

January 16, 2015

BRUCE APPELGATE  
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Nimitz Marine Facility  
Mail Code 0210

***Subject: Marine Facility  
Audit & Management Advisory Services Project 2015-12***

The final audit report for the Marine Facility, Audit Report 2015-12, is attached. We would like to thank all members of the department for their cooperation and assistance during the audit.

Because we were able to reach agreement regarding corrective actions to be taken in response to the audit recommendations, a formal response to the report is not requested.

The findings included in this report will be added to our follow-up system. While management corrective actions have been included in the audit report, we may determine that additional audit procedures to validate the actions agreed to or implemented are warranted. We will contact you to schedule a review of the corrective actions, and will advise you when the findings are closed.

UC wide policy requires that all draft audit reports, both printed (copied on tan paper for ease of identification) 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. We also request that draft reports not be photocopied or otherwise redistributed.

David Meier  
Director  
Audit & Management Advisory Services

Attachment

cc: D. Bennett  
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# UC San Diego

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## AUDIT & MANAGEMENT ADVISORY SERVICES

Marine Facility  
January 2014

**Performed By:**

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**Approved By:**

David Meier, Director

Project Number: 2015-12

*Marine Facility*  
*Audit & Management Advisory Services Project 2015-12*

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ATTACHMENT A – Audit Results by Business Functional Process

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**I. Background**

Audit & Management Advisory Services (AMAS) has completed a review of the Nimitz Marine Facility as part of the approved audit plan for Fiscal Year 2014-2015. This report summarizes the results of our review.

The Nimitz Marine Facility is the support and management center for the Scripps Institution of Oceanography (SIO) fleet of research vessels, and is also one of the largest and most completely outfitted operating bases at any oceanographic institution. The Marine Facility is organized under SIO Ship Operations and Marine Technical Support (SOMTS).

The facility includes a pier and quay wall capable of accommodating 5 ships, including the platform FLIP, and as many as 7 ships doubled up. The pier provides a complete suite of utility connections for both domestic and foreign institutions. The facility also includes a number of buildings adjacent to the pier, which house workshops, a control room for the marine radio station, scientific staging and storage areas, administrative offices, and the Shipboard Technical Support section. MarFac is able to carry out a variety of ship maintenance, repair, and modification work in-house, and these services are re-charged to the various UCSD departments where the research programs originate.

The Marine Facility receives funding from a variety of agencies, most notably the National Science Foundation (NSF) and the Department of Defense. Its global seagoing activities are coordinated by the University-National Oceanographic Laboratory System (UNOLS) along with over 60 other academic institutions and laboratories involved in oceanographic research. UNOLS helps to ensure the efficient scheduling of UCSD's ships along with those of other institutions. Generally, all research institutions, including UC, strive to ensure their research vessels' schedules are as booked as possible throughout the year.

Marine Facility staff includes over 100 seagoing personnel. Normal operations include upkeep and maintenance of the ships, as well as the customization and configuration necessary to perform the research activities scheduled throughout the year. It is also occasionally necessary for maintenance and research configuration to be performed when research vessels are abroad at domestic or international ports, which sometimes necessitates travel for MarFac technicians and crew.

**II. Audit Objective, Scope, and Procedures**

The objective of our review was to evaluate if Marine Facility internal control procedures are adequate to provide reasonable assurance that operations were effective, in compliance with applicable UC policies, and resulted in accurate financial reporting.

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In order to achieve our objectives we completed the following:

- Interviewed Marine Facility management and key personnel to discuss business processes and potential areas of concern;
- Reviewed completed internal control questionnaires and separation of duties matrices with department management;
- Analyzed departmental organizational and financial information and reports, including the departmental Transaction Sampling Management Report, Electronic Certification of Effort and Reporting Tool (ECERT) aging reports, and overdraft reports;
- Performed limited transaction testing to evaluate key business processes, as summarized in *Attachment A*.

Based on a request from Marine Facility management, a secondary objective was to evaluate the Facility's treatment of fuel and shipyard maintenance expenses as goods and services, rather than sub-awards or subcontracts, for the purpose of applying the full negotiated indirect cost recovery rate.

