ORANGE COUNTY

AUDITOR-CONTROLLER

INTERNAL AUDIT

INFORMATION TECHNOLOGY AUDIT:

COUNTY PROCUREMENT OFFICE/OC EXPEDITER SYSTEM

As of May 31, 2015

Audit Number 1455
Report Date: October 16, 2015

ORANGE COUNTY
AUDITOR-CONTROLLER
INTERNAL AUDIT

Eric H. Woolery, CPA
Orange County Auditor-Controller

Toni Smart, CPA	**Director, Internal Audit**
Autumn McKinney, CPA, CISA	**Senior Audit Manager**
Wilson Crider, CPA, CISA	**IT Audit Manager**

12 Civic Center Plaza, Room 200
Santa Ana, CA 92701

Auditor-Controller Web Site
www.ac.ocgov.com

ERIC H. WOOLERY, CPA
AUDITOR-CONTROLLER

Audit No. 1455

Transmittal Letter

October 16, 2015

TO: Rob Richardson, County Procurement Officer
County Executive Office/County Procurement Office

SUBJECT: Information Technology Audit:
County Procurement Office/OC Expediter System

We have completed an Information Technology Audit of the OC Expediter System as of May 31, 2015. Our final report is attached for your review.

I submit an **Audit Status Report** quarterly to the Audit Oversight Committee (AOC) and a monthly report to the Board of Supervisors (BOS) where I detail any critical and significant audit findings released in reports during the prior month and the implementation status of audit recommendations as disclosed by our Follow-Up Audits. Accordingly, the results of this audit will be included in a future status report to the AOC and BOS.

Additionally, we will request your department to complete a **Customer Survey** of Audit Services. You will receive the survey shortly after the distribution of our final report.

Toni Smart, CPA, Director
Auditor-Controller Internal Audit Division

Attachments

Other recipients of this report:
  Members, Board of Supervisors
  Members, Audit Oversight Committee
  Eric Woolery, Auditor-Controller
  Frank Kim, County Executive Officer
  Mark Denny, Chief Operating Officer
  Michelle Aguirre, Chief Financial Officer
  Christina Koslosky, Chief Information Officer
  Lyle Rossow, Chief County Deputy Purchasing Agent
  Quazi Hashmi, CEO/IT, Program Manager
  Jessica O'Hare, Assistant to the Chief Operating Officer
  Foreperson, Grand Jury
  Robin Stieler, Interim Clerk of the Board of Supervisors
  Macias Gini & O'Connell LLP, County External Auditor

Information Technology Audit:
County Procurement Office/OC Expediter System
Audit No. 1455

As of May 31, 2015

Table of Contents (continued)

Internal Auditor's Report

TO: Rob Richardson, County Procurement Officer
               County Executive Office/County Procurement Office

FROM: Toni Smart, CPA, Director
               Auditor-Controller Internal Audit Division

SUBJECT: Information Technology Audit of County Procurement Office/OC Expediter System

OBJECTIVES

The County Procurement Office (CPO) is planning a countywide implementation of an enterprise version of OC Expediter currently used in three departments (OC Public Works, OC Community Resources, and OC Waste & Recycling). OC Expediter is a routing based requisition software tool and an invoice tracking system that provides information so departments can monitor remaining contract balances to avoid contract overruns.

CPO requested Internal Audit to review the internal controls of the planned enterprise version of the system before it is implemented countywide. We have performed an audit of the OC Expediter system to evaluate the adequacy of the application's internal controls as of May 31, 2015. Our audit objectives were:

1. Segregation of Duties: Evaluate whether OC Expediter has adequate controls that prevent the same individual from entering and authorizing a requisition transaction. This can be accomplished by a system enforced rule that requires separate individuals to perform the following tasks: Entering requisitions and reviewing and approving requisitions.

2. Reviews and Approvals: Evaluate whether OC Expediter has adequate controls to ensure that requisition transactions are properly reviewed and approved before processing continues.

3. Audit Trails: Evaluate whether OC Expediter has adequate audit trails to document each transaction's activity. This would enable management to track transactions from the source to the ultimate result and to trace backward from results to identify the transactions and events they record.

4. Reconciliations: Evaluate whether OC Expediter has adequate controls to ensure that sound reconciliations of data are performed. This could include reviews or comparisons of system interfaces for completeness.

5. Other Items: During the performance of our audit, we may identify other control weaknesses or areas for improvement that we will provide recommendations. These areas may include data accuracy and limits or thresholds, user access or logical security to ensure only authorized individuals can access the application, system governance and change management procedures to ensure errors are not introduced into the application during development or subsequent modification.

RESULTS

Objective #1: Segregation of Duties - OC Expediter has adequate controls to prevent the same individual from entering and authorizing a requisition transaction and establishes a proper segregation of duties throughout the processes. No specific findings were identified, other than related Finding Nos. 1, 9, and 10 discussed further in the detailed findings section of this report.

Objective #2: Reviews and Approvals - OC Expediter has some controls to ensure that transactions are properly reviewed and approved before processing continues; however, the controls are not sufficient to provide adequate accountability for the final approval of requisitions, which is a department head delegated authority. We identified **two (2) Critical Control Observations** regarding (1) lack of adequate accountability for final approval and budget approval of requisitions and (2) final approval of a requisition is not required by the system. We also identified **two (2) Significant Control Observations** regarding (1) lack of formal process for establishing users' access, including Department Head delegation of "Final Approval" authority, and (2) CPO needs to provide corporate policy for OC Expediter usage.

Objective #3: Audit Trails - OC Expediter generally has adequate audit trails to document each transaction's activity (status changes), except that audit trails as currently implemented do not capture data changes to requisitions such as those affecting Estimated Cost. We identified **one (1) Significant Control Observation** concerning audit trails for capturing changes to requisitions.

Objective #4: Reconciliations - OC Expediter has some controls to ensure that sound reconciliations of the data were performed; however, a reconciliation of data file uploads was not initially being done. This was subsequently corrected during our audit fieldwork. We identified **one (1) Control Observation** regarding the need to document procedures for the newly created data file upload reconciliation.

Objective #5: Other Items - During the performance of our audit, we identified **one (1) Significant Control Observation** regarding need for a system threshold or limit when final costs exceed authorized amounts, and **six (6) Control Observations** regarding data accuracy, restricting sensitive data, controlling IT staff access to the production environment, and the need for system governance, system documentation, and monitoring system performance during implementation.

The thirteen (13) findings and recommendations are discussed below:

BACKGROUND

The County Procurement Office (CPO) is planning a countywide implementation of "OC Expediter." OC Expediter is a routing based requisition software tool and invoice tracking system that provides information so departments can monitor remaining contract balances to avoid contract overruns. CPO plans to have departments utilize OC Expediter for requisitions of all purchases including petty cash, Cal-Card, and non-DPA contracts such as human services and public works.

CPO requested Internal Audit to review the internal controls of the planned system before it is implemented countywide. CPO informed us that this system is being implemented as an interim solution until an eProcurement solution is determined since it is already available and meets the basic functional requirements for a countywide requisition process. Even though OC Expediter is planned as an interim solution, it is still important for us to share all relevant observations and recommendations for improvement with the CPO.

The original standalone version of Expediter (no "OC") was developed in-house by OC Community Resources (OCCR) and later shared with OC Public Works (OCPW) and OC Waste & Recycling (OCW&R) for their own standalone use. For the new countywide or enterprise version of the application, CPO has taken over as the business owner responsible for governance and policy setting and CEO/Orange County Information Technology (OCIT) has taken over the technical support responsibilities. In March and April 2015, version 1.0 of OC Expediter was finalized and implemented at OCCR, OCPW, and OCW&R.

The OC Expediter system is comprised of two applications or modules: Expediter and CMS.

Expediter: Expediter is used to process and approve requisitions, as well as monitor available or remaining contract balances (contracts less encumbrances less pending requisitions) to avoid contract overruns.

The system workflow is basically a series of permissions and states where the current "owner" of the transaction selects the state (create, modify, approve, etc.) and selects the next user ("owner") to receive the transaction in the process flow, and so on (i.e. a flexible workflow). Users know that they have been assigned a transaction by receiving an email (sender can turn-off) and the transactions show up in their work queue. User roles specify which state or "status" they have been given rights to. Users select the status to apply to a requisition using a pre-populated drop-down menu.

Contract Management System (CMS): For CMS, there is no workflow. CMS is used primarily to track the status of invoices and determine remaining contract balances to avoid overruns. There are two basic user functions: view and edit. The different roles in CMS help to identify when a key step of the process is performed (receive invoice, approve invoice, send invoice to central Auditor-Controller for payment, etc.) so that the status of invoices in process can be tracked and metrics (how long it takes) can be gathered.

System Interfaces

OC Expediter receives overnight feeds or data files (Monday through Friday) from the CAPS+ Finance & Purchasing system to populate key data housed in OC Expediter. The data received includes: vendor information, contracts/purchase orders (CT/PO), master agreements (MA), delivery orders (DO), and payments (paid invoices). As part of the load or import process, OC Expediter deletes the existing CAPS+ data in OC Expediter and replaces it with latest CAPS+ data files.

