

**NATIONAL SCIENCE FOUNDATION**  
4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230



**OFFICE OF  
INSPECTOR GENERAL**

**MEMORANDUM**

**DATE:** March 10, 2011

**TO:** Martha A. Rubenstein  
Director and Chief Financial Officer  
Office of Budget, Finance, and Award Management (BFA/OAD)

**FROM:** Dr. Brett M. Baker /s/  
Assistant Inspector General for Audit

**SUBJECT:** Limited Scope Review of Recovery Act Data Quality - New Jersey Institute of Technology, Report Number OIG-11-1-004

As part of our oversight responsibilities, the Office of Inspector General has conducted reviews of institutions that have received National Science Foundation (NSF) grants funded by the American Recovery and Reinvestment Act (ARRA or Recovery Act) to assess the overall quality of required quarterly reports. Such reports contain detailed information on ARRA projects and activities and are the primary means for keeping the public informed about the way funds are spent and the outcomes achieved. Our review objectives were to determine whether the New Jersey Institute of Technology (NJIT or the Institute) had established an adequate system of internal controls to provide reasonable assurance that (1) Recovery Act funds were segregated and separately tracked in its project cost accounting system and (2) quarterly reporting was timely, accurate, and fully compliant with Section 1512 ARRA reporting requirements. A detailed description of the background, objectives, scope, and methodology can be found in Appendix A.

**Results of Review**

Our review found that NJIT had properly segregated \$6.7 million in NSF funds awarded for ten ARRA grants in its accounting system, timely submitted Recovery Act quarterly reports, and centralized ARRA reporting to ensure consistent application of federal and NSF reporting requirements. However, improvements were needed in the Institute's processes for compiling and reviewing the quarterly ARRA information to ensure all data elements reported were accurate, complete, and fully compliant with Section 1512 requirements. Specifically, our review disclosed that NJIT had not established formal ARRA reporting guidance or a comprehensive ARRA data quality review process.

As a result, review of the December 2009 and March 2010 quarterly reports found that three of the eight ARRA data elements reviewed were not accurately reported. Specifically, the data elements reported correctly included: expenditures, funds received/invoiced, quarterly activities/project description, project status, and final report status. However, improvements were needed to ensure the number of jobs, vendor payments, and subaward data were accurately and completely reported.

These exceptions identified during our review occurred primarily because NJIT was in the early stages of developing its ARRA reporting processes. Given the delays and changes to the Office of Management and Budget (OMB) reporting guidance and the volume of ARRA data required to be reported within 10 days after the end of each quarter, this was understandably a very challenging process. Nevertheless, given the unprecedented Recovery Act accountability and transparency goals, the development of effective NJIT processes and oversight functions are critical factors for ensuring ARRA data quality.

We provided a draft of this memorandum to NJIT management for its review and comment. Also, the review results were discussed with the Institute management at the completion of our onsite review so that timely NJIT actions could be taken to implement improvements needed to promote the highest degree of transparency and accountability over Recovery Act funds. NJIT generally concurred with the finding and recommendation 1.2 and has begun developing formal ARRA reporting policies and procedures and establishing a formal data quality review process. NJIT's written comments in their entirety are included as Appendix B.

With regard to recommendation 1.1, we have revised and redirected it from NSF to NJIT in the final audit report. The recommendation requires NJIT to establish a formal milestone date for issuing formal written grant policies and procedures, as required by a prior NSF Desk Review Report. Accordingly, NJIT has been requested to provide its position on the revised recommendation.

To help ensure the recommendations are resolved within six months of audit report issuance pursuant to the Office of Management and Budget Circular A-50, please provide the audit resolution memorandum for our review when NSF has obtained an acceptable Corrective Action Plan. The Plan should detail specific NJIT actions taken and/or planned to address each audit recommendation. Milestone dates should be provided for corrective actions not yet completed.

