

AUDITOR'S REPORT

CONTINUOUS AUDITING ANALYTICS CHANGE CONTROL MANAGEMENT FOR THE THREE MONTH PERIOD ENDED NOVEMBER 30, 2015



January 29, 2016

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HARRIS COUNTY AUDITOR

January 29, 2016

Mr. Mike Post
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Houston, Texas 77002

RE: Continuous Auditing Analytics Change Control Management for the three month period ended November 30, 2015

The purpose of this letter is to present the results of the Continuous Auditing Analytics Change Control Management Review for the three month period ended November 30, 2015. Through the use of automated tools, the department monitors key data tables on a daily basis of the County's Integrated Financial and Administrative Solution (IFAS) System to ensure that any changes conform to relevant policies and procedures. Our procedures included the following analyses:

- 1) A daily analysis to monitor change controls relative to security, configuration, and user access on the County's IFAS System.
- 2) Routine monitoring and analysis of security override privileges relative to cash handling.

The enclosed Auditor's Report presents information concerning Change Control Management performed during the period. No reportable items were identified. We appreciate the time and attention provided by you and your staff during this ongoing engagement.

Sincerely,

A handwritten signature in blue ink that reads "Barbara J. Schott".

Barbara J. Schott
County Auditor

cc: District Judges
County Judge Ed Emmett
Commissioners:
R. Jack Cagle
Jack Morman
Steve Radack
Gene Locke
Devon Anderson
Vince Ryan
William J. Jackson
Dorothy Washington
Judy Springer

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OVERVIEW

BACKGROUND

Continuous Auditing performs auditing activities on an ongoing basis. This includes, but is not limited to:

- Daily monitoring of changes within the County’s financial system.
- Monthly review of user access relative to cash handling.

While management is responsible for the results of operations and the fair presentation of the financial statements in conformity with Generally Accepted Accounting Principles (GAAP), Continuous Auditing provides a near real-time capability to review financial related information by automating the identification of exceptions through the use of Computer Aided Audit Tools and Techniques (CAATTs). Using CAATTs, Continuous Auditing analyzes patterns within key fields, reviews trends, tests controls, and performs other activities for policy and procedure compliance. In many cases, this allows Continuous Auditing to review 100% of all recorded activity.

Change Control Management is composed of two parts, the Change Control Management Analysis and the Cash Receipt Batch Security Analysis.

CHANGE CONTROL MANAGEMENT ANALYSIS

Monitoring Change Control Management is important, as changes to the financial system can affect not only what County personnel can do, but also how the system is configured to perform. For example, access should be assigned to County personnel on a “need to know” or “need to do basis”. Unapproved changes to the system may create an issue related to segregation of duties (i.e., the ability to post and approve transactions) or unauthorized access. Therefore, the change control management related to configuration and user access is monitored to ensure that system controls are in place and functioning as intended.

While Central Technology Services (CTS) is responsible for supporting the County’s financial systems and data, Continuous Auditing works with CTS to monitor changes to the financial systems to ensure the data is properly maintained. On a daily basis, Continuous Auditing performs the following procedures:

- Obtains a download of key system tables provided by CTS.
- Compares every data element on key tables with the value from the previous day, noting any changes.
- Determines if the changes impact system security, configuration, or user access to financial systems.
- When necessary, obtains appropriate documentation showing management approval.

As it is management’s responsibility to approve changes and assess potential impact, Continuous Auditing does not evaluate the appropriateness of the change itself. The purpose of the analysis

is to verify that proper Change Control Management is followed, ensuring the integrity of the system security, configuration, and user access to financial systems.

CASH RECEIPT BATCH SECURITY ANALYSIS

The Cash Receipt Batch Security Analysis identifies County employees that have the ability to distribute and update cash payment batches. Numerous locations around the County receive payments (cash, check, charge, etc.). The receipt of a cash payment is entered into the Cash Receipt function via batches. A batch is a grouping of transactions (usually by day, by shift, etc.). Two critical functions related to cash receipts are the ability to distribute (e.g., record) and update existing batches.

The ability to distribute allows the user to record the amount of cash received into a batch. The ability to update allows the user to open a batch created by another user and edit the information recorded (e.g., the user can change the amount received). Having access to perform both of these functions can be used to override internal controls and should be closely monitored, as the handling of cash has inherent risks not present with other types of transactions. To help identify and monitor individuals who have these control override privileges, a monthly report is produced by Continuous Auditing and distributed to Audit Services and Compliance Audit management. This report can be utilized to assess control risks when planning an audit engagement.

