SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



ITEM: 2.9 (ID # 23242) MEETING DATE: Tuesday, October 17, 2023

FROM:

AUDITOR CONTROLLER:

SUBJECT: AUDITOR-CONTROLLER: Internal Audit Report 2024-312: Riverside County

Emergency Management Department, Follow-up Audit, All Districts. [\$0]

RECOMMENDED MOTION: That the Board of Supervisors:

1. Receive and file Internal Audit Report 2024-312: Riverside County Emergency Management Department, Follow-up Audit.

ACTION:Consent

.....

Ben J. Benoit

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Perez, seconded by Supervisor Spiegel and duly carried by unanimous vote, IT WAS ORDERED that the above matter is received and filed as recommended.

Ayes:

Jeffries, Spiegel, Washington, Perez and Gutierrez

Nays:

None

Absent:

None

Date:

October 17, 2023

XC:

Auditor Controller, EMD

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Deputy

SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FINANCIAL DATA	Current Fisca	I Year:	Next Fisca	l Year:	Тс	otal Cost:	Ongoing Cos	st
COST	\$	0.0	\$	0.0		\$ 0.0	\$	0.0
NET COUNTY COST	\$	0.0	\$	0.0		\$ 0.0	\$	0.0
SOURCE OF FUNDS: N/A Budget Adjustment: No								
						For Fiscal Y	'ear: n/a	

C.E.O. RECOMMENDATION:

BACKGROUND:

Summary

We completed a follow-up audit of the Riverside County Emergency Management Department. Our audit was limited to reviewing actions taken as of July 5, 2023, to correct findings noted in our original audit report 2023-001 dated December 13, 2022. The original audit report contained four recommendations, all of which required implementation to help correct the reported findings.

Based on the results of our audit, we found that the four recommendations were implemented.

For an in-depth understanding of the original audit, please refer to Internal Audit Report 2023-001 included as an attachment to this follow-up audit report or it can also be found at https://auditorcontroller.org/divisions/internal-audit/reports.

Impact on Citizens and Businesses

Provide an assessment of internal controls over the audited areas.

SUPPLEMENTAL:

Additional Fiscal Information

Not applicable

ATTACHMENTS:

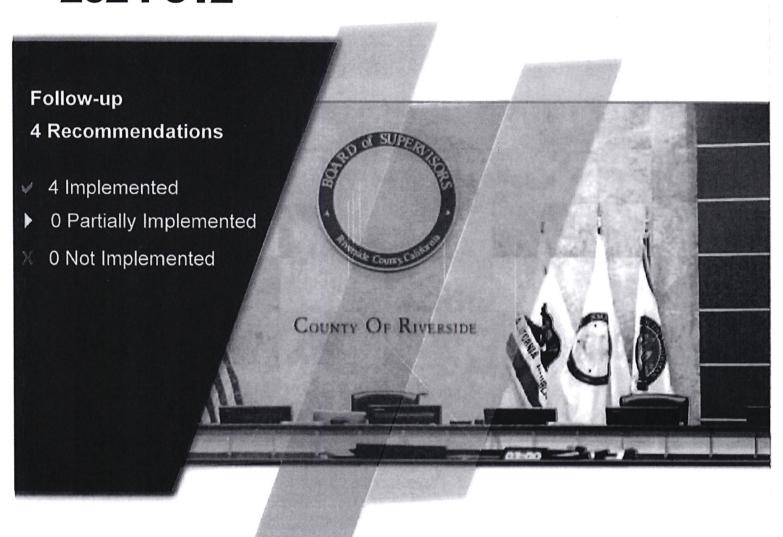
A: Riverside County Auditor-Controller - Internal Audit Report 2024-312: Riverside County Emergency Management Department, Follow-up Audit.

Office of Ben J. Benoit Riverside County Auditor-Controller

4080 Lemon Street, 11th Floor

Internal Audit Report 2024-312

Riverside, CA 92501 (951) 955-3800



Riverside County Emergency Management Department, Follow-up Audit

October 17, 2023



COUNTY OF RIVERSIDE OFFICE OF THE AUDITOR-CONTROLLER

County Administrative Center 4080 Lemon Street, 11th Floor P.O. Box 1326 Riverside, CA 92502-1326 (951) 955-3800 Fax (951) 955-3802



Ben J. Benoit County Auditor-Controller

Tanya S. Harris, DPA, CPA Assistant Auditor-Controller

October 17, 2023

Bruce Barton Director of Emergency Management Riverside County Emergency Management Department 450 E. Alessandro Riverside, CA 92508

Subject: Internal Audit Report 2024-312: Riverside County Emergency Management Department, Follow-up Audit

Dear Mr. Barton:

We completed the follow-up audit of Riverside County Emergency Management Department. Our audit was limited to reviewing actions taken as of July 5, 2023, to help correct the findings noted in our original audit report 2023-001 dated December 13, 2022.