We appreciate the cooperation that was extended to us during our review. If you have any questions, please contact Jerel Silver at extension 8461 or Roslyn Kessler at extension 2334.

cc: Mary Santonastasso, Division Director, DIAS  
Dale Bell, Deputy Division Director, DIAS  
Alex Wynnyk, Branch Chief, CAAR/DIAS  
Richard Rasa, Director, Department of Education, OIG

## Audit Finding and Recommendations

### 1. Improved Control Measures Needed to Ensure Accurate ARRA Quarterly Reports

Section 4.2 of OMB Memorandum M-09-21<sup>1</sup> requires “Prime recipients, as owners of the data submitted, [to] have the principal responsibility for the quality of the information submitted.” Specifically, the prime recipient is responsible for (a) implementing internal control measures to ensure accurate and complete information and (b) performing data quality reviews to identify reporting errors and making appropriate and timely corrections.

However, NJIT had not established adequate internal control measures to ensure all Recovery Act data elements reported were accurate, complete, and fully compliant with OMB reporting guidance. Review of the December 2009 and March 2010 ARRA reports disclosed that three of the eight ARRA data elements reviewed were not accurately or completely reported pursuant to Section 1512 requirements. Specifically, the number of jobs, vendor payment information, and subaward amounts were incorrectly reported as follows:

- ARRA job estimates in the December 2009 were not reported accurately and/or completely. The estimate for one grant was overstated by two jobs due to a clerical posting error. Also, NJIT did not follow a consistent and reasonable methodology to estimate jobs. In particular, for two grants the job estimates were rounded to the nearest whole number but for another award the estimate was not rounded. Due to the rounding, the job estimate for two grants was understated by .34 jobs. NJIT officials stated that rounding the job estimate to whole numbers was not precluded by the OMB guidance. However, given the primary objective of the Recovery Act is to create and/or retain jobs, partial jobs must be counted in order to provide accurate reporting.
- ARRA job estimates in the March 2010 report did not include any vendor jobs for \$3,995 of payments made on a consulting service contract valued at \$18,000. OMB guidance<sup>2</sup> requires reporting of jobs impact for vendors. Accordingly, consulting services, by the nature of the work, create jobs that should have been included in NJIT's estimate.
- Consultant expenditures of \$3,995 were mistakenly reported both as subaward and vendor payments in the March 2010 report.

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<sup>1</sup> OMB Memorandum M-09-21, *Implementing Guidance for the Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009*, issued on June 22, 2009.

<sup>2</sup> Section 5.7 of OMB Memorandum M-10-08, *Updated Guidance on the American Recovery and Reinvestment Act- Data Quality, Non-Reporting Recipients and Reporting of Job Estimates*, requires prime recipients to generate estimates of jobs impact by directly collecting data from subrecipients and vendors on the total jobs funded by ARRA projects and activities.

- Vendor payments in the March 2010 report were mistakenly reported only for the current quarter instead of on a cumulative basis as required by OMB guidance. As such, 20 vendor payments totaling \$18,782 were reported instead of 30 vendor payments totaling \$22,316; an understatement of 16 percent and 33 percent, respectively.

As a result of the errors identified in the three ARRA data fields, NJIT had not effectively achieved the unprecedented accountability and transparency goals required by the Recovery Act. It is essential that the American public and other stakeholders be provided accurate information on the number of ARRA jobs created or retained as well as the total amount of funds expended. Pursuant to its NSF grant terms and conditions, NJIT was obligated to provide accurate and complete reporting each quarter on how its \$6.7 million of NSF ARRA funds have been utilized to help stimulate the country's economic recovery.

#### *Factors Contributing to ARRA Reporting Errors*

These reporting exceptions occurred because NJIT lacked (i) formal established guidance for ARRA reporting and (ii) an adequate data quality review process to preclude reporting errors. According to cognizant officials, time constraints coupled with the volume and vagueness of OMB reporting guidance were obstacles for developing a proficiency in ARRA reporting. Officials were faced with the challenge of how to handle the increased responsibility of reading, interpreting, and correctly applying the extensive OMB and supplemental NSF ARRA reporting guidance without any additional grants management staff.

However, without establishing written procedural guidance, NJIT had not developed a thorough understanding of the intricacies of key ARRA reporting requirements and had not consistently applied the OMB reporting requirements from one quarter to the next. Written policies and procedures are the cornerstone of internal controls and NSF had previously directed NJIT to establish formal guidance for managing its federal grant program in a July 21, 2009 Desk Review Report. The Institute's Corrective Action Plan established January 31, 2010 as the milestone date for issuing written guidance. However, at the time of our April 2010 onsite review, NJIT had drafted some of the required policies and procedures but had not formally issued the written guidance. Officials attributed the delay to the ongoing implementation of its Banner accounting system and had established a revised completion date of June 30, 2010.

