



**National Science Foundation**

4201 Wilson Boulevard  
Arlington, Virginia 22230

Office of Inspector General

**MEMORANDUM**

**DATE:** September 30, 2010

**TO:** Greg Steigerwald, Acting Director  
Division of Acquisition and Cooperative Support (DACCS)

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

**SUBJECT:** NSF OIG Audit Report No. OIG-10-1-011, Audit of Consortium of Ocean Leadership's Accounting System; and NSF OIG Audit Report No. OIG-10-1-012, Audit of Proposed Budget for the Ocean Observatories Initiative

We contracted with the Defense Contract Audit Agency (DCAA), Chesapeake Bay Branch Office, to perform audits of Consortium of Ocean Leadership's (COL) accounting system and COL's \$386.42 million proposed budget for the construction of the Ocean Observatories Initiative (OOI), which will be performed over a six-year period from September 2009 through August 2014 (FY 2009 through FY 2014)<sup>1</sup>.

The purpose of the OOI project is to provide an interactive, globally distributed and integrated observatory network of ocean and seafloor sensors to enable next-generation studies throughout the global ocean.

**Background**

The Joint Oceanographic Institutions (JOI) and the Consortium for Oceanographic Research and Education (CORE) merged their staffs and operations as of May 31, 2007<sup>2</sup>. The consolidated organization is now known as Consortium for Ocean Leadership, Inc. COL is a Washington, DC based nonprofit organization that manages ocean research and education programs. COL currently has [REDACTED] employees and revenue for FYs 2006 through 2008 were approximately [REDACTED] [REDACTED] respectively. COL's accounting period is from October 1 through September 30.

---

<sup>1</sup> COL submitted the OOI Proposal (NSF Proposal No. 0957938) under NSF Solicitation No. 09-29.

<sup>2</sup> OIG issued Audit Report No. OIG-10-1-014, Audit Report on Joint Oceanographic Institutions' FY 2006 (12 months) and FY 2007 (8 months) Incurred Costs, dated September 30, 2010, which reports the results of the audit of incurred costs claimed by JOI in FYs 06-07 up to the date of the merger.

NSF entered into Cooperative Support Agreement (CSA) No. OCE-0964093 with COL and initially funded the OOI project with \$105.93 million of American Recovery and Reinvestment Act (ARRA) funds in September 2009. NSF expects to award the remaining \$280.49 million for the OOI project with Major Research Equipment and Facilities Construction (MREFC) funds. NSF initially awarded the OOI project with \$5.91 million and an additional \$14.28 million in MREFC funds in FYs 2009 and 2010, respectively. NSF expects to award the balance of MREFC funds in FYs 2011 through FY 2014.

The objectives of this audit were to:

1. Assess the adequacy of COL's accounting system to properly accumulate and bill costs under NSF awards, determine whether COL adequately accumulates, segregates and reports the use of ARRA funds<sup>3</sup>, determine whether COL adequately monitors its subawardees' compliance with Federal requirements
2. Examine the OOI construction proposal to determine if COL's proposed budget was prepared in accordance with applicable federal requirements, including the Cost Accounting Standards (CAS) and if the proposed costs are acceptable as a basis to negotiate a fair and reasonable price. This included performing audit tests at two of COL's major subawardees, the University of Washington (UW) and Woods Hole Oceanographic Institute (WHOI).
3. Assess the adequacy of WHOI's accounting system to properly track, account for, segregate and report on equipment purchased using federal funds, including equipment purchased with ARRA funds.

DCAA issued two audit reports to separately address the first two audit objectives, and a memorandum to address the third objective. We have attached the two DCAA audit reports on COL's accounting system and proposed budget for the OOI project and DCAA's memorandum on WHOI's accounting system for equipment to this memo. The audits were performed in accordance with generally accepted government auditing standards. DCAA's findings and recommendations are summarized below.

### **DCAA's Accounting System Report on COL Identified CAS Noncompliance**

DCAA reported that COL's accounting system is adequate for accumulating and billing costs on its government contracts, in that COL adequately accumulates, segregates, and reports the use of its ARRA and other federal funds. DCAA also reported that COL adequately monitors its subawardees to ensure subawardee compliance with ARRA and other federal requirements and with the terms and conditions of their subaward agreements. However, in the *Other Matters to be Reported Section*,<sup>4</sup>, DCAA reported that NSF is the cognizant federal agency for COL, and

---

<sup>3</sup> DCAA's audit scope did not include a review of COL's compliance with ARRA requirements for reporting the number of jobs created or retained.

<sup>4</sup> DCAA's Memorandum to Consortium for Ocean Leadership on CAS Noncompliance, dated April 20, 2009, was included in NSF OIG Report No. OIG\_10-1-015, *Audit Report on Consortium of Ocean Leadership's FY 2007 (4 months) Incurred Costs*, dated September 30, 2010.

that COL is subject to Cost Accounting Standards (CAS). Therefore, NSF is required to ensure that COL has an adequate CAS Disclosure Statement describing its cost accounting practices.<sup>5</sup> Nevertheless, NSF did not issue a determination of adequacy or compliance of COL's Disclosure Statement, which is a cognizant federal agency responsibility,<sup>6</sup> nor has NSF requested DCAA to review COL's Disclosure Statement for adequacy or compliance.

We previously issued NSF an Alert Memorandum dated March 31, 2010, *NSF Contract Administration Issues at the Consortium of Ocean Leadership*, that informed NSF that, since the inception of COL's CAS covered contract, COL and Joint Oceanographic Institutions have submitted six Disclosure Statements to NSF. However, none of these Disclosure Statements have been audited by DCAA or formally approved by NSF. We noted that we were mainly concerned with the four Disclosure Statements effective on and after the merger of JOI and CORE (Consortium for Oceanographic Research and Education) to form COL effective June 1, 2007. We concluded that NSF should, as soon as possible, request an audit of the four JOI/COL Disclosure Statements and also request COL to provide cost impact proposals explaining its disclosed accounting practice changes.

DCAA also reported that COL's G&A (General & Administrative) allocation base, used to allocate its G&A expenses (those expenses which are for the general management and administration of the business unit as a whole), is in noncompliance with Cost Accounting Standards (CAS) 410. This standard



DCAA recomputed COL's G&A rate using a value-added base and calculated a 7-month cost impact on COL's CAS-covered contract, which showed a total of \$57,712 in increased costs allocable to Contract OCE-0352500 for FY 2010 through April 30, 2010. Other NSF awards, which would receive decreased G&A costs were not identified by DCAA.<sup>7</sup> However, DCAA reported that there could be a material impact to the government in future periods because the merger brought additional work from other organizations and other federal agencies into the total activity of COL. Therefore, the risks of misallocating G&A costs between NSF programs and different government agencies will increase as COL takes on more business and other programs with NSF and with other federal and non-federal organizations. DCAA is unable to determine the full impact of the CAS noncompliance because DCAA did not receive a cost impact proposal

---

<sup>5</sup> COL is required to follow CAS because its NSF Contract No. OCE-0352500, *System Integration Contractor for the Integrated Ocean Drilling Program*, dated September 2003, includes the FAR clause that incorporates CAS requirements into the contract. Therefore, COL's CAS Disclosure Statement is applicable to all of COL's federal contracts and awards, including all of COL's cooperative agreements with NSF.

<sup>6</sup> Federal Acquisition Regulations (FAR) 30.202-6).

<sup>7</sup> DCAA performed an audit of JOI/COL's claimed incurred costs under NSF Contract No. OCE-0352500. DCAA's audit results were contained in two incurred cost reports that were transmitted to NSF under OIG Report Nos. OIG-10-1-014 and OIG-10-1-015 dated September 30, 2010.

from COL covering all its contracts and awards from the date of the merger until the completion of COL's NSF CAS-covered contract, expected in September 2013.

After a finding of noncompliance by NSF's Contracting Officer, COL will be required to submit a cost impact proposal from the time of NSF's required date for COL to change its G&A base to comply with CAS until the completion of COL's CAS-covered contract (expected in September 2013). This cost impact proposal should monetize the impact of COL's change in accounting practice (i.e. change to a value-added G&A base) on all COL's contracts and awards.

### **DCAA's OOI Construction Proposal Report on COL Found Significant Questioned Costs**

In its audit of COL's OOI construction proposal, DCAA questioned a total of \$88,184,480 because the proposed budget was not prepared to accordance with applicable Cost Accounting Standards or appropriate provisions of 2 CFR Part 230 (federal cost principles for non-profit organizations). However, DCAA determined that COL submitted adequate supporting data and believes that the proposed budget is an acceptable basis for negotiation of a fair and reasonable price. DCAA told us that they made this judgment because they considered the proposal adequate to audit (only after many discussions over time with COL and its subawardees UW and WHOI), and received sufficient data from COL to enable them to quantify the impact of the noncompliances on this proposal--most significantly the \$88 million of questioned contingency provisions discussed below.

COL's proposed and DCAA's questioned costs by funding source are as follows:

	<u>Proposed</u>	<u>Questioned</u>	<u>Difference</u>	<u>Report Ref</u>
ARRA		\$34,799,844		Exhibit A
MREFC		53,384,636		Exhibit B
Total		<u>\$88,184,480</u>		

The questioned costs are identified by cost category below.

<u>Cost Element</u>	<u>ARRA</u>	<u>MREFC</u>	<u>Total Amount</u>
Contingencies	\$34,205,053	\$53,913,795	\$88,118,848
Subawards	168,291	(16,868)	151,423
G&A Expenses	442,860	(431,879)	10,981
Direct Labor	(12,394)	(60,918)	(73,312)
Fringe Benefits	(3,966)	(19,494)	(23,460)
Total	<u>\$34,799,844</u>	<u>\$53,384,636</u>	<u>\$88,184,480</u>

( ) denotes upward adjustment, i.e. an increase in costs

**Contingency Provisions:** DCAA noted in Exhibit A that the \$105.93 million of funded ARRA costs included \$34,205,053 of proposed contingencies. DCAA noted in Exhibit B that the \$280.49 million of proposed MFEFC costs included \$53,913,795 of proposed contingencies. DCAA questioned the entire \$88,118,848 of proposed contingencies based on 2 CFR Part 230, Appendix B, Paragraph 9, Contingency Provisions, which states “contributions to a contingency reserve or any similar provisions made for events the occurrence of which cannot be foretold with certainty as to time, intensity, or with an assurance of their happening, are unallowable.” DCAA noted that the proposed contingency costs were based on risk estimates for such factors as weather, vendors going out of business, a ship breaking down, and other unforeseen events. NSF required the awardee to build contingency provisions into the proposed budget, and NSF reviewed and accepted contingencies as part of its Variant FDR (Final Design Review), which served as a basis for COL’s proposed budgets for OOI.

DCAA stated that COL classified contingency costs in the proposed budgets as equipment costs, but are not necessarily equipment. Contingency costs were proposed to ensure that COL will not overrun the budget. COL officials told DCAA that contingency costs can only be used if the awardee overruns the budget due to unforeseeable factors. However, DCAA noted that COL can draw down the contingency funds the same as normal funds and DCAA found no controls or technical barriers to prevent COL from drawing down these funds and spending them without NSF approval. DCAA also noted that the awardee excluded the proposed contingency costs from its proposed G&A allocation base.

COL does not concur with DCAA’s questioning of contingency costs. The awardee stated that the incorporation of contingency in the proposed budget was directed by NSF.

**Subawards:** The direct labor rates and the application of indirect rates budgeted for two of COL’s major subawardees for OOI construction (UW and WHOI) were audited by DCAA. DCAA noted the cost impact of the proposed and questioned rates for both subawardees in Note 6 -- Exhibit A for ARRA and Exhibit B for MREFC, as follows:

Subawardee	ARRA Proposed	ARRA Questioned	MREFC Proposed	MREFC Questioned
UW		(\$107,610)		(\$243,260)
WHOI		\$275,901		\$226,392

The negative cost questioned (i.e. increase in cost proposed) for UW was due to UW’s revised proposed budget which included revised fringe benefit rates. The costs questioned for WHOI are based on the results of DCAA’s audit at WHOI which questioned direct labor rates. DCAA used the COL’s proposed subawardee labor hours and the applicable indirect rates to compute its questioned costs. COL concurs with DCAA’s audit findings for the two subawardees.

**G&A Expenses:** COL proposed a total of [REDACTED] of G&A expenses under ARRA (Exhibit A) and [REDACTED] of G&A expenses under MREFC (Exhibit B). DCAA questioned \$442,860 under ARRA and (\$431,879) under MREFC for a total of \$10,981 questioned G&A expenses. These G&A expenses were questioned due to a more current NICRA (negotiated indirect cost rate agreement) rate, the CAS 410 noncompliance discussed above under *Adequacy of COL's Accounting System*, and an audit-determined increase in direct labor and fringe benefit costs for OOI discussed below.

Of the \$442,860 questioned under ARRA, \$135,093 of this was due to a more current NICRA rate applied to the audit-determined base costs for OOI ARRA. The awardee proposed the June 2008 NICRA rate of [REDACTED] negotiated with NSF, but DCAA used the more current September 2009 NICRA rate of [REDACTED].

DCAA then adjusted the G&A base in the NICRA and in the OOI proposal to a CAS-compliant value-added base to develop an audit determined rate on value-added cost input of [REDACTED]. Under ARRA, this resulted in DCAA questioning \$307,768 due to the CAS noncompliance. All of the (\$431,879) questioned under MREFC was due to the CAS noncompliance.

Regarding the CAS noncompliance, DCAA determined that the awardee's proposed G&A allocation base is not compliant with CAS 410, as discussed above under *Adequacy of COL's Accounting System*. DCAA also noted that the awardee excluded contingency costs from the proposed G&A allocation base. Therefore, DCAA developed an audit-determined G&A base and rate based on actual awardee data for first 10 months of FY 2010. DCAA removed all subcontract costs from the base and then annualized the pool and base in computing an audit-determined base of [REDACTED]. DCAA applied this rate to audit-determined value-added base costs for OOI of [REDACTED] for ARRA and [REDACTED] for MREFC in computing audit-determined G&A costs of [REDACTED] and [REDACTED] respectively. DCAA then subtracted audit-determined G&A costs from proposed G&A costs in computing G&A costs questioned due to the CAS noncompliance.

We noted that DCAA's audit-determined G&A rate is an estimate based only on 10 month year-to-date data for FY 2010 and does not consider NSF's expected funding in the out years FY 2011 and beyond. To obtain a more accurate general dollar magnitude impact on COL's OOI construction proposal, a cost impact proposal from COL is necessary.

The awardee does not concur with DCAA's questioning the G&A base and associated rate using CAS as the criteria. The awardee stated that the treatment of the G&A base is in accordance with the indirect rate agreement that COL negotiated with NSF.

**Direct Labor:** DCAA questioned (increased) direct labor costs by (\$12,394) for ARRA and (\$60,918) for MREFC due to differences found in the proposed base hourly labor rates and the current payroll rates. See DCAA's audit report (Schedule A for ARRA and Schedule B for MREFC) for the questioned labor rates and summaries of questioned costs by labor category and award year.

DCAA traced the hours from the Variant FDR performed by NSF to ensure they matched and found no exception. COL's proposed base hourly labor rates were based on category average payroll data that was current at the time of proposed budget preparation. However, DCAA found differences between COL's proposed and its more current (at the time of the audit) payroll rates effective for FY 2010. DCAA adjusted the hourly labor rates accordingly and computed questioned costs by applying the difference in hourly rates to the proposed hours.

For the out-years of the project, the awardee used Office of Management and Budget (OMB) escalation rates which DCAA determined to be reasonable. The questioned hourly rates/direct labor costs in the out-years were due to DCAA's adjustment of the proposed first-year rates under ARRA.

