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DOUG BENNETT  
Assistant Vice Chancellor Administration  
Scripps Institution of Oceanography  
0210

***Subject: SIO Validation of COL Fund Administration  
Audit & Management Advisory Services Project 2014-50***

Audit & Management Advisory Services (AMAS) has completed a review of fund administration of Ocean Observatories Initiative (OOI) funds by the Scripps Institution of Oceanography (SIO). This report summarizes the results of our review.

### **Background**

In November 2009, the University of California, San Diego, (UCSD) and the Consortium for Ocean Leadership (COL) entered into a contractual agreement to provide services and material as part of the construction and operations and maintenance of the Ocean Observatories Initiative (OOI). OOI is a networked system that provides ocean measurements to study the Earth-Ocean-Atmosphere interactions for understanding, predicting, and managing the ocean environment. The program is scheduled for completion in June 2015.

The OOI is funded by the National Science Foundation (NSF), which established a cooperative agreement with COL for the construction and initial operation of the OOI network. Funding was allocated from the Major Research Equipment and Facility Construction (MREFC), Operations & Maintenance (O&M) and the American Recovery & Reinvestment Act (ARRA) appropriation accounts. Subawards were issued by COL to implementing organizations (IO), tasked with construction and development of the overall program. The IO's are responsible for delivery of the coastal and global moorings, cabled seafloor systems, the cyberinfrastructure (CI) component, and education and public engagement software. The IO's reported directly to COL, to ensure integration, cooperation and coordination between all IO's.

UCSD SIO was contracted as the IO with core responsibility for implementing the CI component. In addition, SIO had a subcontract with Woods Hole Oceanographic Institution for the coastal and global moorings. The CI component was initially managed through UCSD California Institute of Telecommunication and Information Technologies (Calit2). However as of September 1, 2012, the OOI/CI award administration transferred from Calit2 to the SIO Institute of Geophysics and Planetary Physics (IGPP) Business Office, which assumed responsibility for financial award management and oversight. The subcontract from Woods Hole is managed through the SIO Climate, Atmospheric Sciences, and Physical Oceanography (CASPO) Business Office.

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In September 2012, NSF and OL conducted a Business System Review (BSR) and site visit as part of their sub-recipient monitoring procedures. A BSR is a part of the NSF's monitoring program for government sponsored awards, designed to provide oversight of the business systems (people, processes, and technologies) that support the administrative management of a large facility award.

The BSR team focused largely on the administrative business systems supporting the project, and opportunities for improvement were identified. The final BSR report for the September 2012 review was issued on September 9, 2013. Since the initial BSR visit, SIO has worked toward addressing the issues identified through the BSR process to provide an agreeable action plan to address the identified deficiencies. COL also subsequently requested that SIO perform a historical analysis of OOI funding to validate that funds were spent in accordance with Federal requirements. Due to resource constraints, SIO requested that AMAS perform this funds validation review.

**Audit Objective, Scope and Procedures**

The objective of our audit was to evaluate whether SIO expended OOI funds in accordance with Federal requirements, properly segregated appropriation accounts, and reported costs incurred on these accounts appropriately. The scope of the audit was from program inception through September 30, 2013.

In order to fulfill our objective, we performed the following procedures:

- Reviewed funding received from COL by appropriation account (i.e., MREFC, O&M ARRA);
- Examined the associations between the UCSD Integrated Financial Information System (IFIS) index system used to record OOI transactions and the Work Breakdown Structure (WBS) elements used by COL to record program costs;
- Performed a reconciliation of balances within IFIS to costs invoiced to COL by WBS cost element and corresponding Financial Status Reports (FSRs) as of September 30, 2013; and
- Tested a sample of expenditure transactions to ensure that the expenditures were allowable in accordance with Federal regulations, properly allocated within the COL WBS, and adequately supported by source documentation.

**Conclusion**

Based on our review procedures, we concluded that SIO expended OOI funds in accordance with Federal requirements for costs allowable under the award, and funds for OOI activities were properly segregated within the UCSD IFIS by appropriation account. We confirmed that as of September 30, 2013 the total costs reported to COL via the FSR matched the IFIS fund totals and the program invoices. Testing of a sample of expenditures confirmed that costs were generally allowable, properly allocated, and adequately supported by source documentation. Our testing of 30 transactions identified one instance where employee time data reported for UCSD payroll and

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effort certification did not agree to hours entered in the OOI project's Deltek timekeeping system. This issue was first identified in a 2013 audit conducted by an external firm at the request of COL, which noted employees working on the OOI project were not recording their time on a daily basis, and employee time data entered into two separate systems was not being reconciled timely. SIO implemented revised timekeeping procedures to address this issue.

