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May 1, 2015

Dr. David Daniel, President,
Ms. Lisa Choate, Chair of the Institutional Audit Committee:

We have completed an audit of Work Order System as part of our fiscal year 2015 Audit Plan, and the report is attached for your review. The audit was conducted in accordance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*. The objectives of the audit were to ensure that the controls over the Work Order System are adequate to ensure that access to data is properly safeguarded and operational processes are efficient and effective.

Overall, we found controls within the Work Order System can be strengthened. The attached report details recommendations that will enhance access controls and the efficiency of existing processes.

Management has reviewed the recommendations and has provided responses and anticipated implementation dates. Though management is responsible for implementing the course of action outlined in the response, we will follow up on the status of implementation subsequent to the anticipated implementation dates. We appreciate the courtesies and considerations extended to us during our engagement. Please let me know if you have any questions or comments regarding this audit.

Toni Stephens
Institutional Chief Audit Executive

UT Dallas Responsible Parties:

Mr. Richard Dempsey, Associate Vice President Facilities Management
Mr. Monnie Cates, Associate Director of Facilities Management

Members of the UT Dallas Institutional Audit Committee:

External Members:

Mr. Bill Keffler
Mr. Ed Montgomery
Ms. Julie Knecht

Dr. Hobson Wildenthal, Executive Vice President and Provost
Dr. Calvin Jamison, Vice President for Administration
Mr. Terry Pankratz, Vice President for Budget and Finance
Mr. David Crain, Vice President and Chief Information Officer
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Dr. Gene Fitch, Associate Vice President for Student Affairs and Dean of Students
Mr. Timothy Shaw, University Attorney

The University of Texas System:

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State of Texas Agencies:

Legislative Budget Board
Governor's Office
State Auditor's Office
Sunset Advisory Commission



Executive Summary

Work Order System, Report No. 1515

Audit Objective and Scope: To ensure that the controls over the Work Order System are adequate to ensure that access to data is properly safeguarded and operational processes are efficient and effective. The scope of this audit was Fiscal Year 2014 to date.

The following is a summary of the audit recommendations by priority and risk type. See Appendix A for additional details.

High (0)	High/Medium (0)	Medium (4)	Low (0)
Recommendation	Priority and Risk Type		Estimated Implementation Date
(1) <i>Improve Segregation of Duties Around Inventory</i>	Medium; Effectiveness & Efficiency		December 1, 2015 if an additional personnel budget line is added for FY16
(2) <i>Limit Number of Administrative Accounts</i>	Medium; Information Security		Implemented
(3) <i>Implement Validation of Fund Availability</i>	Medium: Effectiveness & Efficiency		Not implemented
(4) <i>Enhance the User Access Management Process</i>	Medium; Information Security		June 30, 2015
Responsible Vice President: Dr. Calvin Jamison, Vice President for Administration		Responsible Party: Mr. Richard Dempsey, Associate Vice President Facilities Management P.E.	
Staff Assigned to Audit: Ali Subhani, CIA, CISA, GSNA, IT Audit Manager; Colby Taylor, IT Staff Auditor			



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Background

[Facilities Management \(FM\)](#), reporting to the Vice President for Administration, utilizes the Work Order System (WOS) for billing departments for costs that are incurred during projects. The department has responsibility for configuring the WOS and for administering security within the application. Architecture and Infrastructure Services (AIS), within the Office of the Information Resources (IR), is responsible for supporting the underlying IT infrastructure that supports the WOS. The WOS offers FM the capability to:

- Track personnel hours that are being spent on maintenance jobs.
- Means for scheduling personnel.
- Bill departments for projects.
- Track inventory that is being held by FM for maintenance, repairs and remodeling requests.

Given the capability of the application, it is important that a control environment be in place to minimize risks such as:

- Inaccurate billing of construction and other projects.
- Potential loss of inventory due to inadequate segregation of duties.
- Potential for inflation of hours that are charged to projects.

Currently, 490 individuals are active within the Work Order System. During fiscal year 2014, approximately \$2,646,950 was posted from the WOS into the University's financial system. The Software System Support Specialist IV, who reports to the Associate Director for FM, is responsible for managing the user administration within the application. WOS was implemented at UT Dallas in calendar year 2008.

ORGANIZATION CHART





Audit Objective

To ensure that the controls over the Work Order System are adequate to ensure that access to data is properly safeguarded and operational processes are efficient and effective.

Scope and Methodology

The scope of this audit was Fiscal Year 2014 to date, and our fieldwork concluded on January 7, 2015. To satisfy our objectives, we performed the following:

- Interviewed personnel to gain an understanding of the Work Order System.
- Gained an understanding of the process through which users from other departments are provided access to the Work Order System.
- Evaluated authentication controls within the application.
- Reviewed data security controls.
- Reviewed the billing process and evaluated for adequacy.
- Determined if critical functions within the application were adequately segregated.