User Authentication

OC Expediter uses the CEO/OCIT global active directory (known as OCid) to authenticate users. OCid stores a nightly copy of each departments' active directory for the County's network.

SCOPE AND METHODOLOGY

Our audit consisted of inquiry, review of provided system documentation (e.g. *Draft* OC Expediter User Guide, test cases, etc.), and observation of the OC Expediter software (version 1.0) in the test environment to identify and evaluate the adequacy of internal controls related to the applications:

1. Proper segregation of duties to prevent the same user from creating and approving a requisition transaction;
2. Appropriate reviews and approvals of requisition transactions;
3. Adequate audits trails to track and document each transaction's activity;
4. Sound reconciliations of data; and
5. Other selected control issues, on a more limited basis, coming to our attention in the areas of data integrity, logical security, system governance, and change management procedures.

Our audit period is as of May 31, 2015.

SCOPE EXCLUSIONS

Our audit <u>did not</u> include a review of the following:

- Review of any general controls other than the items specified above.
- Review of compliance with any local, state, or federal regulations.
- Review of processes performed outside of OC Expediter by the individual departments such as OCPW, OCCR, OCW&R, CPO, and A-C.
- Review of OCid and the Active Directory settings and file server permissions.
- Security assessment or penetration audit.
- Review of requisition functionality in the CAPS+ Finance & Purchasing system currently used by the Health Care Agency, County Executive Office, and Auditor-Controller.
- Review of CPO's business decision (pros/cons) to utilize OC Expediter versus the CAPS+ Finance & Purchasing system for countywide processing of requisitions.

Additionally, our review was of planned internal controls for OC Expediter version 1.0, which could subsequently change. CPO and CEO/OCIT are currently working on modifications for an OC Expediter version 1.1 to be implemented countywide.

MANAGEMENT'S RESPONSIBILITIES FOR INTERNAL CONTROLS

In accordance with the Auditor-Controller's County Accounting Manual section S-2 *Internal Control Systems*, "All County departments/agencies shall maintain effective internal control systems as an integral part of their management practices. This is because management has primary responsibility for establishing and maintaining the internal control system. All levels of management must be involved in assessing and strengthening internal controls ... Control systems shall be continuously evaluated (by Management) and weaknesses, when detected, must be promptly corrected." The criteria for evaluating an entity's internal control structure is the Committee of Sponsoring Organizations (COSO) control framework. Our Internal Control Audit enhances and complements, but does not substitute for the County Procurement Office's continuing emphasis on control activities and self-assessment of control risks.

Inherent Limitations in Any System of Internal Control

Because of inherent limitations in any system of internal controls, errors or irregularities may nevertheless occur and not be detected. Specific examples of limitations include, but are not limited to, resource constraints, unintentional errors, management override, circumvention by collusion, and poor judgment. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or the degree of compliance with the procedures may deteriorate. Accordingly, our audit would not necessarily disclose all weaknesses in the County Procurement Office's operating procedures, accounting practices, and compliance with County policy.

FOLLOW-UP PROCESS

Please note we have a structured and rigorous **Follow-Up Audit** process in response to recommendations and suggestions made by the Audit Oversight Committee (AOC) and the Board of Supervisors (BOS). Our **First Follow-Up Audit** will begin at <u>six months</u> from the official release of the report. A copy of all our Follow-Up Audit reports is provided to the BOS as well as to all those individuals indicated on our standard routing distribution list.

The AOC and BOS expect that audit recommendations will typically be implemented within six months and often sooner for significant and higher risk issues. Our **Second Follow-Up Audit** will begin at <u>six months</u> from the release of the first Follow-Up Audit report, by which time **all** audit recommendations are expected to be addressed and implemented. At the request of the AOC, we are to bring to their attention any audit recommendations we find still not implemented or mitigated after the second Follow-Up Audit. The AOC requests that such open issues appear on the agenda at their next scheduled meeting for discussion.

We have attached a **Follow-Up Audit Report Form**. Your department should complete this template as our audit recommendation is implemented. When we perform our first Follow-Up Audit approximately six months from the date of this report, we will need to obtain the completed form to facilitate our review.

The Auditor-Controller Internal Audit Division is available to partner with your staff so that they can successfully implement or mitigate difficult audit recommendations.

Acknowledgment

We appreciate the courtesy extended to us by the CPO, CEO/Orange County Information Technology and the OC Expediter development team during our audit. If you have any questions regarding our audit, please contact me directly at (714) 834-5475, or Autumn McKinney, Senior Audit Manager at (714) 834-5430.

Objective #1: Evaluate whether OC Expediter has adequate segregation of duties that prevent the same individual from entering and authorizing a requisition transaction.

AUDIT STEPS AND RESULTS
To accomplish this objective, we performed the following work:
- Inquiry and meetings with the development team.
- Review of provided system documentation such as the *Draft* OC Expediter User Guide and test cases for the application.
- Observation of the OC Expediter software (version 1.0) in a test environment.

System Roles:
- Expediter: Standard User (default role given to all department employees with network access), Department Buyer, Department Administrator (adds/deletes users for their department), Central Purchasing Office (ability to run countywide reports once functionality is developed), and System Administrator (CEO/OCIT staff supporting the system).
- CMS: CMS Field Staff (view only), CMS Accounts Payable Staff, CMS Approval Staff, CMS Administrative Manager (adds/deletes users for their department), and CMS Administrator (CEO/OCIT staff supporting the system). There is no workflow or routing of invoice transactions in CMS. CMS is used primarily to track the status of invoices and determine remaining contract balances to avoid overruns.

Strengths:
- While all user roles have the ability to initiate or approve a requisition, OC Expediter has a system enforced rule where the Initiator cannot "Approve" a requisition they create, i.e. no self-approval.
- Only after the requisition has the status of "Budget Approval" is the "Assigned" status available to the Department Buyer role. At that point, the requisition data is locked and the requisition can be assigned to a buyer to procure the goods or services. The purchasing section of the requisition is then available for completion by the buyers.
- Changes to a requisition can only be made by the current "owner" of the requisition provided the requisition is not locked.
- Users can only process requisitions or access information for their department (based on their County network access).

Related Findings – User Access:
- See Finding No. 1 below regarding lack of unique user roles for "Final Approval" and "Budget Approval."
- See Finding No. 9 below regarding need for capability to restrict access to sensitive data.
- See Finding No. 10 below regarding limiting IT staff access to the production application.

CONCLUSION
Our audit found OC Expediter has adequate controls that prevent the same individual from entering and authorizing a requisition transaction which establishes a proper segregation of duties. **No findings came to our attention under this objective, other than the related findings referenced above.**

Objective #2: Evaluate whether OC Expediter has adequate controls to ensure that requisition transactions are properly reviewed and approved before processing continues.

AUDIT STEPS AND RESULTS

To accomplish this objective, we performed the following work:

- Inquiry and meetings with the development team.
- Review of provided system documentation such as the *Draft* OC Expediter User Guide and test cases for the application.
- Observation of the OC Expediter software (version 1.0) in a test environment.

Strengths:
- Once the requisition form is created by the initiator and all required fields are entered, the initiator selects the next user to route it to for review or approval, and so on. The system allows for multiple reviews or approvals as needed by the different departments or units within a department.
- By procedure (not enforced by a system rule), requisitions generally should be routed to the: Immediate Supervisor, Section or Division Manager, Budget Analyst, and Department Buyer.
- A user can only select another user that is within their department to route a requisition for review or approval.

CONCLUSION

Our audit found that OC Expediter has some controls for review and approval of requisition transactions; however, the controls are not sufficient to provide adequate accountability for the final approval of requisitions, which is a department head delegated authority. We identified **two (2) Critical Control Observations** regarding (1) the lack of unique roles for final approval and budget approval and (2) final approval of a requisition is not required by the system. We also identified **two (2) Significant Control Observations** regarding (1) formal process is needed for establishing users' access including the Department Head delegation of "Final Approval" authority, and (2) CPO needs to provide corporate policy for OC Expediter usage. These four (4) findings and recommendations are discussed below:

Finding No. 1 - Lack of Adequate Accountability for Final Approval and Budget Approval (Critical Control Observation)

Finding No. 2 - Final Approval of the Requisition is Not Required by the System (Critical Control Observation)

Summary: County Codified Ordinance Section 1-4-26 – Requisition Procedure allows department heads to delegate authority for specified individuals to "approve" requisitions. OC Expediter does not have a unique user role for this delegated approval authority. Any department standard user (default role) can apply "approval" or "final approval" or "budget approval" to a requisition for their department. Instead, unique user roles should be established for both the final approval and budget approval permissions. In addition, the "budget approval" is a system required status for requisitions, but the system does not require "final approval" of requisitions.

