




National Science Foundation • Office of Inspector General
4201 Wilson Boulevard, Suite I-1135, Arlington, Virginia 22230

MEMORANDUM

Date: January 9, 2015

To: Mary F. Santonastasso, Director
Division of Institution and Award Support

Karen Tiplady, Director
Division of Grants and Agreements

From: Dr. Brett M. Baker 
Assistant Inspector General for Audit

Subject: Audit Report No. 15-1-002
University of Alaska Fairbanks' Management and
Oversight of the R/V Sikuliaq Construction Process

Attached is the final report on the subject audit. The report contains one finding and recommendation related to the University of Alaska Fairbanks' record retention policies.

Please coordinate with our office during the six month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. Also, the findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

We thank your staff for the assistance that was extended to our auditors during this audit. If you have any questions, please contact Louise Nelson, Director of Western External Audits, at (303) 844-4689.

Attachment

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**University of Alaska Fairbanks'
Management and Oversight of the
R/V Sikuliaq Construction Project**

**National Science Foundation
Office of Inspector General**

**January 9, 2015
OIG 15-1-002**



TM#12-D-1-002

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Introduction

In August 2007, the National Science Foundation (NSF) entered into an agreement with the University of Alaska Fairbanks (UAF) for construction and operation of the Alaska Region Research Vessel – later named the *Sikuliaq*. The ship is expected to provide a larger platform for complex multidisciplinary research and to expand research capabilities in the Arctic up to 300 science days at sea annually. The project consisted of four phases with a total awarded cost of \$199.5 million. The Sikuliaq project was NSF's first and largest award made with Recovery Act funds, and the \$148 million construction phase was funded entirely with Recovery Act funds and predominantly consisted of a firm fixed-price contract to construct the ship. The \$148 million award included \$31.7 million in contingency funds.

We conducted an audit of NSF's management and oversight of the Sikuliaq construction project in light of the large amount of Recovery Act funds awarded and the problems previous audits disclosed with contingency funds in NSF's large construction projects, which placed federal funds at a heightened risk of being misused for non-contingent expenses or to hide cost overruns due to poor management or oversight. We found that: 1) the inclusion of the contingency for each project phase did not comply with the certainty requirement in the OMB cost principles; and 2) the contingency amounts in the proposed budget were not supported by adequate cost data.

We conducted this audit to determine whether UAF project expenditures were reasonable, allowable, allocable and complied with Federal requirements, including Recovery Act requirements. In light of previous audit findings of unallowable contingency at other NSF awardees and a lack of visibility over contingency expenditures, our audit also included reviewing UAF's oversight of change order requests for contingency funds as well as other project funds to determine if such requests were executed properly and were supported by required documentation.

Audit Results

Our examination of UAF financial transactions found nothing material to indicate costs claimed on the project were unallowable. We reviewed \$22.1 million of expenditures¹ that had been charged to the project at the time of the audit -- \$13 million spent during planning and design and \$9.1 million spent during construction—to determine if the costs claimed were allowable. We performed several tests on these transactions to identify potential questioned costs and other issues warranting further analysis. The results of these tests indicated little chance that further analysis would uncover material levels of questioned costs. As such, we did not conduct further analyses of costs claimed on the project.

¹This was the total expenditures at the start of our audit that were not part of the firm-fixed price construction contract.

With respect to UAF's oversight of contingency expenditures, we found that UAF did not have the required documentation to support approval for ten change order requests totaling nearly \$4.8 million. NSF approval was required for change orders valued at \$50,000 or higher. OMB Circular A-110 requires awardees to retain "financial records, supporting documents, statistical records, and all other records pertinent to an award...for three years." NSF's internal policy also requires awardees to maintain certain documentation including "change requests and approvals."

UAF generally complied with the Recovery Act requirements we reviewed.

Finding 1: UAF Could Not Provide Required Records for Ten Change Order Approvals

NSF policy required the project to have a change order process for the use of both contingency funds and other project funds to help ensure that project officials reviewed changes that could impact the project budget, schedule, or scope. For this project, NSF was required to approve all change orders valued at \$50,000 and greater. At the time of our audit, there had been 45 requests that NSF was required to approve.

The change order process for requests of \$50,000 or more consisted of the following steps:

- Endorsement by the technical manager.
- Endorsement by the project director.
- Endorsement by the project manager.
- Endorsement by the configuration control board (three members-- experts from the scientific community).
- Change order submitted to NSF for final approval.

OMB Circular A-110 and NSF's Large Facilities Manual require awardees to retain documentation of change order approvals. Such supporting documentation is important for assurance that funds were spent appropriately. When we asked for the NSF approvals for the change requests related to the ship construction, the UAF Project Officer was unable to provide 10 approvals totaling nearly \$4.8 million. He stated that the approval documentation had been deleted when UAF moved its email system to a different provider and that he could not retrieve the documents from UAF's backup system. In response to our request, the NSF Program Officer overseeing the project was able to provide the documentation for all but one change order request. That request, valued at \$934,426, was for "machinery rearrangements."

