

The logo for UCIrvine, featuring the letters 'UCIRVINE' in a large, black, serif font. The 'U' and 'C' are connected, and the 'I' is a thin vertical line. The 'R' and 'V' are also connected. The 'E' is a simple horizontal bar.The text 'INTERNAL AUDIT SERVICES' in a black, serif font, arranged in two lines. The first line is 'INTERNAL' and the second line is 'AUDIT SERVICES'. There is a vertical line to the left of the text.

Facilities Management

Internal Audit Report No. I2017-106

August 12, 2017

Prepared By

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August 12, 2017

**KARL WOLONSKY
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**RE: Facilities Management Audit
Report No. I2017-106**

Internal Audit Services has completed the review of Facilities Management and the final report is attached.

We extend our gratitude and appreciation to all personnel with whom we had contact while conducting our review. If you have any questions or require additional assistance, please do not hesitate to contact me.

Mike Bathke

Mike Bathke
Director
UC Irvine Internal Audit Services

Attachment

C: Audit Committee
Gary E. Krekemeyer, Director of Budget and Finance, Facilities Management

I. MANAGEMENT SUMMARY

In accordance with the fiscal year (FY) 2016-17 audit plan, Internal Audit Services (IAS) reviewed certain business operations within campus Facilities Management (FM). Several internal controls within FM business processes appear to be functioning satisfactorily. However, certain internal controls may have opportunity for improvement, as follows.

Asset Inventory Management; Scheduled and Deferred Maintenance – Pending sufficient resources, the Preventative Maintenance program in the Tririga system could be further developed. This observation is discussed in section V.1.

Storehouse and Trades Material Inventory and Purchasing – FM Shop Stores inventory verification processes require a better separation of duties. Inventory adjustment processes may overstate inventory purchases/issuances and adjustments should be independently approved. Additionally, FM Trades' supplies and materials inventories are not reconciled annually.

PALCard Transactions – PALcard purchases are not always pre-authorized, and/or not always reviewed in a timely manner. Furthermore, duties are not always adequately separated in purchasing transactions, and purchased parts and materials are not always delivered to FM Shop Stores for proper verification/receiving. Additionally, physical security over the Grounds Maintenance and Building Services yard could be strengthened. These observations are discussed in section V.2.

II. BACKGROUND

FM is responsible for the maintenance of all buildings, grounds, and utility systems on the UC Irvine campus. FM has approximately 333 employees with an annual operating budget of \$76.6 million in fiscal year 2016-17. The FM staff maintains more than 170 buildings and 1,475 acres of land. FM provides maintenance, operation, and renovation of buildings, grounds, utility systems, custodial care, landscaping, fleet services, and engineering support.

III. PURPOSE, SCOPE AND OBJECTIVES

The purpose of the audit was to assess FM business risks and to review internal controls, and compliance with University policy. The audit scope included FY 2016-2017 and prior fiscal years' operations.

The following audit objectives were included in the review:

1. Asset Inventory Management; Scheduled and Deferred Maintenance – verify that the FM building asset management system is effective, complete and current. Verify that preventative maintenance (PM) program management agrees to the building asset management system. Verify that the scheduled and deferred maintenance management system prevents neglect of building and equipment maintenance;
2. Work Order Detail, Monitoring and Reporting - verify that FM work orders are accurate/complete; jobs are monitored for proper work status; productivity measurements are reported and utilized by management;
3. Storehouse and Trades Material Inventory and Purchasing – verify the sufficiency of internal controls over Trades material inventory monitoring and tracking, including variance approvals and write-offs;
4. Payroll Reconciliation - verify that payroll timekeeping reconciles to labor reporting in the Tririga system. Verify payroll and overtime procedures are compliant in selected areas, when applicable.

IV. CONCLUSION

Several internal controls within FM business processes appear to be functioning satisfactorily. However, certain processes may have opportunity for improvement, including scheduled and deferred maintenance, Shop stores and Trades inventory and other processes, and PALCard purchasing processes.

V. OBSERVATIONS AND MANAGEMENT ACTION PLANS

1. Asset Inventory Management; Scheduled and Deferred Maintenance

Background

The Tririga system delivers a facility maintenance software to help maintain critical facilities assets throughout their lifecycle and reduce future maintenance costs. It automates the management of corrective maintenance services to deliver higher-quality services more efficiently. Also, the preventive and condition-based maintenance processes can now be automated to improve the condition of critical facilities assets and extend their life.

Observation

IAS interviewed several personnel about the current utilization of the system as well as the capabilities of the system. Based on the interviews, IAS has concluded that the system has not been utilized effectively or efficiently. The following is a summary of the current usage of the preventative maintenance program in the system.

