

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY  
SUBCOMMITTEE ON OVERSIGHT

**“Top Challenges for Science Agencies: Reports from the Inspectors General - Part 1”**

**Questions for the Record, Ms. Allison C. Lerner, Inspector General, National Science Foundation**

Questions submitted by Dr. Paul Broun, Chairman

Cooperative Agreements

- 1) According to your 2012 Management Challenges report, NSF currently has 685 Cooperative Agreements totaling nearly \$11 billion, of which 38 are for over \$50 million each.<sup>1</sup> Your office has identified various problems with NSF’s Cooperative Agreement award and monitoring process. Considering that Cooperative Agreements are not subject to the same rigor and reporting mechanisms as a contract:
  - a. As indicated in your 2012 Management Challenges report, why does NSF not have a strong post-award monitoring process?
  - b. How has NSF responded to the suggestion that a stronger post-award monitoring process is needed for Cooperative Agreements?<sup>2</sup>

**OIG:** As we have pointed out in the Management Challenges report, there are two main problems contributing to an overall weakness in NSF’s post-award monitoring process. First, while NSF receives certain financial reports on its large facility cooperative agreements, these reports do not contain the level of detail needed to perform adequate cost surveillance. NSF only receives sufficient cost details from a few awardees that also have large contracts and are therefore required by the Federal Acquisition Regulation to provide annual incurred cost submissions. NSF does not require incurred cost submissions, or their equivalent, which are important for proper cost monitoring because they provide visibility over awardees’ claimed costs. Second, NSF does not routinely obtain incurred cost audits of nonprofit awardees that have high-risk, high dollar, cooperative agreements and grants. Audits of incurred cost submissions are critical for proper monitoring and would reveal instances of noncompliance with federal regulations as well as costs claimed that are unallowable or unreasonable. Such information is particularly important in high value, high risk cooperative agreements. NSF explained that it has chosen not to undertake these oversight measures because they are not required in the assistance agreement context.

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<sup>1</sup> P.1 of 2012 NSF Management Challenges Report.

<sup>2</sup> P.1-2 of 2012 NSF Management Challenges Report.

To be clear, we are not suggesting that NSF take these actions for all its cooperative agreements. We are recommending that NSF should use a risk-based approach that at a minimum, includes these elements for its high-risk, high-dollar (those over \$50 million) cooperative agreements that warrant the additional oversight necessary for proper accountability over federal funds. NSF believes that the \$50 million level is too low, but has not indicated what dollar level it believes would be sufficient.

In response to our recommendations to institute stronger post-award monitoring, however, NSF has stated that it agrees with OIG concerning the need for cost surveillance controls over the lifecycle of large facilities projects, which are funded through cooperative agreements. NSF stated in its corrective action plan in response to our alert memo that it agrees with some of our recommendations. However, while the plan makes repeated references to developing guidance for oversight of cooperative agreements, there is no indication of what this guidance will require. NSF needs to have a concrete plan to ensure oversight of its high-risk, high-dollar cooperative agreements, not simply an ad-hoc approach.

In addition, in response to a charge from the NSF Director for a senior advisor to coordinate a major assessment of processes for supporting large research facilities from conception through construction to operation and sun-setting, NSF has developed a plan that offers opportunities for more robust oversight. We view this plan as a step in the right direction. Nevertheless, we remain concerned that it may be too open-ended. For example, as explained in its response to the OIG's alert memo, NSF stated that the need for incurred cost audits of even its highest dollar awards would be determined on an ad hoc basis. NSF has offered nothing concrete insofar as when such audits or incurred cost submissions would be required. Since this effort was spearheaded by the Director, we are concerned about NSF maintaining the momentum to address oversight of its high-risk, high-dollar cooperative agreements after the Director's departure from the Foundation at the end of March. Our recommendations are reasonable and prudent measures to protect taxpayer funds.

- 2) Does your oversight of Cooperative Agreements (CA) include reviewing ethical or conflict-of-interest violations? Have previous CA reviews ever considered such violations?

**OIG:** Our oversight of cooperative agreements has focused on NSF's cost surveillance measures for awarding and managing cooperative agreements and has not included a review to determine whether there are conflict-of-interest violations.

#### Audits

- 3) What areas of your office's audits tend to be most contentious with institutions? How does your office work with institutions to address these issues, and what is the procedure if an agreement cannot be reached?

**OIG:** We use a risk assessment in determining which external entities to audit, which includes factors such as an institution's past record of managing federal awards. The most contentious

areas are usually those audits that question costs, and the level of disagreement rises along with the dollar value of the questioned costs.