Details: The OC Expediter workflow is basically a series of permissions and states (or statuses) where the current "owner" of the transaction selects the state (update, review, approval, final approval, delete, etc.) as well as the next user ("owner") to receive the transaction, who then selects the next user to receive the transaction, and so on. Except for "budget approval," all other reviews and approvals are optional or ad hoc with users following the policy set by their individual departments.

Until a requisition receives "budget approval," the requisition may be modified and those changes are not captured by the system (See Finding No. 5 below). "Budget approval" locks the requisition, allowing it to be assigned to a buyer for procurement of goods or services.

What this means is the process relies primarily on the users themselves to know who else should review and approve their transactions, in what order, and what levels within the department. Different users within the same department could have different policies. The system itself allows a requisition to be processed without reviews, approvals, or final approval, except for the required budget approval. The budget approver is that last person in the system to review the requisition and ensure that appropriate reviews and approvals have occurred before the requisition is assigned to a buyer. As such, the budget approver needs to know the varying policies for their department.

While the OC Expediter's flexible workflow routing allows departments to implement a process that best fits their individual needs, there should be some minimum approval rules enforced by the system. These rules can be implemented in the system while still providing the departments with routing flexibility.

Finding No. 1: A critical control issue is that the OC Expediter system does not have a unique user role established for the final approval or budget approval and instead these permissions are included in the "Standard" user role. All users within a department (that have network access) automatically (by default) have "Standard" access for that department.

The "final approval" is a critical control point in the requisition process and should have a unique role limited to only those individuals that have the express delegated authority from the department head or designee. The "budget approval" is also an important control point and should have a unique role. Establishing these two unique roles will provide accountability and help satisfy the County Procurement Manual and County Ordinance requirements below.

The County Procurement Manual, Section 2.5, states that each of the following provisions of County Codified Ordinance Sec. 1-4-26 – Requisition Procedure shall apply:

a) All purchase, rentals and contracts shall be made only upon receipt of proper written/authorized requisitions, the forms of which shall be supplied by the Purchasing Agent to the several offices of the County.

b) No purchase order shall be issued unless approved budget appropriation is shown according to the budget procedure established by the Auditor-Controller and the County Executive Officer.

c) The head of any County office, department or institution or his duly designated assistant is hereby authorized to draw requisitions for purchases for such office, department or institution in accordance with current budget accounts.

d) Such head may delegate such authority to one or more of his deputies, assistants or employees within the department.

Recommendation No. 1: We recommend that the CPO create unique user roles for the final approval and budget approval permissions.

County Procurement Office Management Response:

Concur - The CPO has addressed this finding by creating a unique user role for "final approval" and "budget approval." These roles will only be available to users that have been delegated this authority by the head of any County office, department or institution or duly designated assistant.

The following modifications have been made to the system:

- Two roles "Final Approver" and "Budget Approver" have been added.
- User(s) in the Dept. Admin role will be able to add/remove users to "Final Approver" and "Budget Approver" groups. (Refer to response on finding # 3 for more details)
- The status "Final Approval" on the requisition shall be available only to the users assigned the Final Approver role.
- Status "Final Approval" shall be required for the requisition to be stamped with a "Budget Approval" status.
- Status "Final Approval" shall lock the requisition except the coding.
- The status "Budget Approval" on the requisition shall be available only to the users in the Budget Approver role.
- Budget team inputs or corrects the coding in Funding section and the following fields within the purchase items section before giving "Budget Approval"
  - Object
  - Dept. Object
  - Budget Line
  - P-Org (Applicable only when Capital projects object 4200 is selected)

Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding No. 2: Another critical control issue is that the OC Expediter system does not require a "final approval" of requisitions (system rule). As the CPM and above County Ordinance require requisitions to be approved by someone with the department head delegated authority, having the system require this approval step will better ensure compliance with the County Procurement Manual and County ordinance.

Recommendation No. 2:   We recommend that the CPO implement a system rule in OC Expediter requiring the final approval to be the last step in the requisition workflow (prior to buyer assignment) or as a required step right before budget approval with the requisition data locked except for account coding entered by the budget approver.

County Procurement Office Management Response:

Concur - The CPO has addressed this finding by creating unique user role for "final approval." This role will only be available to users that have been delegated this authority by the head of any County office, department or institution or his duly designated assistant. Final Approval status is required in the system and locks the requisition information except for the budget coding which is reviewed and approved during the "budget approval" process.   Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Findings No. 3 – Lack of Formal Process for Establishing Users' Access, Including Department Head Delegation of "Final Approval" Authority (Significant Control Observation)

The current process for establishing user access to OC Expediter involves CEO/OCIT staff (going forward will be the Department Administrator role) assigning user roles based on an emailed list received from the department. A more formal process needs to be established and documented in the user guide.

Most importantly once the unique role for "final approval" is created (See Finding No. 1 above), the formal Department Head delegation of authority for users to be granted the "final approval" of requisitions needs to be clearly documented as support for compliance with the County Procurement Manual and above County Codified Ordinance Sec. 1-4-26.

Currently, for paper requisitions processed outside of OC Expediter or the CAPS+ Finance & Purchasing system, the delegated authority for requisition approval is documented as a "manual" role in the Auditor-Controller's Access Request Application (ARA) for CAPS+ Finance & Purchasing. For electronic requisitions processed within the CAPS+ Finance & Purchasing system, a similar system role is established in ARA. CPO relies upon and audits against these ARA/CAPS+ Finance & Purchasing roles for requisition approvals when performing audits of the departmental procurement files. As such, CPO may be able to leverage the existing processes and documentation within ARA for the OC Expediter roles for final approval, budget approval, and buyer (procurement).

Recommendation No. 3: We recommend that the CPO establish written policies and procedures for granting user access to OC Expediter. This includes requirements for the formal delegation by Department Heads (or designee) of the approval authority ("Final Approver") for requisitions.

Once the above process in established, CPO should also go back and ensure the existing OC Expediter users (OCPW, OCCR, and OCW&R) have appropriate documentation in place for their user access roles granted.

County Procurement Office Management Response:

Concur - The CPO has created the following formal processes to address Finding No.3:

- A new requisition form in Expediter, "Dept. Administrator Request" will be added for the Dept. Administrators to add/update/delete users for each department.
- To establish the users in the Final and Budget approver's role for the first time for a department, procurement manager supervisor for the department will submit this new requisition form along with the proof of Department Head approval (email or memo attached with the req.) to add the users in the Final Approver and Budget Approver list for that department.
- For ongoing maintenance of a departmental Final & Budget approver list, any existing member of the Final & Budget approvers can submit this new requisition form along with the written proof of Department Head or their authorized delegate (such as deputy director) approval (email or memo attached with the req.) to add/update/delete users in the Final & Budget Approver list for that department.
- Under OC Expediter Report Module, a report will be available to view all the users with roles across all departments.

Implementation Status: Partially Implemented. CPO is in the process of implementing this delegation process with the existing three departments (OCPW, OCCR, and OCWR) currently using OC Expediter.

We anticipate to complete the existing departments within a 30 day period. These processes will be incorporated as part of the standard "roll out" requirements for new departments on-boarding with the OC Expediter system. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding No. 4 – CPO Needs to Provide Corporate Policy for OC Expediter Usage (Significant Control Observation)

Finding No. 4: As stated previously, the OC Expediter system provides a flexible review and approval workflow allowing departments to customize a process that best fits their individual needs. The development teams has prepared a *draft* OC Expediter User Guide that includes explanations of workflows and how to enter data and route transactions. However, CPO also needs to provide departments with corporate guidance or policies for using OC Expediter including a minimum level of reviews/approvals and defining the key user roles and responsibilities. The policies should address: (1) which requisitions should be processed in the system, (2) roles and responsibilities for reviewers and final approvals, (3) required training for OC Expediter users, and (4) knowledge expectations for the "final approver" regarding the County Procurement Manual (i.e. sole source, Board approval thresholds, contract splitting, etc.).

Recommendation No. 4: We recommend that the CPO develop countywide policies regarding the use of OC Expediter including which requisitions should be processed in the system, key user roles and responsibilities, required training, and procurement knowledge expectations of the users, with an emphasis on the "final approver" of requisitions.

County Procurement Office Management Response:

Concur - The CPO is currently working on Corporate Policies and guidance on the proper use of OC Expediter. Implementation Status: In process. The CPO anticipates completing this process within a 90 day period. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Objective #3: Evaluate whether OC Expediter has sufficient audit trails to document each transaction's activity including review and approval.

AUDIT STEPS AND RESULTS
To accomplish this objective, we performed the following work:

- Inquiry and meetings with the development team.
- Review of provided system documentation such as the *Draft* OC Expediter User Guide and test cases for the application.
- Observation of the OC Expediter software (version 1.0) in a test environment.