The following procedures were performed to complete AMAS' secondary objective:

- Obtained and reviewed correspondence between the Marine Facility and the National Science Foundation;
- Obtained and reviewed proposed contract language, as well as the executed contract, for one of the research vessels;
- Obtained and reviewed the 2013 budget and final expense calculations for the R/V Roger Revelle; and
- Reviewed OMB Circulars A-21, A-110, A-133, the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and Federal Acquisition Regulation 44.

### **III. Conclusion**

Based on our review procedures, we concluded that the Marine Facility's internal controls provided reasonable assurance that financial activities were conducted in accordance with University and campus policies and procedures. However, we did identify opportunities to improve business processes and internal controls. Our observations are discussed in the balance of this report.

AMAS also concluded that the Marine Facility's treatment of fuel and shipyard maintenance costs as goods and services complied with OMB Circular A-133, as well as other relevant federal policies, and that application of the full indirect cost recovery on these costs appeared appropriate.

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**IV. Observations and Management Corrective Actions**

**A. Express Card Administration**

**The Marine Facility Express Card Department Administrator was also issued an Express Card, and the Express Card reviewer role for one Express Card was assigned to an individual who reported directly to the Express Card holder.**

Express Card Department Administrators (ECDA) are responsible for overseeing the Express Card activity for their department. Responsibilities include requesting cards for employees and reviewing their transactions. If needed, the ECDA can designate Express Card reviewers for particular cardholders in order to allocate the administrative burden of reviewing express card transactions. Assignment of reviewers is accomplished through the ECManager system. Due to their responsibilities and ECManager system rights, an ECDA should not be issued an Express Card. Also, to be an effective internal control, reviewers should not be subordinate to the individual whose transactions are being reviewed.

During our review, we noted that the Marine Facility's ECDA had also been issued an Express Card. As a result, this individual was capable of making inappropriate purchases that could go undetected. We also noted that a subordinate had been designated in the review of the SIO Associate Director's Express Card, which could possibly reduce the effectiveness of the review process.

**Management Corrective Actions:**

In order to comply with University policy, and to demonstrate adequate internal controls, Marine Facility will:

1. Reassign ECDA responsibilities for the ECDA's Express Card to the SIO Associate Director.
2. The reviewer role for the SIO Associate Director's Express Card will be reassigned to an individual who does not report to the SIO Associate Director.

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**B. Ledger Transaction Verification**

**Marine Facility should consider the use of the UCSD Transaction Sampling system to improve the efficiency and effectiveness of the monthly ledger transaction verification process.**

On a monthly basis, all UCSD departments are required to validate transactions posted to the operating ledger to assure expenditures, liens, and revenues are correct, accurate and reasonable. Departments must also ensure that evidence of this review is adequately documented. This process entails following-up on unusual items, including verifying amounts to supporting documentation, resolving exceptions, and ensuring that corrective actions are taken in a timely manner. It is recommended that departments adopt one of two different approaches to document their validation of financial transactions:

1. Ledger Reviewer – The UCSD Ledger Reviewer system samples transactions, and all sampled items are reviewed to ensure that adequate supporting documentation exists, the transaction was processed appropriately, and that the transaction is allowable under University policy, federal regulations, or award terms and conditions.
2. Non-Financial Link Process – Some other process for performing and documenting that demonstrates that monthly revenue, budget, and expenditure transactions were reviewed and verified.

During the review, we had the initial understanding that the Marine Facility had opted to utilize Ledger Review to document their ledger transaction verification process. Between July 1, 2012, and December 31, 2014, the transaction sampling system sampled 2,456 transactions. AMAS noted that 185 transactions had not been reviewed and 119 of these were over 60 days old. After we inquired about the un-reviewed transactions, the Marine Facility business office clarified that they had not opted to utilize Ledger Reviewer, but rather utilized a non-Financial Link process that entailed reviewing every transaction line-by-line.