In such audits, the procedure for resolving audit findings is set forth in OMB Circular A-50, *Audit Followup*. Pursuant to A-50, NSF management is responsible for issuing a management decision on audit recommendations and for following up with awardees on implementation of the agreed upon actions to address recommendations. Thus, while the OIG communicates with NSF throughout this process and reviews the proposed actions, NSF works with awardees to address the audit recommendations. If the OIG and NSF are unable to agree on the corrective actions to resolve the recommendations, the matter is referred to NSF's Deputy Director for resolution.

Finally, A-50 provides that all recommendations should be resolved within six months from the date the final report is issued.

- 4) Who is ultimately responsible for recovering money identified by audits, and what happens when NSF disagrees with the OIG?

**OIG:** As part of the audit resolution process, NSF is responsible for working with awardees to recover money identified by audits.

According to your written statement, on a recent audit of a university that is among the top 30 largest NSF award recipients, you identified over \$6 million in questionable expenses using new automated techniques as a supplement to your traditional audit techniques. How did the institution respond to your finding, and how is that situation being resolved?

**OIG:** The institution disagreed with the audit findings. Resolution of audit findings between NSF and the OIG and closure of audit recommendations will follow the audit resolution procedure outlined in the response to question 3.

- 5) To perform better oversight of awards, your office has conducted a "virtual site visit pilot program as an enhancement to the AMBAP [Award Monitoring and Business Assistance Program]." <sup>3</sup> Do you feel that these virtual site visits are sufficient? Are there limitations to when a virtual site visit can be employed compared to an actual site visit?

**OIG:** NSF's Office of Budget, Finance, and Award Management (BFA), which has the responsibility for issuing and overseeing the thousands of awards NSF makes each year, commenced its Award Monitoring and Business Assistance Program to help ensure that awardees have adequate processes and systems to manage their NSF awards. The virtual site visit pilot is BFA's initiative, not the OIG's.

Virtual site visits can be a cost effective mechanism to identify problems, particularly during a time of limited resources. Combined with other oversight tools for high-dollar, high-risk awardees, such as accounting system reviews and incurred cost audits, virtual site visits can enhance NSF's monitoring capability, especially when on-site reviews are not possible.

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<sup>3</sup> P.3 of 2012 NSF Management Challenges Report.

We have not done an analysis comparing the adequacy of virtual site visits with actual visits.

### Contracts

- 6) The 2012 Management Challenges report raised concerns regarding cost reimbursement (CR) contracts, and highlighted the need for better monitoring of costs on NSF's largest contracts. The report states, "Although the Contracting Manual was updated to require cost incurred submissions every 6 months from its largest contractors, in FY 2011 two of three contractors transmitted the submissions late and the third did not submit one at all."<sup>4</sup> What is the next step that NSF should take to ensure compliance with these guidelines from contractors who fail to meet them?

**OIG:** There is a range of options NSF could consider to ensure compliance by contractors including award suspension or termination. Depending on the circumstances, government-wide suspension or debarment could also be appropriate. Ultimately, what NSF does is within the agency's purview, and we continue to encourage NSF to take strong action to ensure compliance with this requirement.

- 7) NSF funds large research infrastructure projects through the Major Research Equipment and Facilities Construction (MREFC) account. In an effort to keep MREFC project costs from escalating during construction, NSF instituted a "no cost overrun policy" on new MREFC-funded construction projects. "This policy requires that the total project cost estimate developed at the Preliminary Design Stage have adequate *contingency* to cover all foreseeable risks, and that any cost increases not covered by contingency be accommodated by reductions in scope."

In testimony you presented last Congress, you noted that the Defense Contract Audit Agency (DCAA) that assists you with audits found that "there are a lack of controls over the contingency funds" for several MREFC projects. Specifically, awardees can draw down contingency funds as they do normal funds.

- a. What has your office found out so far about how these funds are being used?
- b. What is NSF's response to your office's work on contingency funding, and what kind of resolution is your office looking for from its investigation into the MREFC funding process?

**OIG:** In order to gain insight into how contingencies are actually used in construction projects, we audited the use of contingencies in a closed project. We found that NSF lacked visibility over expenditure of contingency funds. NSF's policies allowed the awardee to execute all change order requests for \$250,000 or less to the MREFC account or \$100,000 or less for the operations and maintenance yearly cost without NSF's review or approval. We found that the awardee executed all nine of the existing change orders (which totaled over \$1,000,000) without seeking NSF's approval thereby limiting NSF's ability to ensure that requests for and approvals of the use of contingency funds were appropriate. Current policies continue to allow MREFC awardees to execute change order requirements for amounts less than designated thresholds for

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<sup>4</sup> P.4 of 2012 NSF Management Challenges Report.

each project. We also found some instances in which NSF approved the use of contingency funds for matters that did not appear to represent the materialization of contingent events such as hiring a publications coordinator and paying for office space.