Strengths:
- The system logs the date and user id of actions performed (i.e. change in status such as approval, comments added, etc.).
- As the requisition continues through the routing and review process and comments are added, the most recent actions will appear at the bottom of the routing history.
- The system allows users the option to add a comment of changes they made to a requisition.
- The system allows users the option to add attachments (e.g. vendor price quotes, sole source justification forms, etc.) to requisition transactions.

CONCLUSION

Our audit found that OC Expediter generally has adequate audit trails to document each requisition transaction's activity (status changes) including reviews and approvals, except that audit trails as currently configured do not capture data changes to requisitions such as those affecting Estimated Cost. We identified **one (1) Significant Control Observation** concerning audit trails for capturing changes to requisitions. The finding and recommendation is discussed below:

Finding 5 – Audit Trails Do Not Capture Requisition Data Changes During the Review and Approval Process (Significant Control Observation)

Finding No. 5: The OC Expediter system records status changes (actions taken) as the requisition proceeds through the review and approval process including user id, date, and time, as well as allows users the option to add comments regarding changes they made to a requisition. However, the system does not automatically capture or record whether a change to the requisition data such as those affecting Estimated Cost occurred, who made the change to the content, or the current and prior data values.

Capturing that a change was made as well as the data values is necessary to adequately monitor transactions. This is significant because the system currently allows each of the requisition owners to make changes to the requisition, even after various approvals have been applied, up to the point of "budget approval." The requisition is locked (no further changes can be made) once the "budget approval" status is applied to the requisition.

This lack of audit trail for data changes increases the need for a unique user role allowing "final approval" and the associated locking of key requisition data upon applying the "final approval" status as recommended in Findings No. 1 and 2 above. CPO informed us that it is currently developing system modifications to implement the recommendations for Findings No. 1 and 2 above. If so, the below recommendation is less important.

Recommendation No. 5: We recommend that the CPO consider modifying the OC Expediter system to capture requisition data changes affecting Estimated Cost including user, date, time, and the data values before and after the change. However, this control will become less important should the system be modified to include a designated individual with "Final Approval" status and the requisition is locked (except for buyer data) once the final approval is made.

County Procurement Office Management Response:

Concur -The County Procurement Office has had the following modifications made to the system to address Finding No. 5:

- Requisition currently captures the Status, user, comments entered by user when routing, and time stamped when a change is made to the requisition.
- As part of the solution to finding #2, system shall now track the Vendor name in the backend prior to and after Final Approval (audit tracking).
- Audit tracking information can be provided upon request.

Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Objective #4: Evaluate whether OC Expediter has adequate controls to ensure sound reconciliations of data are performed.

AUDIT STEPS AND RESULTS
To accomplish this objective, we performed the following work:

- Inquiry and meetings with the development team.
- Review of provided system documentation such as the *Draft* OC Expediter User Guide and test cases for the application.
- Observation of the OC Expediter software (version 1.0) in a test environment.

Strengths:
- Data for contracts (MA, DO, PO, & CT), vendors, and paid invoices is overwritten nightly (Monday through Friday) in OC Expediter when the data files are imported from the CAPS+ Finance & Purchasing system.
- CAPS+ paid invoice numbers and invoice vendor codes are matched with the invoice data entered into CMS before the invoice is sent to the Auditor-Controller for payment. CMS includes an additional invoice number field for instances when the CMS invoice number does not match the invoice number associated with the payment in CAPS+ (e.g. an additional digit or letter may be added to the invoice number in CAPS+ such as #123-A).
- An "Invoices Sent to A-C but Not Paid" report is used by departments to identify unmatched invoices.

CONCLUSION
Our audit found that OC Expediter has some controls to ensure that sound reconciliations of the data were performed; however, a reconciliation of data file uploads was not initially being done. This was subsequently corrected during our audit fieldwork. We identified **one (1) Control Finding** regarding the need to document procedures for the newly created data file upload reconciliation. The finding and recommendation is discussed below:

Finding 6 – Data File Reconciliation Process (Control Finding)

Finding No. 6: The OC Expediter system receives numerous file imports from the CAPS+ Finance & Purchasing system for contracts (MA, SO, and CT-PO), paid invoices, vendor data, and account coding. When we initially began our review of OC Expediter, there was no reconciliation process for the CAPS+ data file uploads. We discussed this further with the development team and they subsequently developed a reconciliation (CAPS+ Import Log report) in OC Expediter that shows a comparison between the CAPS+ data files and the OC Expediter imported data. The reconciliation report compares the total record counts and total dollars for three data files: Master Agreements (MA), Delivery Orders (DO), and Contracts (CT-PO). The reconciliation report also compares total record counts for vendor information.

As a reconciliation report has been now created for the data files, the next step is for CPO to assign responsibility for who will perform the daily reconciliation (Monday through Friday) and to document the associated procedures to ensure the data from CAPS+ is completely and accurately incorporated into OC Expediter, and any discrepancies are identified and resolved in a timely manner.

Recommendation No. 6: We recommend that the CPO assign responsibility for the data file reconciliation and document the associated procedures in a system administration guide or user guide.

County Procurement Office Management Response:
Concur - The County Procurement Office is currently working with CEO/OCIT to establish a Data File Reconciliation Process.

Implementation Status: Partially Implemented. CEO/OCIT (OC Expediter Development Team) is currently overseeing the data file reconciliation for the existing three departments (OCPW, OCCR, and OCWR) on OC Expediter. This item will be fully implemented once a permanent resource has been identified and assigned this task. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Objective #5: As needed, evaluate other control issues that may come to the auditors' attention during the audit. These controls may be in the areas of data integrity, user access or logical security to ensure only authorized individuals can access the application, system governance, and change management procedures to ensure errors are not introduced into the application during development.

AUDIT STEPS AND RESULTS
During the course of our audit, we identified the following additional internal controls (strengths) for OC Expediter:

Strengths - System Validations or Functionality for Data Integrity (Accuracy or Completeness):
- The system auto-populates certain data (user information, account coding, contract numbers, etc.) based on the users' login information.
- If users attempt to submit a requisition with missing required information, the system will alert the user of the required fields.
- The system prevents entering duplicate invoice numbers for the same vendor.
- When entering funding information for a requisition, the total percentage is auto-calculated. The total percentage must equal 100%. Funding information can be saved the first time with less than 100%.
- The system calculates cost information once the unit cost information is entered in the "Purchase Item" section of the requisition. The system will also auto-calculate cost based on percentages provided if more than one fund and job number is entered.
- The system calculates the subtotal, tax, and total cost.
- If the final cost entered for the purchase/contract is more than the requisition approved cost, the system alerts the user with a warning. (See Finding No. 7 below regarding making this a "hard" control instead of warning if the increase is above a pre-determined threshold).
- If the final cost entered for the delivery order/purchase order is more than the available contract balance, the system alerts the user with a warning and changes the final cost to "red." In addition, the system will prevent the user from proceeding.
- To create a flag or reminder, the system has an optional "Board Required" check box field that can be checked by users to identify that board approval will be required for the procurement/contract.
- The Sole Source Justification form can be accessed by clicking the Sole Source Memo button. This will open the form in a separate window to complete, save, and add as an attachment.
- All contracts for a department are imported from the CAPS+ Finance & Purchasing system and are maintained in a searchable database.

Strengths - User Access or Logical Security:
- OC Expediter is an enterprise single sign-on application. This requires the user to first sign-on to their local network before accessing OC Expediter.
- The system authenticates users via CEO/OCIT's global active directory (known as OCid). OCid stores a nightly copy of each department's active directory for the County's network.

- Each department will have a department administrator within the system to manage their user access.
- Users will only be able to access their own department's data, except for CPO who will have a view only access to all departmental data. (See related Finding No. 9 below regarding the need for capability to restrict access to sensitive data.)
- CEO/OCIT staff informed us that it plans to have a security assessment performed of the OC Expediter system once the support and maintenance for the server housing the application (located at the enterprise data center) is transitioned from OCPW staff to CEO/OCIT's vendor, SAIC. (See related Finding No. 13 below regarding need for a stress testing of the system.)

Strengths – System Governance:
- The development team has prepared a *draft* OC Expediter User Guide that instructs the users on how to use the system.

Strengths - Change Management:
- The development team (CEO/OCIT staff) uses Microsoft Visual Studio which extends Team Foundation Server for source code control to include management of individual items such as bugs, tasks, and other documents with Azure cloud access to migrate/manage system development. Microsoft Visual SourceSafe stores the application's source code and provides version control.
- Bug fixes are reported using the SAIC help desk procedures.

CONCLUSION

During the performance of our audit, we identified an additional **one (1) Significant Control Observation** regarding need for a system threshold or limit when final costs exceed authorized amounts, and **six (6) Control Observations** regarding data accuracy, restricting sensitive data, controlling IT staff access to the production environment, and the need for system governance, system documentation, and monitoring system performance during implementation. The seven (7) findings and recommendations are discussed below.