We conducted our audit in accordance with the International Standards for the Professional Practice of Internal Auditing. These standards require that we plan and perform the audit to obtain reasonable assurance that our objective, as described in the preceding paragraph, is achieved. Additionally, the standards require that we conduct the audit to provide sufficient, reliable, and relevant evidence to achieve the audit objectives. We believe the audit provides a reasonable basis for our conclusion.

The original audit report contained four recommendations, all of which required implementation to help correct the reported findings. Based on the results of our audit, we found that the four recommendations were implemented.



Summary of the conditions from the original audit and the results of our review on the status of the implementation of the recommendations are provided in this report. For an in-depth understanding of the original audit, please refer to Internal Audit Report 2023-001 included as "Attachment A" of this audit report along with your department status letter as "Attachment B." You can also find the original audit report at https://auditorcontroller.org/divisions/internal-audit/reports.

We thank you and your staff for the help and cooperation. The assistance provided contributed significantly to the successful completion of this audit.

Br. J. Benait
Ben J. Benoit

Riverside County Auditor-Controller

By: René Casillas, CPA, CRMA Deputy Auditor-Controller

cc: Board of Supervisors
Jeff A. Van Wagenen Jr., County Executive Officer
Dave Rogers, Chief Administrative Officer
Grand Jury



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System Access Controls

Finding 1: Monitoring the Removal of Access Rights to System Applications

"For the system applications not linked to Active Directory, we were unable to determine whether access rights were terminated in a timely manner as Emergency Management does not track the date and time in which an employee's access was terminated. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, 'Accounts for terminated or transferred employees shall be disabled or removed on the day of termination or transfer.' The system applications lack the capability to timestamp when account terminations occur. As such, Emergency Management is unable to monitor system applications to ensure user accounts are terminated timely after an employee's termination or transfer from the department. Monitoring account terminations helps ensure that account deactivations are carried out properly and in a timely manner and assists management in identifying areas where additional improvement and training is needed."

Recommendation 1.1

"Develop policies and procedures to document the date in which user access rights are terminated within system applications not linked to Active Directory."

Current Status 1.1: Implemented

Recommendation 1.2

"Develop a process to monitor account deactivation dates to ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management."

Current Status 1.2: Implemented



Finding 2: Timely Termination of Active Directory Accounts

"Upon termination or transfer from Emergency Management, 7 (50%) out of a total of 14 employees did not have their Active Directory account termination requests created and approved in a timely manner (within 24 hours). The average time elapsed between employee termination and ticket approval was 83 days, with the longest taking 166 days for approval and the shortest taking 5 days. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, 'Accounts for terminated or transferred employees shall be disabled or removed on the day of termination or transfer.' Requests and approvals to disable Active Directory accounts are not created and approved in a timely manner after employees are terminated or transferred from the department. Emergency Management does not have formal, written policies and procedures that ensure user accounts for terminated or transferred employees are to be disabled or removed on the day of termination or transfer. Allowing active directory accounts to remain open after employment has ended exposes the department to risk where information maintained in department systems can be continuously accessed by individuals who no longer have a right or need to know. Depending on the sensitivity of the information maintained by department systems, it can create administrative issues and have a financial impact if held liable."

Recommendation 2.1

"Ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, *Account and Access Management*, by disabling Active Directory accounts on the day of an employee's termination or transfer from the department."

Current Status 2.1: Implemented

Recommendation 2.2

"Develop policies and procedures to ensure the disabling of Active Directory accounts are requested and approved within 24 hours of an employee's termination or transfer from the department."

Current Status 2.2: Implemented

Attachment A

Internal Audit Report 2023-001

Riverside County Emergency Management Department Audit

Report Date: December 13, 2022



Office of Paul Angulo, CPA, MA
Riverside County Auditor-Controller
4080 Lemon Street, 11th Floor
Riverside, CA 92509
(951) 955-3800

www.auditorcontroller.org



COUNTY OF RIVERSIDE OFFICE OF THE AUDITOR-CONTROLLER

County Administrative Center 4080 Lemon Street, 11th Floor P.O. Box 1326 Riverside, CA 92502-1326 (951) 955-3800 Fax (951) 955-3802



Paul Angulo, CPA, M.A. Riverside County Auditor-Controller

> Tanya S. Harris, DPA, CPA Assistant Auditor-Controller

December 13, 2022

Bruce Barton Director of Emergency Management Riverside County Emergency Management Department 450 E. Alessandro Riverside, CA 92508

Subject: Internal Audit Report 2023-001: Riverside County Emergency Management Department Audit

Dear Mr. Barton:

In accordance with Board of Supervisors Resolution 83-338, we audited the Riverside County Emergency Management Department to provide management and the Board of Supervisors with an independent assessment of internal controls over system access controls.