Due to the volume of the Marine Facility transactions each monthly, a line-by-line ledger transaction verification process may not be as effective or efficient as it would be using Ledger Reviewer.

**Management Corrective Action:**

The Marine Facility will adopt the Ledger Reviewer transaction sampling process to improve efficiency and effectiveness of the required ledger transaction verification process.

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**C. Documentation of Key Control Activities**

**Evidence that Marine Facility's key internal controls were being performed was not being documented in accordance with UCSD guidelines.**

All departments are required to provide documented evidence that key internal control activities are being performed on a regular basis in accordance with the Statement on Auditing Standards (SAS) 115. Documented evidence helps to demonstrate to individuals external to the department, including external auditors, that control activities are actually being performed.

In July 2014, a web-based tool called Control Tracker was released to the campus to help departments document performance of internal control activities. Prior to the release of Control Tracker, departments were required to document performance of internal controls using manual paper-based forms.

During our review, we noted that the Marine Facility had not yet implemented a process to regularly document performance of their key internal controls.

**Management Corrective Action:**

The Marine Facility will utilize Control Tracker to document performance of key internal control activities.

**Marine Facility**  
**Audit Results by Business Office Functional Process**  
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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>1</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Timekeeping & Payroll	√	√	√	Reviewed timesheets, DOPE reports, leave activity approvals	Yes	Satisfactory	Controls over timekeeping and payroll appeared adequate.
Transaction Processing - Non-Payroll Expenditures	√	√	√	Reviewed judgmentally-selected transactions; traced to supporting documents.	Yes	Satisfactory	Controls over non-payroll related expenses appeared adequate.
Travel	√	√	√	- Reviewed 10 trips totaling \$23,235; traced to vouchers (TEV's) & supporting documents. - Reviewed travel card transactions for 2 employees included in the above sample.	Yes	Satisfactory	Controls over travel expenses appeared adequate. Travel card activity reviewed appeared to be in compliance with campus policy.

<sup>1</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory

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**Audit Results by Business Office Functional Process**  
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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>1</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Contract & Grant Activity (Post Award Admin.)	√	√	√	Reviewed 2 awards totaling \$6.5 million; evaluated journal vouchers, non-payroll and payroll expenses, and DOPE reports.	Yes	Satisfactory	Controls over contract and grant activity appeared adequate; and treatment of fuel and shipyard maintenance costs as goods and services subject to full IDC recovery appeared to be in compliance with OMB A-133.
Effort Reporting	√	√	√	Reviewed ECERT reports and data; ensured effort certification was occurring on a timely basis.	Yes	Satisfactory	Controls over effort reporting appeared adequate.
Payroll Expenditure Transfers	√	√		Verified adjusted payroll charges per operating ledgers & distribution of payroll reports (DOPE's).	Yes	Satisfactory	Controls over payroll expenditure transfers appeared adequate.

**Marine Facility**  
**Audit Results by Business Office Functional Process**  
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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>2</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Non-Payroll Expenditure Transfers	√	√		Reviewed ENPET's for timeliness and business justification.	Yes	Satisfactory	Controls over non-payroll expenditure transfers appeared adequate.
Equipment Management	√	√	√	Reviewed inventory listing and equipment file for purchases, transfers, and deletes.	Yes	Satisfactory	Controls over equipment management appeared adequate.
Express Card Management		√	√	Reviewed express card holder and reviewer assignments; reviewed supporting documentation for 10 express card transactions totaling \$18,500.	Yes	Improvement Needed	Express Card controls will be strengthened by ensuring that the ECDA is not a cardholder, and that Express Card reviewers do not report directly or indirectly to the cardholder.

<sup>2</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory

**Marine Facility**  
**Audit Results by Business Office Functional Process**  
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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>3</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Operating Ledger Review & Financial Reporting		√	√	Examined operating ledgers and financial reports.	Yes	Improvement Suggested	Use of Ledger Reviewer will be utilized to improve the ledger validation review process; Control Tracker will be utilized to document performance of key internal controls.

<sup>3</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory