or 8 of the 30 audit reports with timeliness and/or quality deficiencies (27 percent), involved repeat deficiencies which we had reported to the auditors and awardees during reviews of previous audits. In most cases, the repeat deficiency occurred because the auditors did not receive our letter before issuing the subsequent year’s audit. However, in one instance, the letter contained the same deficiency for the third consecutive year.

The OIG identified each of the potential errors and contacted the auditors and awardees, as appropriate, for explanations. In most cases, they provided adequate explanations or additional information to demonstrate compliance with the Circular, or the error did not affect the results of the audit. However, we rejected one report due to significant non-compliance with federal reporting requirements. We issued a letter to each auditor and awardee informing them of the results of our review and the specific issues on which to work during future audits to improve the quality and reliability of the report.

Improvements Ongoing in Response to National Single Audit Sampling Project

Last year, we reported on the results of the National Single Audit Sampling Project, issued by the IG community to assess in general the quality of the audits that are required by the Single Audit Act.⁴ The project found that 93 of 208 sampled audits were of limited reliability or unacceptable. The report made several recommendations to OMB, various federal agencies, and the American Institute of Certified Public Accountants (AICPA).

² The 45 reports were prepared by 30 different audit forms.

³ The “cognizant or oversight agency for audit” is defined as the federal agency which provided the largest amount of direct funding to an auditee. On a 5-year cycle, OMB assigns a cognizant agency for audit to auditees who expend \$50 million or more in federal funds in a year. On an annual basis, OMB assigns an oversight agency for audit to auditees who expend less than \$50 million in federal funds in a year.

⁴ September 2007 Semiannual report, p. 17.

In response to the findings and recommendations in the report, OMB has established eight workgroups, comprised of individuals from the IG community coordinating with taskforces established by the AICPA, to improve the quality and oversight of future single audits. The workgroups will revise appropriate sections in OMB Circular A-133, the OMB Compliance Supplement, and AICPA guidelines related to presenting audit findings documenting audit testing on internal controls and compliance with federal requirements, and developing and documenting audit sampling plans. Workgroups have also been established to develop a training curriculum for auditors who perform Single Audits; revise PCIE/ECIE standards for conducting initial reviews of the reporting package's completeness and compliance with Circular A-133 requirements, and quality control reviews of the auditor's workpapers in order to ensure uniform reviews by the federal community; and determine what sanctions and punitive actions are available to federal agencies in response to substandard audits.

NSF OIG staff are participating in the workgroup to revise the PCIE/ECIE standards for conducting quality control reviews, and have taken the lead on making revisions to the initial review checklist. OIG staff have also met with members of the AICPA Peer Review Board to discuss how initial reviews and quality control reviews of A-133 audits compare to the AICPA's own peer reviews. Several workgroups expect to issue exposure drafts of the proposed Circular A-133 changes for public comment in the Federal Register during the next semiannual period.

Audit Resolution

NSF Implements Recommendations to Enhance Stewardship of Research Center Programs

In late 2007, we issued an audit report on NSF's policies and practices to oversee and manage its eight research center programs. The report noted that while the National Science Board (NSB) and NSF senior management had issued a set of principles and general guidance that provided a broad framework to ensure effective management, oversight, and accountability for center programs, NSF program managers had not consistently implemented this guidance. Further, NSF lacked a formal mechanism for program managers to share information and best practices to enhance their management and oversight principles. Our report recommended that NSF incorporate the guidance into its formal policies and procedures and re-establish a forum for center program managers to discuss common issues and identify and exchange promising practices.

During this semiannual reporting period, NSF implemented both recommendations. In July 2008, NSF took action to implement our first recommendation by updating its *Proposal and Award Manual* to incorporate both the NSB principles and NSF Senior Management guidance regarding research center programs. NSF describes the guidance and principles as the framework and baseline for overseeing and managing center programs. It also states that, if program staff supplement this guidance when communicating it to their Center programs, the supplemental guidance should be documented in eJacket (NSF's electronic record system) and shared with NSF staff from other Center programs, as appropriate.

In the same month, NSF implemented the second recommendation by holding the first *Effective Practices Forum for the NSF Center Programs*. In this session, each of NSF's research center programs discussed its diversity goals, strategies for achieving these goals, and program achievements and concerns. NSF plans to hold four meetings each year to stimulate discussion and an exchange of information on effective practices for the management of research centers.

UCAR Agrees to Implement Corrective Actions

The University Corporation for Atmospheric Research (UCAR) has agreed to correct the significant internal control weaknesses in its purchase card program and employee timekeeping processes reported in our March 2008 Semiannual Report, but has not yet implemented all corrective actions.