Finding 7 – System Limit or Threshold Needed When Final Cost of Procurement is Greater Than the Authorized Requisition Amount (Significant Control Observation)

Finding No. 7: When initially reviewing the OC Expediter system, we noted that a final contract or procurement amount (Final Cost) that is greater than the authorized requisition amount can be entered into the system. This was done to allow for minor differences due to shipping, sales tax, or price changes. The system was subsequently modified to alert or warn (does not prevent) the buyer if the Final Cost entered is greater than the authorized amount. This will help in the event the overage was due to a data entry error made by the buyer.

The actual procurement of the goods and services occurs outside of the OC Expediter system. As such, it is important to advise the final approver and budget analyst when the Final Cost amount has increased and is more than the authorized amount. However, the system does not automatically notify the users or route back for their approval when the Final Cost exceeds the authorized amount.

To ensure cost increases over a management pre-determined threshold are approved, CPO should implement a system rule/validation that prevents a final cost increase from being entered that is greater than the management pre-determined threshold.

If the increase is above the pre-determined threshold, the requisition should be rerouted for final approval and budget approval.

Recommendation No. 7: We recommend that the CPO modify OC Expediter to prevent a final cost from being entered that is greater than a management pre-determined threshold. If the increase is above the pre-determined threshold, the requisition should be rerouted for final approval and budget approval.

County Procurement Office Management Response:

Concur -The CPO has addressed this finding by creating unique user role for "final approval." This role will only be available to users that have been delegated this authority by the head of any County office, department or institution or his duly designated assistant. Final Approval status is required in the system and <u>locks</u> the requisition information, except for the budget coding which is reviewed and approved during the "budget approval" process.

Should the final cost be greater than the estimated cost, the requisition has to be "unlocked" by either a budget approver or buyer (special role) and returned to the initiator to correct and resend through the requisition approval process.

An example of the requisition flow regarding the correction to cost is as follows:

- A new proposed process flow allowing the requisition to be unlocked by the buyer and routed to the initiator to adjust the cost variation or quantity modification leading to cost changes.
- Routing Status-**Final Approval**-partially locks the requisition except coding.
- Final Approval status option will only be available to those in the Final Approval group.
- Upon selecting Final Approval, the requisition can only be routed to Budget.
- Status: "Final Approval" is required before Budget may select Budget Approval.
- Requisition status "**Budget Approval**" completely locks the requisition content except buyer box.
- Routing Status-**Budget Unlock**-unlocks the entire requisition for changes by the program. If Budget determines that changes need to be made in the requisition before approval can be provided, Budget may select this status, provide the necessary comments, and route the requisition back to the initiator.
- Upon completion of those edits of the requisition, the requisition must be routed for **Final Approval** again before it can be routed to Budget for **Budget Approval**.
- Buyer is ready to make purchase and when the final cost varies from estimated cost, buyer has ability to "**Buyer Unlock**" the requisition and route it back to initiator with their comments to make the necessary cost changes.
- The requisition will now have to go through the normal approval cycle with Final Approval & Budget Approval before it can be routed back to the buyer to process.

Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding 8 – Temporary Inaccurate Balances Could Result from Invoices with Multiple DO's (Control Observation)

Finding No. 8: Some vendors may submit invoices for multiple delivery orders (purchases from a Master Agreement) on a single invoice. Currently, the OC Expediter system will only allow one delivery order (DO) per invoice to be recorded.

Therefore, when entering an invoice received for multiple DOs, the accounts payable (AP) user will select only one DO to assign the total invoice amount to. The AP user will enter a comment in the system explaining the situation and the DOs involved. This causes the cumulative contract data (remaining balances) within OC Expediter for the affected contracts to be inaccurate. More specifically, the remaining balance for the one DO (e.g. $300) for which the invoice (e.g. $500) was applied will be understated (e.g. remaining negative balance of -$200) while the remaining balance for the other DO(s) will be overstated (e.g. $200).   The remaining balance of the master agreement is not impacted by this.

According to CPO, there may be a relatively low frequency of vendors submitting invoices for multiple DOs for the three departments currently using OC Expediter. However, countywide impact will need to be considered.

This inaccuracy will only impact the DO balances in OC Expediter while the invoice is in a "pending" status (i.e. during the time of receipt, routing for departmental approval, and then payment by the Auditor-Controller). A correction will occur when the "paid" invoice data is subsequently uploaded from the CAPS+ data file into OC Expediter. The prior inaccurate "pending" invoice recording will be reversed, and the paid invoice will be properly recorded and allocated among the multiple DOs. At that point, the cumulative contract totals (remaining balances) will be correct in OC Expediter.

To ensure the accuracy of remaining contract balances in OC Expediter, we recommend that CPO work with CEO/IT to modify the system to accept multiple DO numbers for a single invoice. We were informed the development team is currently evaluating this modification (along with certain modifications for credit memos and retention payments).

Recommendation No. 8: We recommend that the CPO modify OC Expediter system to accept multiple contract numbers (DOs) for a single invoice.

County Procurement Office Management Response:

Concur - The CPO has addressed this finding by modifying the system to be capable of accepting multiple encumbrance (DO) documents for a single invoice. Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding 9 – Lack of System Configuration or Written Policy for Restricting Sensitive Data (Control Observation)

Finding No. 9: The OC Expediter system has not been configured to restrict access to sensitive data. CPO informed us their intention is that no sensitive data be stored in the OC Expediter system and as such, the system was not designed to store sensitive data. However, as OC Expediter is implemented countywide, there may be occurrences where sensitive data is included in requisitions. For example, there could be sensitive information related to requisitions for law enforcement or other protected information (such as HIPAA). Rather than modifying the system to restrict access to sensitive data, another option is to prohibit users from storing sensitive information in OC Expediter. Written policy and manual processes for users would need to be developed for those transactions.

Recommendation No. 9: We recommend that the CPO either modify the OC Expediter system to restrict access to sensitive data or develop a written policy that prohibits users from entering sensitive data in OC Expediter; provides definitions and examples of sensitive data; and provides a manual process outside of OC Expediter for any requisitions containing sensitive information.

County Procurement Office Management Response:

Concur - The OC Expediter system is transparent by design and not a suitable repository for sensitive data. The CPO will develop training materials and written policy to forbid entering sensitive data (i.e., SSN, HIPAA, Law Enforcement related, etc.) into the OC Expediter system.

Implementation Status: Not yet implemented. As part of Recommendation No. 4 of this report, the County Procurement Office will incorporate this Recommendation No. 9 into the Corporate Policies and guidance on the proper use of the OC Expediter system. CPO anticipates to completing this within a 90 day period.

Finding 10 – IT Staff Have Ability to Perform Operational Functions in the Production Environment (Control Observation)

Finding No. 10: Certain CEO/OCIT personnel (development team/system administrators) have access to the production system to support it while it is being implemented for countywide use. They can perform operational functions in the production environment. Because IT personnel also have elevated system access, their access should be limited and monitored in the production environment. Once the countywide version of the system is completed and implemented, this access is no longer necessary on an ongoing basis and, therefore, should be removed. In the event production access is needed, an emergency access process for granting and removing a temporary password (to be used in a short window of need) can be implemented.

Recommendation No. 10: We recommend that the CPO work with CEO/OCIT to institute an emergency access procedure for the OC Expediter system and remove IT staff access to the production environment once the system is deployed countywide.

County Procurement Office Management Response:

Concur - The County Procurement Office is working with CEO/OCIT to prepare a transition plan for the IT Staff (OC Expediter Development Team) to work in a test environment instead of the production environment of OC Expediter. Implementation Status: Will be implemented during the next 90 to 180 days pending OCIT transition schedule. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding 11 – No Formal System Governance Framework Exists (Control Observation)

Finding No. 11: A CPO governance committee needs to be established for the OC Expediter system and a formal system governance framework needs to be documented. As a single department application, the assessment of enhancements/modifications were appropriately evaluated within the departmental procedures. However, a countywide application should consider all its users when evaluating its future needs. Therefore, a formal change management process needs to be documented and distributed to the application stakeholders to adequately guide the future maintenance and development of the application. The governance structure should address committee membership, committee operation, budget, procedures for requesting and approving application enhancements, etc.

Recommendation No. 11: We recommend that the CPO prepare a formal governance framework for the OC Expediter system.

County Procurement Office Management Response:

Concur - The CPO is working on creating a formal governance framework for the OC Expediter system. Until this is established, the CPO has obtained a representative from each of the participating departments on OC Expediter to provide input on the governance of this countywide system.

Implementation Status: Partially Implemented. The CPO will continue to work on the creation of a formal governance framework for the OC Expeditor system. This is anticipated to be completed within a 90 day period. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding No. 12 – Additional System Documentation Needs to be Developed (Control Observation)

Finding No. 12: Currently, the development team has not prepared a system administrator manual or development documentation. Items to include are the requirements documentation, data dictionary, user roles matrix, test cases, change management procedures, etc. This information is needed in one readily available source to support the system and allow for better continuity in the event of IT staff turnover. Some of this information has been documented by the development team (e.g. requirements and test cases) while other information has not been documented yet (e.g. data dictionary and user roles matrix).