- In July 2007, the system was purchased to process and manage planned, preventative, and deferred asset maintenance. In order to establish a proper preventative maintenance program in the system the following minimum data must be entered into the system: (1) assets/locations; (2) maintenance frequency; (3) preventative maintenance procedures.

However, until 2012, none of the assets were entered into the system tying a specific asset to its location (building and room number). As of the audit report date, data for only 2,700 assets/locations (elevators, fume hoods, exhaust fans, ice machines, heating, and air conditioners) on campus have been entered into the system. Currently, there are tens of thousands of assets in more than 500 locations that have not been entered into the system.

Furthermore, an inventory of all assets that require preventative maintenance has not been documented and/or updated with information on new construction that opened in 2015.

- Due to the number of assets/locations that have not been entered into the system, the preventive and deferred maintenance modules have not been used. As a work around, reoccurring work orders have been entered in the system for the last five years instead. As a result, there is no historical data on planned/preventative maintenance by asset in the system.
- To utilize the full capabilities of the system, the following additional information must be entered into the system: (1) frequency of preventative maintenance program for each asset; (2) current equipment condition assessment; (3) equipment warranty information; and (4) equipment readings.

By not utilizing the full resources, capabilities, and tools of the system, FM cannot improve the effectiveness of maintenance services and help reduce maintenance and operating costs; improve the efficiency of facility maintenance operations and associated assets over their lifetimes; set priorities for capital improvements and extend the life of facilities; or identify asset/building issues before they escalate and require more expensive repairs.

- A review of the preventive maintenance work orders in the system also disclosed that entries for certain data fields such as preventative maintenance procedures and actual work performed were not consistently and/or accurately completed. Without an accurate accounting of asset management, FM cannot monitor the current condition of an asset or ensure that the asset does not fall into deferred maintenance which is estimated at \$400.7 million dollars.

Management Action Plan

FM just completed a major implementation of a new more robust version of the Tririga system, IBM10, in July of 2016, and the focus has been to resolve any issues typically associated with the initial implementation of a major system. This implementation was very significant and required extensive customized programming by both OIT and a third party software integrator. FM agrees with IAS that “tens of thousands of assets in more than 500 locations have not been entered into the system” and that not all of the applicable features of IBM10 are being utilized.

Currently there is insufficient funding for the resources necessary to input all the equipment (referred to as assets above). FM management intends to request funding from the Budget Office for FY 17-18, to support two additional FTEs dedicated to the input of the referenced equipment. In the interim, FM intends to input equipment into IBM10 as current, very limited resources permit.

2. Storehouse and Trades Material Inventory and Purchasing

a. Shop Stores – Inventory Verification

Observation

A review of FM Shop Stores' inventory verification processes disclosed the following issues.

a. Separation of Duties

Shop Stores employees who complete inventory verifications also make inventory purchases and/or have access to the perpetual inventory system. As a result, inventory responsibilities are not adequately separated.

b. Posting Inventory Adjustments

Purchase orders are created in the Tririga system to post adjustments for physical inventory overages. Conversely, issuance tickets adjust for shortages. These purchase orders and issuance tickets are not actual transactions. As a result of this process, actual inventory purchases/issuances may be overstated.

c. Approval/Explanation of Inventory Adjustments

Inventory adjustments are not approved/explained by a material manager or designee, as required by UC policy. Currently, only the final inventory count (after adjustments have been posted) is reviewed and approved by FM.

Maintaining a proper separation of duties, posting adjustments in the correct manner, and independently pre-approving inventory adjustments before they are posted helps to ensure the integrity of physical inventory.

Management Action Plan

Effective immediately, inventory will only be adjusted through the application designated in Tririga. Adjusting inventory by means of sales or purchases will no longer be allowed.

Before inventory can be adjusted in Tririga, the person reporting the discrepancy will be required to obtain approval from the Business Office. The Business Office will review the items to be adjusted for materiality (e.g., volume of adjustments, dollar value of adjustments, etc.). Only when approved may changes be posted to Tririga.

The Business Office staff performs test counts to validate the accuracy of the physical count and valuation of the inventory at year-end. FM management considers these changes sufficient to ensure adequate control and separation of duties.

b. Trades – Supplies and Materials

Background

Shop Stores orders supplies and materials for FM Trades that are charged to various work orders. Some items may remain after the work order is completed; these items are accumulated and stored in the FM Trades areas.