Further, our audit of a closed award found that awardees did not separately track contingency expenditures so it was impossible to tell what these funds were actually used to purchase. In addition, a recent audit of another MREFC project revealed many of the same problems.

The bottom line is that NSF's current method for managing contingencies which allows awardees to request and obtain contingency funds without NSF's approval and is exacerbated by a lack of visibility into contingency expenditures, increases the risk of misuse of contingency funds. At a minimum, NSF should hold unallowable contingency funds (i.e., those for unforeseeable occurrences) until the awardee is able to demonstrate through adequate documentation, the need for such funds. The OIG is seeking a resolution that implements its recommendations which are in line with federal requirements, reasonable, and represent prudent business practice.

NSF's disagrees with the OIG and asserts that its current practice is consistent with federal requirements.

#### Research Misconduct

- 8) You reported that over the past 10 years, the number of allegations and findings of research misconduct at NSF has tripled.<sup>[1]</sup>
  - a. Do you think that the increase is because technology has made it easier to perpetrate misconduct, or because misconduct is easier to detect?
  - b. Has there been a shift in culture with regards to research misconduct?

**OIG:** (a) Technology has made it easier for individuals to commit research misconduct and has also advanced our ability to detect such activity.

As cited in my testimony, recent surveys suggest that 30 percent of researchers admit to engaging in questionable research practices and 50 percent of college undergraduate students admitted to cheating reflecting the current cultural climate. Such attitudes demonstrate the importance of affirmative steps to counter integrity-related violations.

Responsible Conduct of Research (RCR) programs were created in response to requirements in the America Competes Act to advance the professional and ethical development of new scientists. My office has observed variations in grantee RCR programs. Therefore, among other things, we are planning to examine the course content, participation requirements, and oversight of institutional RCR programs.

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<sup>[1]</sup> P.9 of 2012 NSF Management Challenges Report.

## U.S. Antarctic Program (USAP)

- 9) The September 2011 NSF IG Report to Congress included the recovery of \$11.4 million in wrongful charges from the contractor providing support for the USAP. In 2012, a new contractor took over work on the USAP. Has your office been involved with the transition to the new contractor for the Antarctic Program? To what degree does your staff monitor and review this transition and the work of the new contractor?

**OIG:** My office was not involved with the transition to the new contractor for the USAP. The selection of a new contractor is an agency function. The IG Act makes clear that OIGs are not to perform management functions. As such, we would not have been involved in NSF's process for selecting the new contractor or managing the transition. My office did, however, recommend that as part of the procurement process, NSF ensure that DCAA audits were obtained of business and financial systems along with cost proposals submitted by bidders for the USAP contract. Such audits, which NSF obtained, are important to determine whether those systems are capable of ensuring that government funds are properly allocated and billed and that costs proposed are reasonable.

Now that the new contractor has been chosen and is in place, we are developing a comprehensive, long-term oversight plan for the USAP. As the new contractor is responsible for infrastructure and logistical functions for the program, we will be monitoring the new contractor's work in these areas. In addition to examining those areas, the plan also includes work to determine whether the contractor is charging costs that are reasonable and allowable.

- 10) Does NSF have sufficient oversight mechanisms to protect against waste, fraud, and abuse relative to the USAP?

**OIG:** USAP is a complex program operating in one of the world's most challenging environments. The recent Blue Ribbon Panel report made a number of recommendations with regard to the program's logistical challenges. NSF has recently completed its response to the Panel's recommendations, which we will be evaluating and assessing for any vulnerabilities that could increase the risk of waste, fraud, and abuse. We have started an audit to determine whether there are opportunities for savings in USAP's medical screening processes. Other issues in our oversight plan include the impact of deferred maintenance on USAP facilities and the impact on research if an icebreaker is unavailable.

## SBIR/STTR

- 11) Based on what seems to be significant concerns of fraud within the Small Business Innovation Research (SBIR) program, how are the recommendations of the SBIR Working Group – under the Council of Inspectors General on Integrity and Efficiency – being received by the different SBIR participating agencies?