Follow-up with NJIT officials on December 3, 2010 disclosed that the Institute plans to issue its formal grant guidance by March 31, 2011. Without written policies and procedures, NJIT increases its risk of non-compliance with specific ARRA requirements as well as applicable federal grant administrative standards and cost principles. Given the unprecedented Recovery Act accountability and transparency goals and the complex nature of the Institute's ARRA awards, the development of effective written procedures for quarterly reporting are critical factors for fulfilling NJIT's responsibilities under its NSF award agreements. In addition, it is imperative for the Institute to issue formal written grant guidance to ensure proper management and stewardship of its NSF grant portfolio of \$39.2 million and 106 awards.

Furthermore, contrary to OMB guidance, NJIT had not established a sufficient data quality review process to ensure all ARRA data elements reported quarterly were accurate and

complete. Specifically, the Institute's independent review process did not validate key data fields to source documentation to ensure calculations made were correct or there were no transposition errors that occurred during the posting process. A more robust data quality review process would have identified the errors we found and allowed NJIT the opportunity to correct the data prior to submission and reporting to the public and other stakeholders.

#### Recommendations:

We recommend that the NSF Director of the Division of Institution and Award Support, coordinate with the cognizant audit agency, as needed, to require NJIT to:

- 1.1 Establish a formal milestone date for issuing written grant policies and procedures, as required by NSF's July 2009 Desk Review Report, and provide NSF with periodic updates on its progress.

#### OIG Comment

The subject recommendation was revised and redirected from NSF to NJIT in the final audit report. As such, the Institute should provide its comments to this recommendation, including any actions taken and/or planned, in its Corrective Action Plan during the formal NSF audit resolution process.

- 1.2 Improve internal control measures for ARRA reporting as follows:
  - a. Develop formal policies and procedures covering key aspects of ARRA reporting, including at a minimum processes to report jobs for vendors, discontinue rounding reported jobs to whole numbers, and report appropriate vendor and subaward information.
  - b. Establish a formal and robust data quality review process to ensure quarterly ARRA reports are accurate and complete.

#### NJIT Response

NJIT generally agreed with the audit finding and concurred with both recommendations. Specifically, the Institute agreed to develop formal ARRA reporting policies and procedures and establish a formal data quality review process. Furthermore, NJIT provided specific actions taken or planned to address each ARRA reporting weakness discussed in the audit finding. With regard to vendor jobs reporting, NJIT specifically stated that it "will treat consultants as subrecipients in its future reports" to ensure jobs were accurately reported for consulting service contracts.

#### OIG Comment

NJIT's response fully met the intent of both audit recommendations. However, the Institute's comments on proposed changes to ensure accurate reporting of ARRA vendor

jobs were unclear. Specifically, consultants are vendors and should not be treated as subrecipients as stated in NJIT's comments. It is essential that NJIT correctly categorize its ARRA recipients consistent with OMB Recovery Act reporting guidance<sup>3</sup> because the specific data elements required to be reported for vendors versus subrecipients are different.

Therefore, NJIT needs to ensure its written policies and procedures being developed for collecting and reporting ARRA vendor jobs are clear and fully compliant with OMB requirements. Such guidance should establish clear monetary thresholds for jobs reporting for ARRA vendors apart from subrecipients. The guidance should specify whether such dollar thresholds apply to the value of the individual vendor payments being made or the total value of the vendor contract itself.

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<sup>3</sup> Sections 2.2 and 2.3 of OMB Memorandum M-09-21, *Implementing Guidance for the Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009*, provide definitions of a subrecipient versus a vendor and the applicable data elements required to be reported.

## Background, Objectives, Scope, and Methodology

### Background:

*Recovery Act Reporting Requirement:* On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (Recovery Act or ARRA) was enacted to help the nation recover from a severe economic downturn. The Recovery Act emphasizes unprecedented levels of accountability and transparency over the \$787 billion of public funds committed by Congress, of which \$3 billion was received by NSF. The public expects that the use of ARRA funds will result in a positive impact to our nation's economy, including jobs creation and retention. Accordingly, Section 1512 of the Recovery Act requires recipients to submit reports on ARRA activity no later than 10 days after the end of each reporting quarter. The first ARRA quarterly report was required to be submitted for the period ending September 30, 2009.