The audit was initiated based on information developed during an OIG investigation of an employee's fraudulent use of a UCAR purchase card. The audit report noted that while the internal control structure for UCAR's purchase card program contained the basic elements of an effective internal control system, the controls were not always implemented or effective in preventing or detecting fraud. UCAR took immediate steps to address the weaknesses identified in the audit, including strengthening its procedures for supervisory review and approval of monthly billing statements and supporting purchase receipts. UCAR also agreed to perform random inventories on purchased items costing less than \$5,000, which are susceptible to theft, and to implement a timekeeping system that records all employees' hours worked and when they are on leave. It is in the process of identifying a system that will address these needs. Federal guidelines require grantees to have effective controls over government funds, and NSF is responsible for ensuring that corrective actions are satisfactorily implemented.

\$25,778 in Questioned Costs Sustained and Internal Control Weaknesses Corrected at the University of California, Berkeley

In our March 2008 Semiannual Report,⁵ we reported that the University of California, Berkeley (UCB) labor effort certifications did not always ensure that salary and wages charged to NSF awards reasonably reflected actual work performed on sponsored projects and identified a number of serious control weaknesses.

Since that audit, UCB instituted a new web-based effort reporting system and procedures that should correct most of the deficiencies cited in the report, including monitoring the certification of effort reports to ensure timely completion. UCB also added an internal control to ensure personnel certifying effort reports are in a position to know whether work was actually performed and benefited NSF's awards. In addition, the University strengthened its training program on effort reporting and agreed to perform independent evaluations of the effort reporting system every three years to ensure it meets federal and NSF requirements. NSF sustained all of the \$25,778 in questioned costs and has verified with the Division of Financial Management that UCB has repaid the entire amount in two payments received in April and June 2008.

⁵ March 2008 Semiannual Report, pp. 15-16.

Non-Profit Requested to Record Actual Indirect Costs in Its Accounting System to Properly Report the Full Cost of Its Operations

The March 2008 Semiannual Report,⁶ discussed two reviews of Bermuda Institute of Ocean Sciences' (BIOS) accounting system and costs claimed on four awards. Those reviews found that BIOS did not comply with a federal requirement to use actual rather than budgeted indirect cost rates to close out and recognize its final costs in its accounting records. As a result, BIOS may not be recovering the full cost of its operations. The possible underbilling of expenses, coupled with increased costs that BIOS incurred for an expanded research program, could impact BIOS' ability to operate without additional funding, cost reductions, or increased revenue.

NSF agreed that BIOS' current accounting practices could potentially lead to under-billing its federal funding agencies and encouraged BIOS to consider the use of the NSF negotiated final rates to close its accounting records at year-end to reflect its actual indirect costs. Also, in response to OIG concerns about the financial stability of BIOS, NSF reviewed BIOS' FY 2006 financial statement and noted increases in property, plant and equipment assets and increases in revenue from investments and outside party contributions. NSF stated that it will monitor BIOS' 2007 financial statements when negotiating its next indirect cost rate proposal.

NSF Sustains \$173,663 of Questioned Costs Due to Significant Internal Control Weaknesses at University

An audit of three awards amounting to \$9.4 million to the University of Maryland Baltimore County (UMBC) found serious internal control deficiencies, including inconsistent adherence with UMBC's own established financial management practices, as reported in our September 2007 Semiannual Report.⁷

In submitting costs to NSF for reimbursement, auditors found that UMBC staff: 1) did not always follow the University's cost accounting procedures to ensure that costs were accurate, allowable, and allocable; 2) did not always monitor the subaward costs and cost sharing as required; and 3) did not have adequate procedures to detect errors in the amount of indirect costs it claimed. These internal control deficiencies resulted in \$174,655 of erroneous costs billed to NSF grants that the auditors questioned.

During the resolution process, UMBC submitted documentation supporting corrective action it has taken, including the reorganization of UMBC's Office of Sponsored Programs and Office of Contract and Grant Accounting. UMBC is also 1) establishing grant compliance review procedures; 2) providing training programs on proper federal award management; 3) developing a new subawardee fiscal monitoring plan; and 4) developing procedures for the review and recalculation of indirect costs. NSF sustained \$173,663, or 99 percent, of the questioned costs.

⁶ March 2008 Semiannual Report, p. 19.

⁷ September 2007 Semiannual Report, pp. 16-17.