Where applicable, we conducted our examination in accordance with the guidelines set forth in The Institute of Internal Auditor's *International Standards for the Professional Practice of Internal Auditing*. The *Standards* set criteria for internal audit departments in the areas of independence, professional proficiency, scope and performance or audit work, and management of the internal auditing department.

Audit Results and Management's Responses

Controls

Our audit work indicated that the following controls currently exist:

- Logging that tracks the identity of the individuals that make updates to work orders is enabled.
- An authentication process for user accounts is functioning as intended.
- Roles with different levels of access privileges within the WOS exist and are being utilized.
- A separate environment is in place to segregate the production environment from the test environment.
- Webpage access is provided by a secure HTTPS connection and proper browser certification.
- No confidential data was noted within the application.



Audit Recommendations

Although the above controls are in place, opportunities exist to enhance the work order system.

Priority Findings – UT System

A UT System priority finding is defined by the UT System Audit Office as: “an issue identified by an internal audit that, if not addressed timely, could directly impact achievement of a strategic or important operational objective of a UT institution or the UT System as a whole.”¹ We have **no UT System Priority Findings** resulting from this audit.

Audit Recommendations

See Appendix A for the Priority Findings and Risk Matrix defining the various risk factors and risk levels for each audit recommendation.

(1) **Improve Segregation of Duties Around Inventory** Risk Rating: **Medium** ★; Risk Factor: **Effectiveness and Efficiency**

The Facilities Management team maintains inventory within two warehouses for material that may be utilized on renovation projects. At the end of FY 2014, there was \$94,280 in inventory that was stored within the warehouses. During the audit the following concerns related to inventory were noted:

- The Senior Buyer that is involved in the purchase of inventory also maintains physical access to inventory as it is retained within the warehouses.
- The Senior Buyer also has access privileges within the WOS that will allow for entering and modifying inventory records within the application.
- The Senior Buyer is also responsible for performing the annual physical inventory verification to ensure that physical inventory within the warehouse matches the inventory records that are maintained within WOS.

Without adequate segregation of conflicting job duties the University risks being unable to detect loss or theft of inventory that is being maintained within the warehouse.

Recommendation: Management should consider separating the job duties so that the same individual does not perform the annual inventory, have physical access to inventory, and have responsibility for maintaining inventory records.

¹ Appendix A defines the priority and risk ranking used for all internal audit recommendations.



Management's Response: *Concur with the need to separate or segregate these job duties. Senior Buyer's access to inventory will be limited per recommendation. Job duties will be evaluated and where possible reassigned to other FM personnel to ensure proper segregation of duties.*

Estimated Date of Implementation: *December 1, 2015*

Person Responsible for Implementation: *Monnie Cates, Associate Director FM Business Services*

(2) **Limit Number of Administrative Accounts**

Risk Rating: **Medium** ★; Risk Factor: **Information Security**

As of October 24, 2014, 12 individuals within the WOS had administrative privileges assigned to them. Eight of the 12 individuals with administrative privileges do not require such privileges for the performance of their job duties. According to TAC 202.75 3², "A user's access authorization shall be appropriately modified or removed when the user's employment or job responsibilities within the institution of higher education change." Administrative privileges allow users to update the configurations in place and carryout all business functions within the application.

Recommendation: FM should work on reducing the number of individuals with administrative accounts that remain active in the application. Security privileges should be assigned in line with the user's job responsibilities.

Management's Response: *Concur with this recommendation. The system administrators within Facilities Management (FM) organization has already been reduced to three. This is a reasonable number without jeopardizing the organization's ability to operate the system. Information Resources (IR) has reduced their number to three which includes an AiM system root account which cannot be disabled or removed. This is the number which they indicate is necessary for them to support the underlying IT infrastructure.*

Estimated Date of Implementation: *Completed*

Person Responsible for Implementation: *Monnie Cates, Associate Director FM Business Services*

² [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&ti=1&ch=202&rl=75](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&ti=1&ch=202&rl=75)



(3) **Implement Validation of Fund Availability**

Risk Rating: **Medium** ★; Risk Factor: **Effectiveness & Efficiency**

Currently, there is no process in place to ensure that adequate funding is available within the cost center to which project costs will be distributed. Funding availability is manually performed only if the cost center has not been set up within the WOS. As a result, there is risk that a department may not have adequate funds to pay for costs that may be incurred by Facilities Management. Budgetary controls are crucial to the internal control framework of an organization.

Recommendation: Management should determine the feasibility of implementing a process to determine fund availability prior to the work order being created. Additionally, management should consider encumbering the necessary funds prior to the beginning of the work so that funding can be guaranteed.