Recommendation No. 12: We recommend that the CPO work with CEO/OCIT to ensure that a system administrator manual or development documentation is prepared for the OC Expediter system.

County Procurement Office Management Response:

Concur - The CPO has worked with CEO/OCIT to address this finding. Multiple system documents such as Infrastructure Diagram, Database Design, and Workflow Diagram have been created and additional diagrams/documents will be added as the OC Expediter system evolves. Implementation Status: Fully Implemented. (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

Finding 13 – Need to Consider System Performance of Countywide Implementation (Control Observation)

Finding No. 13: The OC Expediter system was originally developed for a single department and developed with appropriate computer technology. Because the enterprise version of the system is planned to be implemented countywide, the development team should consider stress testing to ensure it can handle the additional volume of transactions, additional bandwidth, etc. CPO plans to have departments utilize OC Expediter for requisitions of all purchases including petty cash, Cal-Card, and non-DPA contracts such as human services and public works. CPO also plans to implement countywide reports of requisition and contract activity.

CEO/OCIT staff informed us that it plans to have a security assessment performed of the OC Expediter system once the support and maintenance for the server housing the application (located at the enterprise data center) is transitioned from OCPW staff to CEO/OCIT's vendor, SAIC. However, there are no plans for a stress test. CEO/OCIT staff informed us that a conventional stress test is not needed as the development team has allocated processing power and memory to handle large numbers of simultaneous users, as well as fine-tuned the database to faster performance. The system implementation strategy is to roll out the system one department at a time.

The development team indicated that the OC Expediter servers are virtual machines and computational resources (e.g. memory processor) can be added quickly if needed.

In addition to the performance of a security assessment, system performance (e.g. response time, reporting, and resource usage/storage) should still be monitored.

Recommendation No. 13: We recommend that the CPO ensure system performance is monitored and evaluated upon system implementation at each of the individual departments.

County Procurement Office Management Response:

Concur - The CPO is working with CEO/OCIT to ensure that the OC Expediter's system "capacity" is scalable and properly calibrated to meet the County's usage needs as additional County departments implement the OC Expediter system.

Implementation Status: Partially Implemented. The CPO is collaborating with OCIT on the appropriate time to migrate the OC Expediter system from a County server over to an SAIC server or virtual server (cloud). (*Auditor's Note: this status determination was made by CPO. The status will be verified during A-C/IAD's routine follow-up process in six months.*)

ATTACHMENT A: Report Item Classifications

For purposes of reporting our audit observations and recommendations, we will classify audit report items into three distinct categories:

▸ **Critical Control Observation:**
These are Audit Findings or a combination of Auditing Findings that represent critical exceptions to the audit objective(s) and/or business goals. Such conditions may involve either actual or potential large dollar errors or be of such a nature as to compromise the Department's or County's reputation for integrity. Management is expected to address Critical Control Observations brought to their attention immediately.

▸ **Significant Control Observation:**
These are Audit Findings or a combination of Audit Findings that represent a significant deficiency in the design or operation of internal controls. Significant Control Observations require prompt corrective actions.

▸ **Control Observation:**
These are Audit Findings concerning internal controls, compliance issues, or efficiency/effectiveness issues that require management's corrective action to implement or enhance processes and internal controls. Control Findings are expected to be addressed within our follow-up process of six months, but no later than twelve months.

ATTACHMENT B: County Procurement Office Management Responses

County Executive Office
County Procurement Office
Memorandum

September 15, 2015

To: Eric Woolery, County Auditor-Controller

From: Rob Richardson, County Procurement Officer

Subject: Audit Response – Internal Audit No. 1455 (OC Expediter)

We are pleased to provide the CEO/County Procurement Office (CPO) response to the findings and recommendations contained in the Internal Audit Report of the OC Expediter requisition system. The CPO would like to extend its appreciation to the Internal Audit staff for the courtesies they offered during the audit and review phase. The support and review by Internal Audit will further sharpen controls for this County-wide requisition system.

Finding No. 1: A critical control issue is that the OC Expediter system does not have a unique user role established for the final approval or budget approval and instead these permissions are included in the "Standard" user role. All users within a department (that have network access) automatically (by default) have "Standard" access for that department.

The "final approval" is a critical control point in the requisition process and should have a unique role limited to only those individuals that have the express delegated authority from the department head or designee. The "budget approval" is also an important control point and should have a unique role. Establishing these two unique roles will provide accountability and help satisfy the County Procurement Manual and County Ordinance requirements below.

The County Contract Policy Manual, Section 2.5, states that each of the following provisions of County Codified Ordinance Sec. 1-4-26 – Requisition Procedure shall apply:

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 2

a) All purchase, rentals and contracts shall be made only upon receipt of proper written/authorized requisitions, the forms of which shall be supplied by the Purchasing Agent to the several offices of the County.

b) No purchase order shall be issued unless approved budget appropriation is shown according to the budget procedure established by the Auditor-Controller and the County Executive Officer.

c) The head of any County office, department or institution or his duly designated assistant is hereby authorized to draw requisitions for purchases for such office, department or institution in accordance with current budget accounts.

d) Such head may delegate such authority to one or more of his deputies, assistants or employees within the department.

Recommendation No. 1: We recommend that the CPO create unique user roles for the final approval and budget approval permissions.

County Procurement Office Management Response:

1. Concur – The CPO has addressed this finding by creating a unique user role for "final approval" and "budget approval." These roles will only be available to users that have been delegated this authority by the head of any County office, department or institution or duly designated assistant.

    The following modifications have been made to the system:

    - Two roles "Final Approver" and "Budget Approver" have been added.
    - User(s) in the Dept. Admin role will be able to add/remove users to "Final Approver" and "Budget Approver" groups. (Refer to response on finding # 3 for more details)
    - The status "Final Approval" on the requisition shall be available only to the users assigned the Final Approver role.
    - Status "Final Approval" shall be required for the requisition to be stamped with a "Budget Approval" status.
    - Status "Final Approval" shall lock the requisition except the coding.
    - The status "Budget Approval" on the requisition shall be available only to the users in the Budget Approver role.

**ATTACHMENT B: County Procurement Office Management Responses
(continued)**

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 3

- Budget team inputs or corrects the coding in Funding section and the following fields within the purchase items section before giving "Budget Approval"

  - Object
  - Dept. Object
  - Budget Line
  - P-Org (Applicable only when Capital projects object 4200 is selected)

Implementation Status: Fully Implemented

Finding No. 2: Another critical control issue is that the OC Expediter system does not require a "final approval" of requisitions (system rule). As the CPM and above County Ordinance require requisitions to be approved by someone with the department head delegated authority, having the system require this approval step will better ensure compliance with the County Procurement Manual and County ordinance.

Recommendation No. 2: We recommend that the CPO implement a system rule in OC Expediter requiring the final approval to be the last step in the requisition workflow (prior to buyer assignment) or as a required step right before budget approval with the requisition data locked except for account coding entered by the budget approver.

County Procurement Office Management Response:

1. Concur – The CPO has addressed this finding by creating unique user role for "final approval." This role will only be available to users that have been delegated this authority by the head of any County office, department or institution or his duly designated assistant. Final Approval status is required in the system and locks the requisition information except for the budget coding which is reviewed and approved during the "budget approval" process.

   Implementation Status: Fully Implemented

Finding No. 3 – Lack of Formal Process for Establishing Users' Access, Including Department Head Delegation of "Final Approval" Authority (Significant Control Observation)

The current process for establishing user access to OC Expediter involves OC IT staff (going forward will be the Department Administrator role) assigning user roles based on

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 4

an emailed list received from the department. A more formal process needs to be established and documented in the user guide.

Most importantly once the unique role for "final approval" is created (See Finding No. 1 above), the formal Department Head delegation of authority for users to be granted the "final approval" of requisitions needs to be clearly documented as support for compliance with the County Procurement Manual and above County Codified Ordinance Sec. 1-4-26.

Currently, for paper requisitions processed outside of OC Expediter or the CAPS+ Finance & Purchasing system, the delegated authority for requisition approval is documented as a "manual" role in the Auditor-Controller's Access Request Application (ARA) for CAPS+ Finance & Purchasing. For electronic requisitions processed within the CAPS+ Finance & Purchasing system, a similar system role is established in ARA. CPO relies upon and audits against these ARA/CAPS+ Finance & Purchasing roles for requisition approvals when performing audits of the departmental procurement files. As such, CPO may be able to leverage the existing processes and documentation within ARA for the OC Expediter roles for final approval, budget approval, and buyer (procurement).

Recommendation No. 3: We recommend that the CPO establish written policies and procedures for granting user access to OC Expediter. This includes requirements for the formal delegation by Department Heads (or designee) of the approval authority ("Final Approver") for requisitions.

Once the above process is established, CPO should also go back and ensure the existing OC Expediter users (OCPW, OCCR, and OCW&R) have appropriate documentation in place for their user access roles granted.