We conducted our audit in accordance with the International Standards for the Professional Practice of Internal Auditing. These standards require that we plan and perform the audit to obtain sufficient, reliable, relevant and useful information to provide reasonable assurance that our objective as described above is achieved. An internal audit includes the systematic analysis of information to evaluate and improve the effectiveness of internal controls. We believe this audit provides a reasonable basis for our conclusion.

Internal controls are processes designed to provide management reasonable assurance of achieving efficiency of operations, compliance with laws and regulations, and reliability of financial and non-financial information. Management is responsible for establishing and maintaining adequate internal controls. Our responsibility is to evaluate the internal controls.

Our conclusion and details of our audit are documented in the body of this audit report.



As requested, in accordance with paragraph III.C of the Board of Supervisors Resolution 83-338, management responded to each reported condition and recommendation contained in our report. Management's responses are included in the report. We will follow-up to verify that management implemented the corrective actions.

Paul Angulo, CPA, MA Riverside County Auditor-Controller

By: René Casillas, CPA, CRMA Deputy Auditor-Controller

cc: Board of Supervisors Jeff A. Van Wagenen, Jr., County Executive Officer Dave Rogers, Chief Administrative Officer Grand Jury



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Executive Summary

Overview

Riverside County Emergency Management Department (Emergency Management) was established July 2015 and consists of four divisions: Business and Finance, Operations, Preparedness, and Riverside County Medical Services Agency. Emergency Management provides coordination and oversight of emergency management and disaster response services for the residents of Riverside County. Additionally, Emergency Management supports the Riverside County Operational Area and the Regional Disaster Medical Health Coordination for California Region VI.

Emergency Management has an adopted budget of \$24.3 million for FY 2022-23 and 87 adopted positions. *County of Riverside, Fiscal Year* 2022-23 *Adopted Budget Volume* 1, 243.

Audit Objective

Our objective is to provide management and the Board of Supervisors with an independent assessment about the adequacy and effectiveness of internal controls over system access controls. Internal controls are processes designed to provide management reasonable assurance of achieving efficiency of operations, compliance with laws and regulations, and reliability of financial and non-financial information. Reasonable assurance recognizes internal controls have inherent limitations, including cost, mistakes, and intentional efforts to bypass internal controls.

Audit Scope and Methodology

We conducted the audit from May 23, 2022, through August 29, 2022, for operations from July 1, 2020, through August 11, 2022. Following a risk-based approach, our scope initially included the following:

- County-wide Disaster Preparedness Plan
- Disposal of Perishable Supplies
- Inventory Monitoring Relating to Business Continuity
- System Access Controls

Through inquiry, observations, and limited examination of relevant documentation, it was determined through a risk assessment of the county-wide disaster preparedness plan, disposal of perishable supplies, and inventory monitoring relating to business



continuity, that the risk exposure to Emergency Management associated with these processes are well mitigated with internal controls and are functioning as designed. Therefore, our audit scope focused on internal controls over system access controls.

Audit Highlights

Summary of Existing Conditions

- For the system applications not linked to Active Directory, we were unable to determine whether access rights were terminated in a timely manner as Emergency Management does not track the date and time in which an employee's access was terminated. Monitoring account terminations helps ensure that account deactivations are carried out properly and in a timely manner and assists management in identifying areas where additional training is needed.
- Terminated employees did not have their Active Directory account termination requests created and approved in a timely manner (within 24 hours). Allowing active directory accounts to remain open after employment has ended exposes the department to risk where information maintained in department systems can be continuously accessed by individuals who no longer have a right or need to know.

Summary of Improvement Opportunities

- Develop policies and procedures to document the date in which user access rights are terminated within system applications not linked to Active Directory.
- Develop a process to monitor account deactivation dates to ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, *Account and Access Management*.
- Ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, *Account and Access Management*, by disabling Active Directory accounts on the day of an employee's termination or transfer from the department.
- Develop policies and procedures to ensure the disabling of Active Directory accounts are requested and approved within 24 hours of an employee's termination or transfer from the department.



Audit Conclusion

Based upon the results of our audit, we identified opportunities for improvement of internal controls relating to system access controls.