Requiring NSF approval for change requests greater than \$50,000 is an important project management tool for monitoring overall project costs and for tracking the use of contingency funds.

Other Matters

UAF Generally Complied with Recovery Act Requirements

UAF generally complied with the Recovery Act requirements we reviewed; however, we identified a few instances of noncompliance with examples listed below. We tested for compliance with the following Recovery Act requirements: Davis Bacon Act, Buy American Act, recipient reporting, and suspension and debarment for the phase 3 construction award funded entirely with Recovery Act funds.

Examples of non-compliance include:

- The Marinette Marine Corporation (MMC) did not include the required Davis Bacon Act clauses in its subcontractors' contract terms and conditions even though the terms were included in the prime contract between UAF and MMC.
- MMC initiated the procurement of two of nine items requiring a Buy American Act exemption waiver prior to NSF's authorization of the waiver.
- UAF incorrectly reported the award description on all four quarterly Recovery Act reports submitted in 2012.
- UAF did not ensure that all of MMC's subcontracts and purchase orders contained the required suspension and debarment language.

It is important to note that ensuring compliance with Federal requirements, such as suspension and debarment laws, is not limited to projects receiving Recovery Act funds, but will also apply to future projects as well.

Recommendation

We recommend that NSF's Director of the Division of Institution and Award Support request that UAF take appropriate action to ensure that UAF has a sufficient record retention process that meets Federal requirements.

Summary of Auditee Response and OIG Comments

UAF concurs with the conclusions and recommendations related to the finding. We have included UAF's response to this report in its entirety as Appendix A.

OIG Contact and Staff Acknowledgements

Louise Nelson- Director of the Western External Audit Office
(303) 844 – 4689 or lnelson@nsf.gov

In addition to Ms. Nelson, Ken Lish, Lisa Hansen, and Susan Crismon made key contributions to this report.

Appendix A: Awardee Response



Office of the Chancellor

December 2, 2014

Ms. Louise M. Nelson
Director
Denver External Audit Office
National Science Foundation OIG

Dear Ms. Nelson:

The University of Alaska Fairbanks has reviewed the Official Sikuliaq Draft Report provided by the National Science Foundation (NSF) Office of the Inspector General on November 3, 2014. On behalf of UAF I thank you for the opportunity to respond before the report is finalized. For clarity, we will restate each comment from the draft report that UAF is responding to then provide UAF's response in italics.

1. NSF policy required the project to have a change order process for the use of both contingency funds and other project funds to help ensure that project officials reviewed changes that could impact the project budget, schedule, or scope. For this project, NSF was required to approve all change orders valued at \$50,000 and greater. At the time of our audit, there had been 45 requests that NSF was required to approve.

The change order process for requests of \$50,000 or more consisted of the following steps:

- Endorsement by the technical manager.
- Endorsement by the project director.
- Endorsement by the project manager.
- Endorsement by configuration control board (three members-- experts from the scientific community).
- Change submitted to NSF for final approval.

OMB Circular A-110 and NSF's Large Facilities Manual require awardees to retain documentation of change order approvals. Such supporting documentation is important for assurance that funds were spent appropriately. When we asked for the NSF approvals for the change requests related to the ship construction, the UAF Project Officer was unable to provide 10 approvals totaling nearly \$4.8 million. He stated that the approval documentation had been deleted when UAF moved its email system to a different provider and that he could not retrieve the documents from UAF's backup system. In response to our request, the NSF Program Officer overseeing the project provided the documentation for all but one change order request. That request, valued at \$934,426, was for "machinery rearrangements."

UAF Response

UAF did note the dates that approval was received on its Change Request Forms. However the email from authorizing party was not forwarded to be incorporated into the contract file. When UAF underwent an email system conversion, those emails were lost. After UAF discovered the shortcoming in its processes, we ensured that a copy of each approving email was forwarded to the contracting officer with the change request form. It is UAF's position that the change request approval process now includes all proper documentation.

2. The Marinette Marine Corporation (MMC) did not include the required Davis Bacon Act clauses in its subcontractors' contract terms and conditions.

UAF Response

The requirement to flow down Davis Bacon Act clauses was included in UAF's RFP and subsequent contract with MMC. However at the time of audit no verification had been performed by UAF. The original Davis Bacon procedures developed by NSF and UAF only address shipyard reporting and not that of lower tier subs. Once it was discovered that MMC was not collecting Davis Bacon information from its subs, UAF notified MMC's purchasing department of its failure to abide by the terms of the contract. MMC immediately contacted their subs, amended their purchase orders to include Davis Bacon reporting, and began forwarding reports from subs to UAF.

3. MMC initiated the procurement of two of nine items requiring a Buy American Act exemption waiver prior to NSF's authorization of the waiver.