ARRA reporting instructions are contained in the Office of Management and Budget (OMB) guidance. OMB is the primary agency responsible for providing Section 1512 reporting guidance used by federal agencies, grant recipients, and grant subrecipients. The federal guidance clearly establishes that recipients have primary responsibility for the quality of data submitted. In addition, NSF has issued supplemental guidance to its recipients for ARRA reporting.

OMB published a Recipient Reporting Data Model to define the 99 data elements required to be reported for each ARRA grant on June 22, 2009. Clarifications to the elements were published by OMB as a set of Frequently Asked Questions with extensive updates published to address both recipient and federal agency concerns; many of which were issued only a short time prior to the end of each ARRA reporting quarter. Some of the key data elements required to be reported include award number; quarterly award activities; funds received/invoiced; award expenditures; number of and description of jobs created/retained; number and dollar of sub-awards and vendor payments; and final report status.

*NSF Recipient Information:* The New Jersey Institute of Technology (NJIT) is a public university in Newark, New Jersey with almost 9,000 students and 408 full-time faculty members. The Institute offers 92 undergraduate and graduate degree programs in six specialized schools. Research funding has grown dramatically over the last decade and in 2009, research expenditures were more than \$93 million.

As of March 31, 2010, NJIT had been awarded ten ARRA grants totaling \$6.7 million, which accounted for 17 percent of its total NSF grant portfolio of \$39.2 million and 106 awards. ARRA expenditures totaled \$ 307,323 or 4.6 percent of total Recovery award funds as of the March 2010 reporting period. Furthermore, NJIT had received total ARRA funding of \$11.8M as of September 30, 2010.

### Review Objectives:

Our review objectives were to determine whether NJIT had established an adequate system of internal controls to provide reasonable assurance that (1) Recovery Act funds were segregated and separately tracked in its project cost accounting system and (2) quarterly reporting was timely, accurate, and fully compliant with Section 1512 reporting requirements.

### Scope and Methodology:

Our review focused on NJIT's December 2009 ARRA report, but included review of its March 2010 report to assess the Institute's progress and improvements made in reporting processes. We reviewed the Institute's processes for compiling and reporting Recovery Act data elements. Of the 99 data fields required to be reported for each ARRA grant, we selected key elements that were either deemed critical to ensuring transparency or that were considered more at risk of being reported inconsistently or inaccurately. Accordingly, our review focused on the following eight data elements: the number of jobs created/retained, funds received/invoiced, expenditures, vendor payments, sub-award amounts, quarterly activities/project description, project status, and final report status indicator. To gain an understanding of NJIT's processes for compiling and reporting of the ARRA data elements, we conducted a limited review of internal controls related to our audit objectives. Our review included the following steps:

- Reviewed criteria applicable to Section 1512 reporting requirements, including OMB and NSF guidance.
- Reviewed NJIT policies, procedures, and processes for collecting, compiling, reviewing, and reporting ARRA data.
- Interviewed cognizant NJIT officials to gain an understanding of their role in the ARRA project management and reporting process.
- Performed analytical procedures to understand and evaluate NJIT's Recovery Act reporting processes and related controls. This included the processes for reporting quarterly activities/project description, project status, and final project status.
- Performed limited non-statistical sampling procedures to determine the reasonableness of the reported data elements when compared to supporting documentation for (i) the funds received/invoiced and expenditures included in the December 2009 report and (ii) vendor payments and sub-award amounts in the March 2010 report.
- Reconciled the number of jobs reported to payroll records to determine the reasonableness of the number of jobs reported for each of the nine ARRA grants in the December 2009 report.
- Discussed fieldwork results with NJIT management officials.

The onsite NJIT review work was performed from April 26 -30, 2010, with additional information obtained through January 2011. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan the review to obtain sufficient appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for the findings and conclusions contained in this report.

To obtain a copy of the Auditee Response to this report,

Please contact us at [oig@nsf.gov](mailto:oig@nsf.gov) or at (703) 292 7100.

In your request please specify the audit title and report number.