System Access Controls

Background

System access controls within information systems ensure proper confidentiality, integrity, and availability to the data stored within the system. Authentication is a control which confirms a user's identity to provide access to a systems sensitive information. Sensitive information is any information that must be protected from unauthorized access to maintain the information security of an organization or an individual. Authentication is often achieved by using login credentials such as a username and password. Authentication relies on the presumption that the user is authorized to use the system and that only the user knows the login credentials to gain access.

Active Directory is a directory service which allows Emergency Management to manage permissions and access to network resources, and linked data applications utilized by the department. When a user ends employment with Emergency Management, it is the department's responsibility to create and approve a help desk ticket to request the removal of the terminated employee's access rights to their Active Directory account. Once the ticket is approved by Emergency Management personnel, Riverside County Information Technology is notified to disable Active Directory to remove permissions and network access. These help desk tickets contain various workflow tasks such as disabling e-mail accounts, Active Directory, data/application systems access, badge access, reclaiming software licenses, and reclaiming any equipment that may have been issued to an employee. A help desk ticket is not closed until all tasks within have been completed by Riverside County Information Technology personnel.

Objective

To verify the existence and adequacy of internal controls over employee access termination to system applications used by Emergency Management.



Audit Methodology

To accomplish these objectives, we:

- Obtained an understanding of County of Riverside Information Security Standard v1.0.
- Interviewed key personnel regarding the department's employee access termination processes.
- Obtained a listing of all critical systems used by Emergency Management and judgmentally selected a sample of systems not linked to Active Directory.
- Obtained listing of employees who had access to the selected system applications not linked to Active Directory during the audit review period.
- Obtained listing of employees whose access to the selected system applications not linked to Active Directory were terminated during the audit review period.
- Obtained report from Riverside County Information Technology that details Emergency Management ticket creation and approval dates for disabling employee access to Active Directory.
- Verified whether access rights to the selected system applications not linked to Active Directory were disabled within 24 hours of an employee's termination from Emergency Management.
- Verified whether requests to disable Active Directory were created and approved by Emergency Management personnel within 24 hours of an employee's termination or transfer from the department.

Finding 1: Monitoring the Removal of Access Rights to System Applications

For the system applications not linked to Active Directory, we were unable to determine whether access rights were terminated in a timely manner as Emergency Management does not track the date and time in which an employee's access was terminated. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, "Accounts for terminated or transferred



employees shall be disabled or removed on the day of termination or transfer." The system applications lack the capability to timestamp when account terminations occur. As such, Emergency Management is unable to monitor system applications to ensure user accounts are terminated timely after an employee's termination or transfer from the department. Monitoring account terminations helps ensure that account deactivations are carried out properly and in a timely manner and assists management in identifying areas where additional improvement and training is needed.

Recommendation 1.1

Develop policies and procedures to document the date in which user access rights are terminated within system applications not linked to Active Directory.

Management's Response

"Concur. EMD has developed and implemented the System Access Off Boarding Procedure to document the date on which user access rights are terminated within system applications not linked to Active Directory."

Actual/Estimated Date of Corrective Action: July 1, 2022

Recommendation 1.2

Develop a process to monitor account deactivation dates to ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management.

Management's Response

"Concur. EMD has included a procedure in the System Access Offboarding Procedure ensuring when deactivations are requested, a confirmation of deactivation is also requested, and that confirmation is retained in the terminated employee's personnel file."

Actual/Estimated Date of Corrective Action: July 1, 2022



Finding 2: Timely Termination of Active Directory Accounts

Upon termination or transfer from Emergency Management, 7 (50%) out of a total of 14 employees did not have their Active Directory account termination requests created and approved in a timely manner (within 24 hours). The average time elapsed between employee termination and ticket approval was 83 days, with the longest taking 166 days for approval and the shortest taking 5 days. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, "Accounts for terminated or transferred employees shall be disabled or removed on the day of termination or transfer." Requests and approvals to disable Active Directory accounts are not created and approved in a timely manner after employees are terminated or transferred from the department. Emergency Management does not have formal, written policies and procedures that ensure user accounts for terminated or transferred employees are to be disabled or removed on the day of termination or transfer. Allowing active directory accounts to remain open after employment has ended exposes the department to risk where information maintained in department systems can be continuously accessed by individuals who no longer have a right or need to know. Depending on the sensitivity of the information maintained by department systems, it can create administrative issues and have a financial impact if held liable.

Recommendation 2.1

Ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, *Account and Access Management*, by disabling Active Directory accounts on the day of an employee's termination or transfer from the department.

Management's Response

"Concur. EMD has included a procedure in the System Access Offboarding Procedure ensuring when deactivations are requested, a confirmation of deactivation is also requested, and that confirmation is retained in the terminated employee's personnel file."