County Procurement Office Management Response:

1. Concur – The CPO has created the following formal processes to address Finding No. 3:
   - A new requisition form in Expediter, "Dept. Administrator Request" will be added for the Dept. Administrators to add/update/delete users for each department.
   - To establish the users in the Final and Budget approver's role for the first time for a department, procurement manager / supervisor for the department will submit this new requisition form along with the proof of Department Head

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 5

        approval (email or memo attached with the req.) to add the users in the Final Approver and Budget Approver list for that department.

- For ongoing maintenance of a departmental Final & Budget approver list, any existing member of the Final & Budget approvers can submit this new requisition form along with the written proof of Department Head or their authorized delegate (such as deputy director) approval (email or memo attached with the req.) to add/update/delete users in the Final & Budget Approver list for that department.
- Under OC Expediter Report Module, a report will be available to view all the users with roles across all departments.

Implementation Status: Partially Implemented

CPO is in the process of implementing this delegation process with the existing three departments (OCPW, OCCR, and OCWR) currently using OC Expediter. We anticipate to complete the existing departments within a 30 day period. These processes will be incorporated as part of the standard "roll out" requirements for new departments on-boarding with the OC Expediter system.

Finding No. 4 – CPO Needs to Provide Corporate Policy for OC Expediter Usage (Significant Control Observation)

Finding No. 4: As stated previously, the OC Expediter system provides a flexible review and approval workflow allowing departments to customize a process that best fits their individual needs. The development team has prepared a *draft* OC Expediter User Guide that includes explanations of workflows and how to enter data and route transactions. However, CPO also needs to provide departments with corporate guidance or policies for using OC Expediter including a minimum level of reviews/approvals and defining the key user roles and responsibilities. The policies should address: (1) which requisitions should be processed in the system, (2) roles and responsibilities for reviewers and final approvals, (3) required training for OC Expediter users, and (4) knowledge expectations for the "final approver" regarding the County Contract Policy Manual (i.e. sole source, Board approval thresholds, contract splitting, etc.).

Recommendation No. 4: We recommend that the CPO develop countywide policies regarding the use of OC Expediter including which requisitions should be processed in the system, key user roles and responsibilities, required training, and procurement knowledge expectations of the users, with an emphasis on the "final approver" of requisitions.

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 6

County Procurement Office Management Response:

1. Concur – The CPO is currently working on Corporate Policies and guidance on the proper use of OC Expediter.

   Implementation Status: In process

   The CPO anticipates completing this process within a 90 day period.

Finding 5 – Audit Trails Do Not Capture Requisition Data Changes During the Review and Approval Process (Significant Control Observation)

Finding No. 5: The OC Expediter system records status changes (actions taken) as the requisition proceeds through the review and approval process including user id, date, and time, as well as allows users the option to add comments regarding changes they made to a requisition. However, the system does not automatically capture or record whether a change to the requisition data such as those affecting Estimated Cost occurred, who made the change to the content, or the current and prior data values.

Capturing that a change was made as well as the data values is necessary to adequately monitor transactions. This is significant because the system currently allows each of the requisition owners to make changes to the requisition, even after various approvals have been applied, up to the point of "budget approval." The requisition is locked (no further changes can be made) once the "budget approval" status is applied to the requisition.

This lack of audit trail for data changes increases the need for a unique user role allowing "final approval" and the associated locking of key requisition data upon applying the "final approval" status as recommended in Findings No. 1 and 2 above. CPO informed us that it is currently developing system modifications to implement the recommendations for Findings No. 1 and 2 above. If so, the below recommendation is less important.

Recommendation No. 5: We recommend that the CPO consider modifying the OC Expediter system to capture requisition data changes affecting Estimated Cost including user, date, time, and the data values before and after the change. This control, however, will become less important should the system be modified to include a designated individual with "Final Approval" status and the requisition is locked (except for buyer data) once the final approval is made.

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 7

County Procurement Office Management Response:

1. Concur – The County Procurement Office has had the following modifications made to the system to address Finding No. 5:
   - Requisition currently captures the Status, user, comments entered by user when routing, and time stamped when a change is made to the requisition.
   - As part of the solution to finding #2, system shall now track the Vendor name in the backend prior to and after Final Approval (audit tracking).
   - Audit tracking information can be provided upon request.

   Implementation Status: Fully Implemented

Finding 6 – Data File Reconciliation Process (Control Observation)

Finding No. 6: The OC Expediter system receives numerous file imports from the CAPS+ Finance & Purchasing system for contracts (MA, SO, and CT-PO), paid invoices, vendor data, and account coding. When we initially began our review of OC Expediter, there was no reconciliation process for the CAPS+ data file uploads. We discussed this further with the development team and they subsequently developed a reconciliation (CAPS+ Import Log report) in OC Expediter that shows a comparison between the CAPS+ data files and the OC Expediter imported data. The reconciliation report compares the total record counts and total dollars for three data files: Master Agreements (MA), Delivery Orders (DO), and Contracts (CT-PO). The reconciliation report also compares total record counts for vendor information.

As a reconciliation report has now been created for the data files, the next step is for CPO to assign responsibility for who will perform the daily reconciliation (Monday through Friday) and to document the associated procedures to ensure the data from CAPS+ is completely and accurately incorporated into OC Expediter, and any discrepancies are identified and resolved in a timely manner.

Recommendation No. 6: We recommend that the CPO assign responsibility for the data file reconciliation and document the associated procedures in a system administration guide or user guide.

County Procurement Office Management Response:

1. Concur – The County Procurement Office is currently working with OC IT to establish a Data File Reconciliation Process.

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 8

Implementation Status: Partially Implemented

OC IT (OC Expediter Development Team) is currently overseeing the data file reconciliation for the existing three departments (OCPW, OCCR, and OCWR) on OC Expediter. This item will be fully implemented once a permanent resource has been identified and assigned this task.

Finding 7 – System Limit or Threshold Needed When Final Cost of Procurement is Greater Than the Authorized Requisition Amount (Significant Control Observation)

Finding No. 7:   When initially reviewing the OC Expediter system, we noted that a final contract or procurement amount (Final Cost) that is greater than the authorized requisition amount can be entered into the system. This was done to allow for minor differences due to shipping, sales tax, or price changes. The system was subsequently modified to alert or warn (does not prevent) the buyer if the Final Cost entered is greater than the authorized amount. This will help in the event the overage was due to a data entry error made by the buyer.

The actual procurement of the goods and services occurs outside of the OC Expediter system. As such, it is important to advise the final approver and budget analyst when the Final Cost amount has increased and is more than the authorized amount. However, the system does not automatically notify the users or route back for their approval when the Final Cost exceeds the authorized amount.

To ensure cost increases over a management pre-determined threshold are approved, CPO should implement a system rule/validation that prevents a final cost increase from being entered that is greater than the management pre-determined threshold. If the increase is above the pre- determined threshold, the requisition should be rerouted for final approval and budget approval.

Recommendation No. 7: We recommend that the CPO modify OC Expediter to prevent a final cost from being entered that is greater than a management pre-determined threshold. If the increase is above the pre-determined threshold, the requisition should be rerouted for final approval and budget approval.

County Procurement Office Management Response:

1. Concur - The CPO has addressed this finding by creating unique user role for "final approval." This role will only be available to users that have been delegated this

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 9

authority by the head of any County office, department or institution or his duly designated assistant. Final Approval status is required in the system and <u>locks</u> the requisition information, except for the budget coding which is reviewed and approved during the "budget approval" process.

Should the final cost be greater than the estimated cost, the requisition has to be "unlocked" by either a budget approver or buyer (special role) and returned to the initiator to correct and resend through the requisition approval process.
An example of the requisition flow regarding the correction to cost is as follows:

- A new proposed process flow allowing the requisition to be unlocked by the buyer and routed to the initiator to adjust the cost variation or quantity modification leading to cost changes.
- Routing Status—**Final Approval**—partially locks the requisition except coding
- Final Approval status option will only be available to those in the Final Approval group
- Upon selecting Final Approval, the requisition can only be routed to Budget
- Status: "Final Approval" is required before Budget may select Budget Approval.
- Requisition status "**Budget Approval**" completely locks the requisition content except buyer box.
- Routing Status—**Budget Unlock**—unlocks the *entire* requisition for changes by the program. If Budget determines that changes need to be made in the requisition before approval can be provided, Budget may select this status, provide the necessary comments, and route the requisition back to the initiator
- Upon completion of those edits of the requisition, the requisition must be routed for **Final Approval** again before it can be routed to Budget for **Budget Approval**
- Buyer is ready to make purchase and when the final cost varies from estimated cost, buyer has ability to **"Buyer Unlock"** the requisition and route it back to initiator with their comments to make the necessary cost changes.
- The requisition will now have to go through the normal approval cycle with Final Approval & Budget Approval before it can be routed back to the buyer to process.