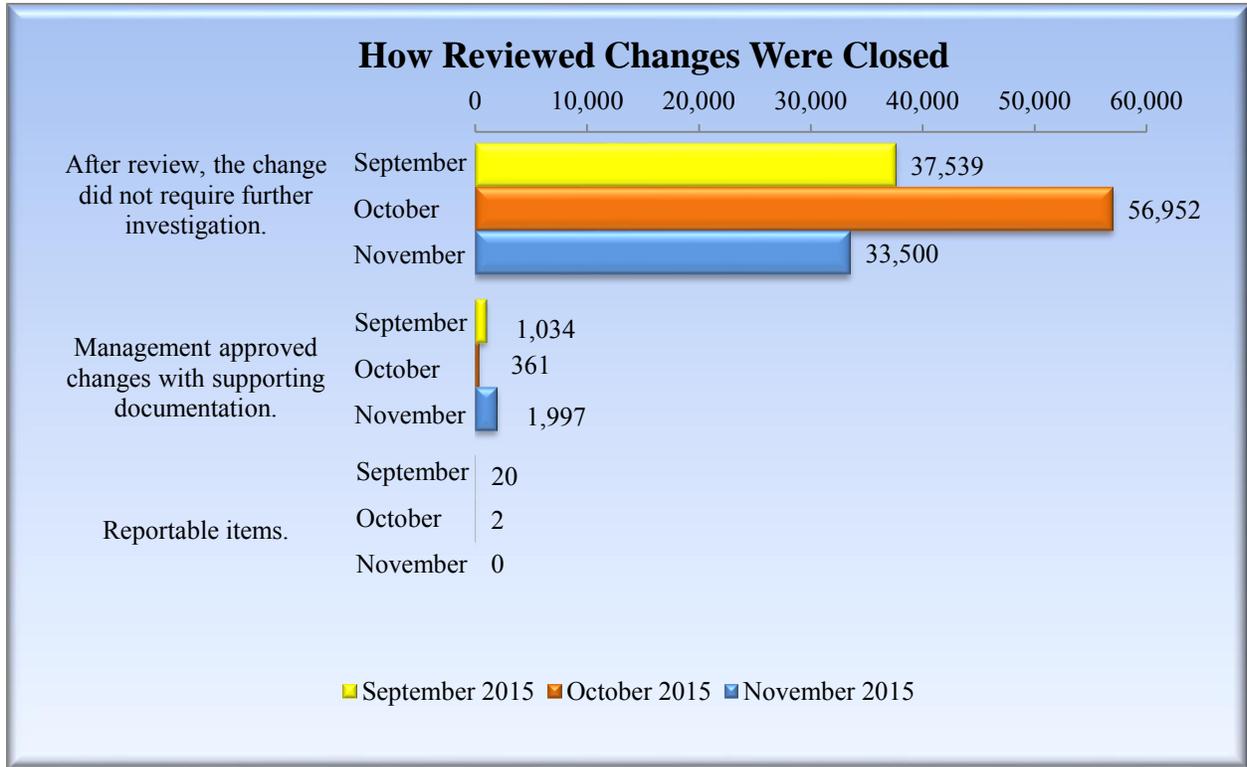
RESULTS

CHANGE CONTROL MANAGEMENT

The Change Control Management Analysis performs over 4.3 million comparisons a day, identifying changes as explained in the Overview section. On a daily basis, the analysis identifies an average of 3,500 changes. To review these changes, Continuous Auditing uses three monitoring levels to measure the associated risks of the changes. The three levels are Critical, Important and Awareness.

- Critical changes are those that pose an *immediate risk* to the system security on the County's financial system (e.g., changing posting strategies). These changes require supporting documentation.
- Important changes are those that *may pose a risk* to the system security or the County's financial system (e.g., granting of certain access to the system). Important changes are reviewed for appropriateness and/or require supporting documentation.
- Awareness changes are those that are either *routine in nature* (e.g., a user logging onto the system) or *do not pose a risk* to the system (e.g., adding a printer). Awareness changes may require review for appropriateness or may be closed automatically.

The majority of the changes can be resolved via automated processes and require no further review. Remaining changes are analyzed by Continuous Auditing to determine if supporting documentation is required. The chart below illustrates how those changes were resolved:



The top section of the chart reports the reviewed changes that were closed automatically or required an analytical assessment by Continuous Auditing. As a result of this assessment, Continuous Auditing was able to close the changes without requesting additional documentation (e.g., changes that decreased user access to the system).

The second section of the chart indicates changes that required management approval and supporting documentation. The months of September and November experienced an increase in the number of changes in the reviewed areas requiring management approval.

- In September, the increase was related to two requests. First, The State of Texas made changes to their benefits which affected state employees paid by the County. Second, a number changes were made related to debt financing and issuance of bonds.
- In November, the increase was related to the open enrollment for benefits period for retirees.

The third section of the chart illustrates the reportable items for each month. Reportable items are changes that were made without management approval or not performed properly. For the months of September through November, a total of twenty-two (22) reportable items were identified.

- In September, twenty (20) changes were made prematurely to the payroll amounts for election workers. This information was communicated to Central Technology Services

and corrected. As it occurred outside of an election period and nobody was receiving election pay, it did not affect payroll.

- In October, two (2) changes were related to a change in the payroll system. This was inadvertently made by payroll in responding to an audit inquiry. Continuous Auditing identified the change and reported it to payroll who promptly restored the value. The affected field related to a running total of accumulated hours. Due to the nature and timing, it did not impact payroll.

CASH RECEIPT BATCH SECURITY ANALYSIS

The Cash Receipt Batch Security Report is generated every month and provided to Audit Services and Compliance Audit management to review and consider for their engagements. The chart below illustrates the changes in the ability to distribute and update cash payment batches for County employees:

	Beginning of Period	Additions	Removals	End of Period
<i>Distribute</i>	69	2	0	71
<i>Update</i>	36	1	0	37

Continuous Auditing verified that management approved these additions. All changes throughout the period were communicated to Audit Services and Compliance Audit management.

CONCLUSIONS

Continuous Auditing noted twenty-two (22) reportable changes to the IFAS system. The reportable changes were addressed by Central Technology Services (CTS) and appear to not pose a risk to IFAS system security, configuration or finances. In addition, Continuous Auditing's review of security override privileges via the Cash Receipt Batch Security Analysis did not identify changes made without appropriate manager approval.