Actual/Estimated Date of Corrective Action: July 1, 2022



Recommendation 2.2

Develop policies and procedures to ensure the disabling of Active Directory accounts are requested and approved within 24 hours of an employee's termination or transfer from the department.

Management's Response

"Concur. EMD has updated the System Access Offboarding procedure to address requests to deactivate accounts. During offboarding, a confirmation of deactivation is requested, and that confirmation is retained in the terminated employee's personnel file. In the event that supervisor approval is necessary, the Executive Assistant will personally contact the terminated employee's supervisor to ensure that approval is provided immediately as to not delay the disabling of the account."

Actual/Estimated Date of Corrective Action: July 1, 2022



Attachment B

Bruce Barton Director

The following are the current status of the reported findings and planned corrective actions contained in Internal Audit Report 2023-001: Riverside County Emergency Management Department Audit. 07/05/2023 Authorized Signature Date Finding 1: Monitoring the Removal of Access Rights to System Applications For the system applications not linked to Active Directory, we were unable to determine whether access rights were terminated in a timely manner as Emergency Management does not track the date and time in which an employee's access was terminated. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, "Accounts for terminated or transferred employees shall be disabled or removed on the day of termination or transfer." The system applications lack the capability to timestamp when account terminations occur. As such, Emergency Management is unable to monitor system applications to ensure user accounts are terminated timely after an employee's termination or transfer from the department. Monitoring account terminations helps ensure that account deactivations are carried out properly and in a timely manner and assists management in identifying areas where additional improvement and training is needed. **Current Status** Reported Finding Corrected? No Yes Recommendation 1.1 Develop policies and procedures to document the date user access rights are terminated within system applications not linked to Active Directory. Management Reply "Concur. EMD has developed and implemented the System Access Off Boarding Procedure to document the date user access rights are terminated within system applications not linked to Active Directory." Actual/Estimated Date of Corrective Action: July 1, 2022 Recommendation 1.2 Develop a process to monitor account deactivation dates to ensure compliance with County of

Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management.







Management Reply

"Concur. EMD has included a procedure in the System Access Offboarding Procedure to ensure confirmation is received when deactivations are requested. That confirmation is retained in the terminated employee's personnel file."

Actual/Estimated Date of Corrective Action: July 1, 2022
Current Status
Corrective Action: Fully Implemented Partially Implemented Not Implemented
Finding 2: Timely Termination of Active Directory Accounts
Upon termination or transfer from Emergency Management, 7 (50%) out of a total of 14 employees did not have their Active Directory account termination requests created and approved in a timely manner (within 24 hours). The average time elapsed between employee termination and ticket approval was 83 days, with the longest taking 166 days for approval and the shortest taking 5 days. County of Riverside Information Security Standard v1.0, Section 4.1, Account and Access Management, states, "Accounts for terminated or transferred employees shall be disabled or removed on the day of termination or transfer." Requests and approvals to disable Active Directory accounts are not created and approved in a timely manner after employees are terminated or transferred from the department. Emergency Management does not have formal, written policies and procedures that ensure user accounts for terminated or transferred employees are to be disabled or removed on the day of termination or transfer. Allowing active directory accounts to remain open after employment has ended exposes the department to risk where information maintained in department systems can be continuously accessed by individuals who no longer have a right or need to know. Depending on the sensitivity of the information maintained by department systems, it can create administrative issues and have a financial impact if held liable.
Current Status
Reported Finding Corrected? Yes No
Recommendation 2.1
Ensure compliance with County of Riverside Information Security Standard v1.0, Section 4.1, <i>Account and Access Management</i> , by disabling Active Directory accounts on the day of an employee's termination or transfer from the department.







Management Reply

"Concur. EMD has included a procedure in the System Access Offboarding Procedure to ensure confirmation is received when deactivations are requested. That confirmation is retained in the terminated employee's personnel file."

Actual/Estimated Date of Corrective Action: July 1, 2022

Recommendation 2.2

Develop policies and procedures to ensure the disabling of Active Directory accounts are requested and approved within 24 hours of an employee's termination or transfer from the department.

Management Reply

"Concur. EMD has updated the System Access Offboarding procedure to address requests to deactivate accounts. During offboarding, a deactivation confirmation is requested, which is retained in the terminated employee's personnel file. If supervisor approval is necessary, the Executive Assistant will personally contact the terminated employee's supervisor to ensure that approval is provided immediately as not to delay the disabling of the account."

Actual/Estimated Date of Corrective Action:	July 1, 2022
Current Status	
Corrective Action: Fully Implemented	Partially Implemented Not Implemented