Observation

A review was completed of inventory and receiving processes for Trades supplies and materials. Certain security measures were also reviewed.

a. Supplies and Materials Inventory

Most supplies and materials inventories stored in the Trades shops, on service vehicles, and in building supply closets are not reconciled with the Shop Stores inventory. Furthermore, most Trades shops are not performing their own inventory reviews. UC policy requires supply inventories valued in excess of \$50,000 to be verified annually.

b. Receiving

Shop Stores purchases items for the Trades and often delivers the items to the requestor, or to drop sites. Receiving records accompany the items; the requestor should sign and date them as receipt confirmation. However, this process doesn't always occur. As a result, Shop Stores may have difficulty verifying that items were delivered to the proper person/location.

c. Physical Security

The gated entrance to the Grounds Maintenance and Building Services yard provides security for assets stored in the yard. Discussions with the Assistant Director disclosed that the gate should be locked from 5:00pm to 8:30 am. However, in two observations, the gate remained open after 5:00 pm. A secured gate may provide additional protection for University assets.

Management Action Plan

Item a. is under evaluation by the Warehouse Manager hired on January 30, 2017. An inventory and control assessment is being performed. It is estimated that this will be complete by June 2017.

Item b. is being monitored by the Warehouse Manager and any exceptions are being communicated to the appropriate assistant director.

Item c. has been addressed by installation of a security camera. A review of the security footage will be requested if the security gate is determined to have been left unlock during off hours. There are over 300 cameras installed on campus and review of security footage is performed on an as requested basis.

c. PALCard Transactions

Background

PALCard is UC Irvine's credit card. PALCard cardholders have been delegated authority by campus Purchasing & Risk Services to make low value purchases with University funds.

Observation

IAS reviewed a sample of FM PALCard purchases for FYs 2014-15, 2015-16, and FY 2016-17. The following concerns was noted.

1. **Purchase Pre-Authorization:** Purchases are sometimes made before purchase pre-authorizations are obtained, and/or before purchase requisitions and other purchasing documentation is prepared. With one sampled Los Angeles county auto parts vendor, eight of fourteen sampled purchases (57%) were ordered before a pre-authorization was obtained. Although five of the purchase requisitions indicated some urgency, none of the requisitions were checked as “rush” or “emergency” purchases. Furthermore, the vendor’s location is approximately 30 miles from UC Irvine. Orange county vendors in closer proximity to UC Irvine carry the same parts and materials.
2. **Separation of Duties/Receiving Procedures:** A proper separation of duties is not always maintained in PALCard purchases. With the aforementioned auto parts vendor, parts and materials were both requested and picked-up by the same FM employee. Furthermore, the purchased parts and materials were always taken directly to the job site. As a result, FM Shop Stores could not always verify/receive the parts and materials that were purchased.

Except for actual emergencies, pre-authorizations should be obtained and necessary paperwork completed before purchases are made. In addition, duties should be adequately separated in purchasing transactions. Purchased parts and materials should always be delivered to FM Shop Stores for proper verification/receiving, when possible.

Management Action Plan

Effective immediately, these practices have been discontinued. Internal control measures in purchase pre-authorization, separation of duties and receiving procedures are now in place.

d. Post-approved PALCard Transactions

Background

UC PALCard policies require documentation for all purchases. PALCard transactions must be reviewed within 14 days in the Kuali financial system (KFS). Otherwise, KFS posts the transaction automatically.

Observation

A review of PALCard transactions for August/September 2016 indicated that 179 of 753 transactions (23.7%) posted automatically. Timely review and approval of PALCard transactions may reduce the risk of inaccurate postings, and other concerns.

Management Action Plan

FM shop stores uses PALCard as a primary means of procurement, and has paid careful attention to having the proper internal controls in place and making sure our process meets campus policy as well as internal operational requirements.

FM operates somewhat differently from the campus as it has a separate system (IBM10) that tracks our maintenance and operations operation to help meet the requirements set out in the UCOP Facilities Manual. This system works in conjunction with the campus general ledger to insure the proper allocation of expenses and revenue. In our operational model, costs incurred through shop stores are recharged to the facilities user or the customer by IBM10 via a monthly upload to the campus general ledger. It is for this reason that all PALCard transactions are recorded in and are, by design, not “moved” from the default KFS account as part of the PALCard approval process.

FM employs an “internal” purchase requisition for all procurement requests. This requisition contains all the necessary approvals, and is required for all but emergent situations. This requisition is an important part of our internal controls, as it represents a pre-order authorization.

For all PALCard transactions, a package consisting of the authorized request with all necessary details and other required backup is provided to the

PALCard reviewer. Each package is reviewed to assure the integrity of the order- that the items requested are in fact the items delivered. This initial review happens prior to any interface with KFS. The second step then involves the KFS approval, and any transactions that have already been approved are subject to adjustment as necessary – including adding or subtracting use tax, etc. – and a cross-reference to the IBM10 transaction is added to the KFS record. To be clear, system-posted PALCard transactions are being reviewed after-the-fact by the PALCard reviewer.

In our case, the first two approval reviews are sufficient to eliminate serious risk from the procurement process (the review prior to placing the PALCard order, and the review by the PALCard reviewer).