The awardee concurs with DCAA's audit findings for direct labor.

**Fringe Benefits:** DCAA questioned (increased) fringe benefits costs by (\$3,966) for ARRA and (\$19,494) for MREFC due to applying COL's proposed unaudited fringe benefits rate for FY 2009 of [REDACTED] to the questioned (increased) direct labor costs of (\$12,394) for ARRA and (\$60,918) for MREFC.

The awardee concurs with DCAA's audit findings for fringe benefits.

[REDACTED]

## Recommendations

We recommend that the NSF Director of the Division of Acquisition and Cooperative Support:

1. Request DCAA to review all JOI/COL's Disclosure Statements effective on and after the merger of JOI and CORE to form COL (on June 1, 2007) for adequacy and compliance, and provide COL with a letter of determination of adequacy and compliance of the Disclosure Statements based on the results of audit. To facilitate DCAA's Disclosure Statement reviews, NSF should request COL to provide cost impact proposals explaining its disclosed accounting practice changes.
2. Require COL to change its G&A allocation base to a CAS-compliant base and submit to NSF a general dollar magnitude cost impact proposal which identifies the shift of costs between all COL's contracts and awards. This cost impact proposal should monetize the impact from the required date of the change until the completion of COL's CAS-covered contract (expected in September 2013).

3. Request DCAA to review COL's cost impact proposal and, upon determination that the data are acceptable for negotiating the cost impact due to the change, negotiate the cost impact with COL and require COL to revise its proposed budgets accordingly.
4. Require COL to remove unallowable contingency provisions from its proposed budgets for OOI and discontinue NSF's practice of funding contingencies. Instead, NSF should require its awardee to submit proposed budgets supported by auditable current, accurate and complete cost data, request independent audits of the awardee's proposed budgets prior to funding, and base NSF funding on the results of audit.
5. Require the awardee to revise its proposed budgets for OOI for subaward, direct labor and fringe benefit costs questioned consistent with DCAA's audit findings.

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

We are providing a copy of this memorandum to the OOI Program Director and the Director of Large Facilities Projects. The responsibility for audit resolution rests with DACS. Accordingly, we ask that no action be taken concerning the report's findings without first consulting DACS at (703) 292-8242.

### **OIG Oversight of Audit**

To fulfill our responsibilities under Government Auditing Standards, the Office of Inspector General:

- Reviewed DCAA's approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with DCAA and NSF officials as necessary to discuss audit progress, findings and recommendations;
- Reviewed the audit report prepared by DCAA to ensure compliance with Government Auditing Standards and Office of Management and Budget Circulars; and
- Coordinated issuance of the audit report.

DCAA is responsible for the attached audit reports on COL and the conclusions expressed in the reports. The NSF OIG does not express any opinion on COL's accounting system, COL's OOI construction proposal, or the conclusions presented in DCAA's audit reports and memorandum.

We thank you and your staff for the assistance extended to us during the audit. If you have any questions about this report, please contact Jannifer Jenkins at (703) 292-4996 or David Willems at (703) 292-4979.

Attachments:

1. DCAA Audit Report No. 6171-2009J17740004, *Audit Report of Accounting System for Consortium of Ocean Leadership, Inc.*, dated July 20, 2010.
2. DCAA Audit Report No. 6171-2009J21000001, *Report on Audit of Proposed Budget for the Ocean Observatories Initiative for Consortium of Ocean Leadership, Inc.*, dated September 14, 2010.
3. DCAA's memorandum on *Request for Additional Information Pertaining to the Woods Hole Oceanographic Institute Audit of the Part of the Cost Reimbursable Proposal – Audit Report No. 02171-2010C27000001 – Proposal Submitted in Response to NSF 03-576*, dated September 9, 2010.

cc: Martha Rubenstein, CFO and Director BFA  
Mary Santonastasso, Division Director, DIAS  
Jean McGovern, OOI Program Director, Division of OCE  
Mark Coles, Director Large Facilities Projects