SRI Improves Licensing and Reporting Activities for Radar Project

As reported in our March 2008 Semiannual Report,⁸ a financial audit of \$30 million of NSF funded costs incurred under a cooperative agreement with SRI International (SRI) found that SRI had failed to renew licenses timely and submit completed reports to Canadian authorities for the Advanced Modular Incoherent Scatter Radar (AMISR) project. In addition, SRI did not keep Canadian authorities fully apprised of the scientific research activities performed on the AMISR project through its annual license renewal reporting process, or obtain NSF review and approval of all agreements with the Canadian authorities as required by the agreement.

The noncompliance with the requirement to maintain timely license renewals was caused by SRI's lack of a written policy and procedure for obtaining scientific license renewals, and its lack of understanding of the license renewal process and requirements. In response to the recommendations, SRI has obtained a current scientific license to conduct research for the project, and established procedures for the renewal of the research license and submission of the annual report to the local government. In addition, SRI has developed a tracking system to identify project requirements and due dates to coordinate licensing and reporting actions with NSF program officials.

NSF Errors and Contractor Cost Overruns Result in \$231,838 of Questioned Costs

In March 2007⁹, we reported on an audit of \$4.8 million in claimed costs on an NSF contract with Temple University to provide technical evaluation support for NSF's Division of Research, Evaluation and Communication. The audit questioned \$230,291 in costs claimed in excess of the authorized contract funding and \$1,547 was for unallowable alcoholic beverages.

Although NSF had prepared a modification to increase the award by \$175,000, it did not sign the award document that provided additional funding to Temple. Therefore, the auditors could not verify that NSF had actually approved the increased funding. The missing NSF approval on the modification document, coupled with an additional cost overrun of \$55,291 resulted in the auditors questioning the \$231,838.

During audit resolution, NSF determined that it had received benefit from the services Temple University performed and therefore allowed all of the extra costs. To correct the contract administration lapses, NSF executed a new contract modification that provided the funding for Temple for all the contract costs, except for the \$1,547 in unallowable alcohol expenses. In addition, NSF, in its newly issued Contracts Award Manual, included requirements for the Division of Acquisition and Cooperative Support staff to complete a distribution checklist and ensure that all award documents are signed, provided to the contractor, and retained in the official contract file.

⁸ March 2008 Semiannual Report, pp. 18-19.

⁹ March 2007 Semiannual Report, p. 17

NSF Sustains \$320,418 in Questioned Costs and \$25,074 in Penalties

An audit of two NSF contracts with Compuware Corporation totaling \$28.2 million over four years to provide information technology support services to NSF resulted in questioned costs of \$320,418 because Compuware incorrectly included direct costs in the overhead pool and claimed unallowable costs for gifts, contributions, parties and picnics.¹⁰ The auditors reported that the questioned unallowable costs were subject to penalties and calculated the amount to be \$25,074. NSF resolved this audit by implementing all of the auditor's recommendations, including sustaining all of the questioned costs and agreeing to assess the penalties at the close of the applicable contract. NSF also obtained Compuware's agreement to review and revise two subsequent years' cost submissions to ensure that the same type of mischarges were not included, and required Compuware to revise its policies and procedures to prevent recurrence of similar problems on the ongoing contract.

Work in Progress

The OIG Continues to Review Labor Effort at Universities

As noted in prior Semiannual Reports,¹¹ the OIG is conducting a series of reviews to assess the adequacy of accounting and reporting processes for labor costs at NSF's top-funded universities. Approximately, one-third of all NSF funds provided to universities are for salaries and wages, amounting to more than \$1.2 billion annually. As of September 30, 2008, we have completed six audits and have six more currently in progress that are expected to be completed early next year. The objectives of these audits are to evaluate whether the universities' internal controls are adequate to properly manage, account for, and monitor salary and wage costs and to determine if these costs are allowable in accordance with federal cost principles. In 2009, we plan to initiate four additional audits, bringing our total work in this series to 16 audits. At that point, we will assess the need for additional reviews of university labor effort.

NSF's Audit Resolution Process

We are continuing our audit of the process NSF follows to resolve the findings and recommendations of OIG and A-133 single audits conducted of NSF award recipients. Our objective is to determine whether NSF has adequate policies and procedures for resolving and closing out the audit recommendations, and whether NSF implements the policies and procedures effectively and timely. To address the objective, we are evaluating NSF's resolution actions for a statistically representative sample of audits issued during the period FY 2003 through FY 2007. We anticipate completion of this audit in early 2009.

¹⁰ March 2007 Semiannual Report, p. 17.

¹¹ September 2005 Semiannual Report, p. 20.