UAF Response

UAF acknowledges that this did occur, but at the time was deemed to be a lower risk to the project than not allowing MMC to proceed with the procurements. MMC initiated the two procurements only after receiving approval to do so from UAF. The two items in question had become critical items for MMC to purchase to avoid causing a disruption in the production schedule. On 6 April 2011 UAF sent MMC a letter granting them authority to proceed with the two purchases and stating that UAF would accept the risk associated with proceeding without the NSF approval. At the time UAF sent the letter, the two Buy American requests had been in NSF review for two months and been reviewed by the NSF Program and DACS with no issues on either request. The draft NSF waiver determination and Federal Register Notice had been submitted to OMB for review and the NSF Program Manager was trying to expedite the OMB review because of the potential impact on the ship production. Because of the successful review within NSF with the determination having been forwarded to OMB for review, the UAF Project Manager determined the risk of cost to the project due to a production delay was greater than the risk of cost to UAF if the exemption ultimately was not approved because the two items in question were of low dollar value. This was discussed at the 04 April 2011 Project Team weekly teleconference with project team personnel and NSF, after which the UAF Project Manager directed the approval letter to be sent to MMC. The 04 April discussions were summarized and documented in the 08 April 2011 weekly Project Summary Report so that NSF was notified regarding UAF's actions.

4. UAF incorrectly reported the award description on all four quarterly Recovery Act reports submitted in 2012.

UAF Response

UAF acknowledges that this did occur and it was an oversight on UAF's part for the quarterly ARRA reporting period of 2012. The correct change in the award description was reflected on the subsequent ARRA reports.

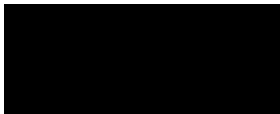
5. UAF did not ensure that all of MMC's subcontracts and purchase orders contained the required suspension and debarment language.

UAF Response

The requirement to flow down suspension and debarred provisions was included in UAF's RFP and subsequent contract with MMC. However at the time of audit no verification had been performed by UAF. Once it was discovered that MMC was not performing suspension and debarred checks on its subs, UAF notified MMC's purchasing department of its failure to abide by the terms of the contract. MMC immediately performed checks on all subs including those whose works was complete prior to the meeting. In addition, MMC updated its terms and conditions for Sikuliaq purchases orders to include the suspension and debarred provision.

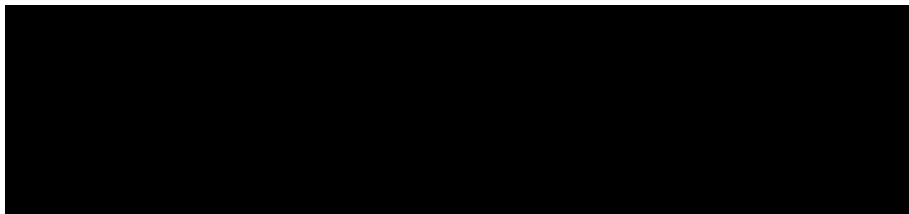
Thank you again for the opportunity to provide input for the final report. Please contact me if you have additional questions.

Regards,



Chancellor

Cc:



Appendix B: Objectives, Scope, and Methodology

We conducted this performance audit from February 2012 to June 2014. The objectives of this audit were to determine if UAF and its sub-awardee(s) had taken steps to ensure 1) compliance with Recovery Act requirements and NSF's implementing guidance and 2) that project expenditures were reasonable, allowable, allocable, and in accordance with the NSF cooperative support agreements and OMB cost principles. To answer our objectives, we obtained information on expenditures and contingency amounts from NSF and UAF officials, and NSF's eJacket reporting system for the project period of August 1, 2007 through June 30, 2013. Since the majority of the \$148,169,289 in expenditures on the project as of June 30, 2013 was for the construction firm fixed-priced contract, we were only able to review expenditures from other phases of the project for allowability, allocability and reasonableness. A database of transactions relating to the remaining \$22.1 million that was not included in the firm fixed price contract was requested for all transactions through September 30, 2012. Our testing of the database included analyzing vendor payments, salary & fringe charges, high dollar value transactions, the timing of transactions, accounting codes, words related to possible questioned costs, and following-up with UAF personnel for confirmation. Nothing material came to our attention to warrant further review of the expenditures.

We reviewed UAF's compliance with applicable provisions of pertinent laws and regulations. We also obtained an understanding of the management controls over UAF's process for reviewing, managing, and overseeing contingency as well as its implementation of Recovery Act requirements through interviews and communications with UAF officials and by reviewing UAF policies and procedures. We identified internal control deficiencies, which we discuss in this report. However, we did not identify any instances of fraud, illegal acts, or abuse.

Our work required reliance on computer-processed data obtained from NSF and UAF. We obtained NSF data by directly accessing NSF's Federal Financial Report (FFR) system and its Award Cash Management Service (ACM\$). We assessed the reliability of the data provided by UAF by comparing costs charged to the NSF award account within UAF's accounting records to the federal share of expenditures, as reflected in UAF's FFR submitted to NSF as of September 30, 2012. Based on our testing, we found UAF's computer-processed data sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in, or controls over, NSF's FFR and ACM\$ systems were accurate or reliable.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit 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 our findings and conclusions.