Management's Response: *Management does not concur with this recommendation at the present time. Jobs requests from departments are documented and properly invoiced at the completion of each job. FM has not had any significant issue collecting funds from internal departments after the completion of a requested job. This recommendation would cause delays in accomplishing important and critical work. Furthermore, system integrity of the change orders and payments related to encumbrances are not fully reliable. Interfacing the WOS with a less dependable encumbrance process would further affect the integrity of the billing process. There is currently a joint effort underway with Procurement, IR, AD and FM to fix the encumbrance errors that occur between SciQuest and PeopleSoft. Management will review the recommendation at a later date once the stability of the encumbrance process has been fully verified.*

Estimated Date of Implementation: *Not applicable*

Person Responsible for Implementation: *Monnie Cates, Associate Director FM Business Services*

Internal Audit Follow-up Comment: *Internal Audit will revisit this recommendation during the follow-up audit process in FY 16 to determine if the encumbrance system is more stable.*

(4) **Enhance the User Access Management Process**

Risk Rating: **Medium** ★; Risk Factor: **Information Security**

Access privileges for users should be in line with their current job duties. Without access privileges that tie to job responsibilities, the risk of error, losses and fraud can be increased. During a review of access privileges that were currently configured within the WOS application, the following observations were made:



- 88 users have access to one or more set-up screens. The set-up pages are utilized to configure how the application functions.
- Currently, access privileges requests are not formally documented. Additionally, the authorization process for role changes has not been formalized. As a result, documentation and the subsequent approval to validate access privileges for users that currently exist within the application does not exist. According to TAC 202. 71 ³, “*Information owners.....(should) approve access and formally assign custody of an information resources asset.*”
- Departments are currently not notifying Facilities Management when a user who had been granted access to the WOS should have that access removed. As a result currently anyone who changes departments or leaves and rejoins the university, but does not have their roles removed, will retain access to the WOS.
- 99 individuals could make adjustments to timecards that have been submitted within the WOS. Adjustments of timecards can have an impact on the work order and phase costs that are billed to the departments.
- The Engineering role has access to add/modify the final checks that are performed by the WOS at the end of the billing process. A user with this level of access could change the work order process so that a certain type of work order does not get charged. 16 individuals had the engineering role assigned.

According to TAC 202.75⁴, “(B) A user's access authorization shall be appropriately modified or removed when the user's employment or job responsibilities within the institution of higher education.”

Recommendation: The user access management process should be enhanced by:

- Implementing a process to document the access request and the subsequent approval prior to adjusting privileges.
- Developing a process to terminate access privileges for users that have not logged into the application for an extended period of time.
- Enhancing the role design so that the roles provide the least amount of privileges that are required by the user to complete their job duties.

Management's Response: *Concur with the recommendation to better document and manage the user access to the WOS. Processes to improve access control and privileges of our customers has already been implemented. All access requests are sent through email and saved in a separate Outlook folder. A written log of new accounts created is also maintained. A 'Birt' report is being developed in AiM to report any account not logged in to in the past 90 days. The individual having access for this account will be contacted and removed if access is no longer appropriate. Any enhancement or changes of role privileges must first be tested and evaluated in the AiM test system to ensure integrity and normal operation.*

³

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=202&rl=71](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=202&rl=71)

⁴

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=202&rl=75](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=1&pt=10&ch=202&rl=75)



Estimated Date of Implementation: *June 30, 2015*

Person Responsible for Implementation: *Monnie Cates, Associate Director FM Business Services*

Overall Audit Response Provided by Management: *It is reassuring to note that no improprieties or irregularities were identified during the audit and that the work order system is performing in a productive manner. It is concurred that certain actions can be taken to strengthen the integrity of this system and the work order process.*

Conclusion

Based on the audit work performed, we conclude that controls within the Work Order System can be strengthened. Implementation of the recommendations outlined in this report will help the enhance access controls and the efficiency of existing processes.

We appreciate the courtesy and cooperation received from the management and staff within Facilities Management during this audit.



Appendix: Priority Findings and Risk Matrix

Definition of Risks

Risk Level	Definition
High	High probability of occurrence that would significantly impact UT System and/or UT Dallas. Reported to UT System Audit, Compliance, and Management Review Committee (ACMRC). Priority findings reported to the ACMRC are defined as <i>“an issue identified by an internal audit that, if not addressed timely, could directly impact achievement of a strategic or important operational objective of a UT institution or the UT System as a whole.”</i>
High/Medium	Risks are considered to be substantially undesirable and pose a moderate to significant level of exposure to UT Dallas operations. Without appropriate controls, the risk will happen on a consistent basis.
Medium	The risks are considered to be undesirable and could moderately expose UT Dallas. Without appropriate controls, the risk will occur some of the time.
Low	Low probability of various risk factors occurring. Even with no controls, the exposure to UT Dallas will be minimal.

Risk Factors

- Reputation - damage to the image of UT Dallas and/or UT System
- Information Security - integrity, confidentiality and availability of information
- Compliance – compliance with external legal or regulatory requirements
- Accomplishment of Management’s Objectives – goals being met, projects being successful
- Effectiveness and Efficiency – objectives at risk and/or resources being wasted
- Capital Impact - loss or impairment of the use of assets
- Life Safety – including loss of life, injury, toxics/infectious disease
- Management Oversight
- Operational Alignment – management’s alignment of people, process and technology to efficiently accomplish organization objectives
- Designed Controls – adequacy of controls within critical operations
- Payments/Expenditures – including fines and legal costs
- Lost Revenue – actual and/or opportunities