**Supporting Comments**

**Segregation of Accounts and Financial Reporting**

Our review confirmed that funds related to the OOI project were properly segregated within IFIS using the standard UCSD accounting mechanisms. Within the University's fund accounting system, a Fund is the six-digit code used to identify the source of funding for a transaction. When the University receives funding, it is allocated to a specific Fund that represents the funding source, and any expenditure charged to this Fund must be related to the purpose of the award. We confirmed that the University established a number of separate funds within IFIS for the purpose of administering OOI program based on the appropriation account from which the funds were allocated. Separate funds were established to record OOI activity for each award that was funded through MREFC, ARRA, and O&M funds.

In addition, SIO further organized OOI program accounts by establishing indexes within each fund to record costs at the WBS level. The Index is another standard feature of UCSD's accounting system which represents a combination the Fund, Organization, Program, Activity and Location (FOPAL). Within this accounting system, several index numbers may be associated to any one FOPAL combination. However any particular Index can relate to only one Fund. We examined the associations between the IFIS index system used to record OOI transactions by SIO and the WBS elements used to COL to record program costs. We found that SIO associated each IFIS index the correlating element of the COL WBS structure. This one-to-one relationship of SIO OOI Indexes to COL WBS cost elements confirmed the connection between SIO OOI costs reported to COL to those same costs as recorded in IFIS.

In order to ensure that SIO OOI activity recorded within IFIS was properly reflected in its reporting to COL, AMAS performed a reconciliation of cumulative totals for invoices to COL from program initiation through September 30, 2013, at the WBS element level. Our reconciliation found that the SIO costs reported to COL by WBS element were consistent with the recording of these costs within IFIS.

**Expenditure Testing**

We also examined a sample of 30 transactions related to the SIO OOI activity to test whether costs recorded within IFIS were allowable, allocable and properly documented in accordance with UCSD and Federal sponsored project requirements. The sample of 30 transactions included both payroll and non-payroll activity, and OOI activity funded by the MREFC, ARRA and O&M appropriations. For each transaction, we examined supporting documentation and obtained information from program staff to confirm the purpose of the transaction. No exceptions were identified in our review of non-payroll transactions. In each case, we found that the expenditure was allowable, was properly allocated within the COL WBS, and was properly documented.

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For payroll transactions, we examined time reporting system reports and effort reports, and traced the hours reported to the UCSD payroll system to the corresponding information in the Deltek system. In 14 of the 15 cases, the billable working hours in Deltek seemed to correspond to payroll percentages contained within the UCSD payroll system. However in one of the 15 records tested<sup>1</sup>, we noted that the data in the Deltek system did not agree with the corresponding UCSD payroll distribution for that month. This appeared to be the result of project timekeeping practices at the time, as employees working on the OOI project were not recording their time in Deltek until the end of the month, and that the Deltek and UCSD systems were not reconciled on a timely basis. This seems to have resulted in a situation where discrepancies in the information entered into the two systems could occur. In this case, the Business Officer, PI, and Program Manager reviewed the transaction and indicated that the actual payroll and effort certification were correct, and the Deltek hours were incorrect.

We noted that weaknesses in internal controls related to time tracking processes were previously identified in a 2013 audit performed by an external firm at the request of COL. Based on the findings of this review, IGPP in consultation with COL, implemented new procedures to ensure that employee time is recorded as it is worked, and reconciled between Deltek and UCSD timesheets each period.

**Management Corrective Action:**

A correction will be made in Deltek to align hours reported with UCSD payroll and effort certification for the one exception noted.

Audit & Management Advisory Services appreciates the cooperation and assistance provided during the review. UC policy requires that all draft audit reports, both printed and electronic, be destroyed after the final report is issued. Because draft reports can contain sensitive information, please either return these documents to AMAS personnel or destroy them at this time.

If you have any questions regarding this report, please call me at 534-3617.

David Meier  
Director  
Audit & Management Advisory Services

cc: J. Bruner  
R. Cressey  
W. Farquharson  
A. Footer  
M. Leinen  
J. Orcutt  
S. Vacca  
N. Wilson

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<sup>1</sup> Employee ID 220127 for the month of July 2012.