Implementation Status: Fully Implemented

Finding 8 – Temporary Inaccurate Balances Could Result from Invoices with Multiple DO's (Control Observation)

Finding No. 8: Some vendors may submit invoices for multiple delivery orders (purchases from a Master Agreement) on a single invoice. Currently, the OC Expediter system will only allow one delivery order (DO) per invoice to be recorded. Therefore, when entering

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 10

an invoice received with this situation, the accounts payable (AP) user will select only one DO to assign the total invoice amount to. The AP user will enter a comment in the system explaining the situation and the DOs involved.

This causes the cumulative contract data (remaining balances) within OC Expediter for the affected contracts to be inaccurate. More specifically, the remaining balance for the one DO (e.g. $300) for which the invoice (e.g. $500) was applied will be understated (e.g. remaining negative balance of -$200) while the remaining balance for the other DO(s) will be overstated (e.g. $200). The remaining balance of the master agreement is not impacted by this.

According to CPO, there may be a relatively low frequency of vendors submitting invoices for multiple DOs for the three departments currently using OC Expediter. Countywide impact will need to be considered.

This inaccuracy will only impact the DO balances in OC Expediter while the invoice is in a "pending" status (i.e. during the time of receipt, routing for departmental approval, and then payment by the Auditor-Controller). A correction will occur when the "paid" invoice data is subsequently uploaded from the CAPS+ data file into OC Expediter. The prior inaccurate "pending" invoice recording will be reversed, and the paid invoice will be properly recorded and allocated among the multiple DO. At that point, the cumulative contract totals (remaining balances) will be correct in OC Expediter.

To ensure the accuracy of remaining contract balances in OC Expediter, we recommend that CPO work with CEO/IT to modify the system to accept multiple DO numbers for a single invoice. We were informed the development team is currently evaluating this modification (along with certain modifications for credit memos and retention payments).

Recommendation No. 8: We recommend that the CPO modify OC Expediter system to accept multiple contract numbers (DOs) for a single invoice.

County Procurement Office Management Response:

1. Concur - The CPO has addressed this finding by modifying the system to be capable of accepting multiple encumbrance (DO) documents for a single invoice.

   Implementation Status: Fully Implemented

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 11

Finding 9 – Lack of System Configuration or Written Policy for Restricting Sensitive Data (Control Observation)

Finding No. 9: The OC Expediter system has not been configured to restrict access to sensitive data. CPO informed us their intention is that no sensitive data be stored in the OC Expediter system and as such, the system was not designed to store sensitive data. However, as OC Expediter is implemented countywide, there may be occurrences where sensitive data is included in requisitions.

For example, there could be sensitive information related to requisitions for law enforcement or other protected information (such as HIPAA). Rather than modifying the system to restrict access to sensitive data, another option is to prohibit users from storing sensitive information in OC Expediter. Written policy and manual processes for users would need to be developed for those transactions.

Recommendation No. 9: We recommend that the CPO either modify the OC Expediter system to restrict access to sensitive data or develop a written policy that prohibits users from entering sensitive data in OC Expediter, provides definitions and examples of sensitive data, and provides a manual process outside of OC Expediter for any requisitions containing sensitive information.

County Procurement Office Management Response:

1. Concur - The OC Expediter system is transparent by design and not a suitable repository for sensitive data. The CPO will develop training materials and written policy to forbid entering sensitive data (i.e., SSN, HIPPA, Law Enforcement related, etc.) into the OC Expediter system.

   Implementation Status: Not yet implemented

   As part of Recommendation No. 4 of this report, the County Procurement Office will incorporate this Recommendation No. 9 into the Corporate Policies and guidance on the proper use of the OC Expediter system. CPO anticipates to completing this within a 90 day period.

Finding 10 – IT Staff Have Ability to Perform Operational Functions in the Production Environment (Control Observation)

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 12

Finding No. 10: Certain CEO/IT personnel (development team/system administrators) have access to the production system to support it while it is being implemented for countywide use. They can perform operational functions in the production environment. Because IT personnel also have elevated system access, their access should be limited and monitored in the production environment. Once the countywide version of the system is completed and implemented, this access is no longer necessary on an ongoing basis and, therefore, should be removed. In the event production access is needed, an emergency access process for granting and removing a temporary password (to be used in a short window of need) can be implemented.

Recommendation No. 10: We recommend that the CPO work with CEO/IT to institute an emergency access procedure for the OC Expediter system and remove IT staff access to the production environment once the system is deployed countywide.

County Procurement Office Management Response:

1. Concur - The County Procurement Office is working with OC IT to prepare a transition plan for the IT Staff (OC Expediter Development Team) to work in a test environment instead of the production environment of OC Expediter.

   Implementation Status: Will be implemented during the next 90 to 180 days pending OCIT transition schedule

Finding 11 – No Formal System Governance Framework Exists (Control Observation)

Finding No. 11: A CPO governance committee needs to be established for the OC Expediter system and a formal system governance framework needs to be documented. As a single department application, the assessment of enhancements/modifications were appropriately evaluated within the departmental procedures. However, a countywide application should consider all its users when evaluating its future needs. Therefore, a formal change management process needs to be documented and distributed to the application stakeholders to adequately guide the future maintenance and development of the application. The governance structure should address committee membership, committee operation, budget, procedures for requesting and approving application enhancements, etc.

Recommendation No. 11: We recommend that the CPO prepare a formal governance framework for the OC Expediter system.

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 13

County Procurement Office Management Response:

1. Concur - The CPO is working on creating a formal governance framework for the OC Expediter system. Until this is established, the CPO has obtained a representative from each of the participating departments on OC Expediter to provide input on the governance of this countywide system.

   Implementation Status: Partially Implemented

   The CPO will continue to work on the creation of a formal governance framework for the OC Expediter system. This is anticipated to be completed within a 90 day period.

Finding No. 12 – Additional System Documentation Needs to be Developed (Control Observation)

Finding No. 12: Currently, the development team has not prepared a system administrator manual or development documentation. Items to include are the requirements documentation, data dictionary, user roles matrix, test cases, change management procedures, etc. This information is needed in one readily available source to support the system and allow for better continuity in the event of IT staff turnover.

Some of this information has been documented by the development team (e.g. requirements and test cases) while other information has not been documented yet (e.g. data dictionary and user roles matrix).

Recommendation No. 12: We recommend that the CPO work with CEO/IT to ensure that a system administrator manual or development documentation is prepared for the OC Expediter system.

County Procurement Office Management Response:

1. Concur - The CPO has worked with OC IT to address this finding. Multiple system documents such as Infrastructure Diagram, Database Design, and Workflow Diagram have been created and additional diagrams/documents will be added as the OC Expediter system evolves.

   Implementation Status: Fully Implemented

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 14

Finding 13 – Need to Consider System Performance of Countywide Implementation (Control Observation)

Finding No. 13: The OC Expediter system was originally developed for a single department and developed with appropriate computer technology. Because the enterprise version of the system is planned to be implemented countywide, the development team should consider stress testing to ensure it can handle the additional volume of transactions, additional bandwidth, etc. CPO plans to have departments utilize OC Expediter for requisitions of all purchases including petty cash, Cal-Card, and non-DPA contracts such as human services and public works. CPO also plans to implement countywide reports of requisition and contract activity.

CEO/IT staff informed us that it plans to have a security assessment performed of the OC Expediter system once the support and maintenance for the server housing the application (located at the enterprise data center) is transitioned from OCPW staff to CEO/IT's vendor, SAIC. However, there are no plans for a stress test. CEO/IT staff informed us that a conventional stress test is not needed as the development team has allocated processing power and memory to handle large numbers of simultaneous users, as well as fine-tuned the database to faster performance. The system implementation strategy is to roll out the system one department at a time. The development team indicated that the OC Expediter servers are virtual machines and computational resources (e.g. memory processor) can be added quickly if needed.

In addition to the performance of a security assessment, system performance (e.g. response time, reporting, and resource usage/storage) should still be monitored.

Recommendation No. 13: We recommend that the CPO ensure system performance is monitored and evaluated upon system implementation at each of the individual departments.

County Procurement Office Management Response:

1. Concur - The CPO is working with OC IT to ensure that the OC Expediter's system "capacity" is scalable and properly calibrated to meet the County's usage needs as additional County departments implement the OC Expediter system.

   Implementation Status: Partially Implemented

ATTACHMENT B: County Procurement Office Management Responses (continued)

Audit Response – Internal Audit No. 1455 (OC Expediter)
September 15, 2015
Page 15

The CPO is collaborating with OC IT on the appropriate time to migrate the OC Expediter system from a County server over to an SAIC server or virtual server (cloud).

cc: Frank Kim, County Executive Officer
Mark Denny, Chief Operating Officer
Michelle Aguirre, Chief Financial Officer
Christina Koslosky, Chief Information Officer
Jessica O'Hare, Assistant to the Chief Operating Officer
Lyle Rossow, Assistant County Procurement Officer
Quazi Hashmi, CEO/IT, Program Manager