**OIG:** Since its inception in 2009, the working group has made significant progress in preventing and detecting fraud in the SBIR program. For example, based on the group's recommendations, SBA has made improvements to *TECH-Net*, the government database of SBIR/STTR awards, to better assist in the identification and analysis of companies under examination or investigation.

A particular focus of the group has been promoting the government-wide use of standardized life-cycle certifications to prevent fraud and to facilitate prosecution of fraudulent activities. This effort culminated in revisions that are being made to the SBA's SBIR policy directives, which include requirements for such certifications. The draft policy directive has also incorporated a number of other working group suggestions to prevent and detect fraud, waste, and abuse in this program. We understand that SBA is finalizing this directive. An agent-level working group also shares information and coordinates investigations with SBIR agencies. This group has identified several fraud indicators and is working proactive investigations.

12) How much time and staff does your office dedicate to investigating and auditing SBIR and STTR (Small Business Technology Transfer) grants?

- a. Is the reason for your focus on these programs a reflection of the problems that exist with these types of grants or that NSF doesn't scrutinize them enough?
- b. How has this changed over the past two or three years?

**OIG:** We have one agent working full time on SBIR investigations and coordinating the interagency working group, but every agent in the office has worked multiple SBIR cases since 2009. Additionally, most of the other investigative attorneys and investigative scientists on our staff have worked SBIR cases over the past few years, on issues including duplicate funding, false certifications, and research misconduct. We currently have 58 active SBIR cases. These cases make up approximately 20% of the Office of Investigations active case load. Twelve of these cases have been accepted for civil or criminal prosecution, with several more likely to follow in the near future.

At NSF, the primary objective of the SBIR program is to increase the incentive and opportunity for small firms to undertake cutting-edge, high-risk, high-quality scientific, engineering, or education research that would have a high potential economic payoff if the research is successful. We have focused on the SBIR programs because of the risk of unscrupulous companies attempting to fraudulently obtain SBIR funds, duplicative funding, and other types of fraud. SBIR funds are directed at small, start-up businesses that may lack experience in managing federal funds. While the vast majority of businesses receiving SBIR awards from NSF spend the funds properly and report accurately to the agency about their results, our experience shows that a small fraction of awardees engage in fraudulent activity.

It is important to emphasize that NSF's SBIR program staff has strongly supported my office's efforts to prevent, detect, and prosecute fraud in the program. SBIR program officers regularly inform us when they receive allegations of wrongdoing or become aware of information that indicates a possible problem.

**OIG:** SBIR cases have been an important part of our investigative work since the 1990s and as noted above, we have worked closely with SBIR program officials since that time. One of the problems we encountered until the working group was established was a lack of insight into problems with duplicative funding at other agencies. The agent-level working group has

enhanced our ability to work multi-agency cases and has contributed to the current increase in the number of cases.

As we conduct our investigations, we look for evidence of internal control weaknesses that can be exploited. Based on these efforts, we have made several recommendations to NSF to reduce the risk of fraud in SBIR/STTR programs including that NSF require awardees to notify the agency when any significant changes to the budget or to research are planned. NSF has agreed with our recommendations and is taking steps to implement them.

Question submitted by Rep. Lamar Smith, Chairman, House Science, Space, and Technology Committee

- 1) During the hearing, I asked you to provide the Committee with the names of universities and colleges that need a second look because of questionable grant expenditures. Please reference p. 38 of the hearing transcript to refresh your memory about this request, and please ensure you provide the information within the timeframe provided in the Committee's letter to you.

**OIG:** NSF is the funding source for approximately 20 percent of all federally supported basic research in science and engineering conducted by the nation's colleges and universities. Each year the Foundation funds approximately 10,000 new awards at more than 2,000 institutions. The OIG has an important oversight role over these expenditures, but given the breadth of our mission, we can only review a small number of awards each year. To target our oversight where questionable grant expenditures are most likely we conduct a risk assessment that considers factors such as an institution's past record in managing federal funds.

In addition, we are using automated techniques, which enhance our oversight and permit us to:

- Better identify high-risk awardees
- Expand audit coverage to 100 percent of expenditures
- Focus our limited audit resources on questionable expenditures.

Using automated techniques enables us to obtain data from multiple financial and program databases, which we can compare and analyze to identify anomalies in cost data and in award-expenditure patterns. These techniques provide a level of transparency over recipient spending well beyond that available from traditional methods.

Following are the names of the colleges and universities where we identified questioned costs in FY 2012 and FY 2013:

Johns Hopkins  
University of Notre Dame  
University of California-Santa Barbara  
University of Wisconsin-Madison  
Jackson State University