Security and Efficiency of the New Carrier Scanners and Electronic Locks

AUDIT REPORT

Report Number 24-089-R25 | November 5, 2024

OFFICE OF
INSPECTOR
GENERAL
UNITED STATES POSTAL SERVICE

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Highlights

Background

The U.S. Postal Service's Mobile Delivery Device – Technology Refresh (MDD-TR) is a handheld mobile scanning device used by Postal Service employees to improve real-time delivery scanning capabilities. As a part of the Delivering for America plan, the Postal Service committed to modernizing the MDD-TRs to improve employee efficiency, increase security of mail and package delivery, and ensure employee safety. Select MDD-TRs also use electronic lock (eLock) technology as a part of a multi-factor authentication requirement to open mail collection boxes and cluster box units — adding another level of security to prevent mail from being stolen. Since 2023, the devices have received software updates improving carrier security and efficiency through address edits, global positioning system, and hazard maps. These improvements support the Postal Service's commitment to creating a safe and secure work environment.

What We Did

Our objective was to assess the functional efficiency of the MDD-TR and the impact on physical security of collection boxes through the deployment of eLock technology and public awareness campaigns. To accomplish our objective, we conducted interviews with Postal Service Headquarters and local management, and the U.S. Postal Inspection Service, and further observed MDD-TRs at 15 randomly selected facilities.

What We Found

The deployment of MDD-TRs coupled with eLocks and additional public awareness efforts demonstrated the Postal Service's commitment to mail security and carrier safety. However, we found external factors, such as connectivity issues and inclement weather, impacted MDD-TR functionality. Additionally, internal factors—such as insufficient training, limited deployment of features, and inadequate oversight of battery capacity—impacted functional efficiency. Finally, the Postal Service could not identify lost, stolen, or missing devices, because facility management did not maintain an accurate MDD-TR inventory, resulting in an unrecoverable loss of about ▮▮▮ million.

Recommendations and Management's Comments

We made 12 recommendations to address the issues identified in the report. Postal Service management agreed with 10 recommendations and partially agreed with two. Management's comments and our evaluation are at the end of each finding and recommendation. The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to all recommendations, as corrective actions should resolve the issues identified in the report. See Appendix B for management's comments in their entirety.

Transmittal Letter

November 5, 2024

MEMORANDUM FOR: ELVIN MERCADO
VICE PRESIDENT, DELIVERY OPERATIONS

LINDA MALONE
VICE PRESIDENT, ENGINEERING SYSTEMS

ANGELA LAWSON
VICE PRESIDENT, TECHNOLOGY APPLICATIONS

MARK GUILFOIL
VICE PRESIDENT, SUPPLY MANAGEMENT

Mary K. Lloyd

FROM: Mary K. Lloyd
Deputy Assistant Inspector General
 for Mission Operations

SUBJECT: Audit Report – Security and Efficiency of the New Carrier Scanners and
Electronic Locks (Report Number 24-089-R25)

This report presents the results of our audit of the Security and Efficiency of the New Carrier
Scanners and Electronic Locks.

All recommendations require U.S. Postal Service Office of Inspector General (OIG) concurrence
before closure. Consequently, the OIG requests written confirmation when corrective actions are
completed. All recommendations should not be closed in the Postal Service's follow-up tracking
system until the OIG provides written confirmation that the recommendations can be closed.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or
need additional information, please contact Brandi Adder, Director, Delivery Operations, or me at
703-248-2100.

Attachment

cc: Postmaster General
    Corporate Audit and Response Management

Results

Introduction/Objective

This report presents the results of our self-initiated audit of the Security and Efficiency of the New Carrier Scanners and Electronic Locks (Project Number 24-089). Our objective was to assess the functional efficiency of the Mobile Delivery Device-Technology Refresh (MDD-TR)[1] and the impact on physical security of collection boxes through the deployment of electronic lock (eLock) technology[2] and public awareness campaigns. See Appendix A for additional information about this audit.

Background

MDDs are handheld scanners that allow letter carriers to track package delivery in real time. In 2019, the Postal Service began upgrading the MDDs to the new MDD-TRs. In total, around 75,000 legacy MDDs were repurposed for in-facility use, and approximately 290,000 new MDD-TRs were deployed to Postal Service facilities across the nation, equipping all carriers with the new device. As a part of the Delivering for America (DFA) 10-year plan, the Postal Service committed to modernizing equipment, such as the MDD-TRs, to improve employee efficiency, increase the security of mail and package delivery, and ensure the safety of employees through their Safety Intervention and Recognition program.[3]

Further, in May 2023, the Postal Service and the U.S. Postal Inspection Service (USPIS) initiated Project Safe Delivery to address a surge in mail theft and related violent crimes against letter carriers. Project Safe Delivery employed a holistic approach to: (1) protect Postal Service employees and the mailstream by installing high security collection boxes, installing eLocks on collection boxes, increasing arrow key accountability reviews, and conducting security reviews of facilities; (2) prevent incidents through education and awareness; and (3) enforce the laws that protect our nation's mailstream.

Aligning with these initiatives, the Postal Service pushed out numerous software updates to add safety and security functionality to the MDD-TRs. One safety improvement included hazard maps that warn carriers of potential weather, road conditions, aggressive animals, and/or high-crime areas. Security improvements included the 24-Hour Arrow Key Management System (AKMS)[4] and, ▮▮▮▮▮ MDD-TRs, the eLock technology as part of a multi-factor authentication (MFA)[5] requirement to open mail collection boxes and cluster box[6] units. The traditional arrow keys have been a target of thieves, looking to steal a key to gain access to collection boxes, as well as cluster boxes along a carrier's route.

The eLocks provide a safer environment for postal employees to collect and deliver mail by eliminating the utility of a lone key for those looking to steal mail. These improvements are intended to support the Postal Service's commitment to creating a safe and secure work environment.

> **"MDDs are handheld scanners that allow letter carriers to track package delivery in real time."**

The MDD-TR also has added functionality that could increase a carrier's efficiency. For example, the secondary address modification feature can reduce the processing time it takes to update customers' temporary or permanent addresses, change the duration of or cancel the change of address request, or correct house numbers. According to the Postal Service, the MDD-TR operates with

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1   The MDD-TR is a handheld mobile scanning device used by Postal Service employees to improve real-time delivery scanning capabilities.
2   ▮▮
3   As part of the DFA plan, the Safety Intervention and Recognition program provides best practices to address risks, hazards, and employee safety concerns
4   The 24-Hour AKMS supports the check-out and check-in of arrow keys ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ using the MDD-TR.
5   MFA is an identity verification method in which users provide two more confirmation factors to gain access to an account.
6   Cluster boxes are centralized units of individually locked compartments for delivering mail to multiple customers.

improved cellular speed and coverage as well as a more accurate global positioning system (GPS). The MDD-TR also improves package visibility for the Postal Service and its customers. This tracking capability is essential for the Postal Service to be competitive in the package industry.

To assess the functional efficiency of the MDD-TR and the impact on physical security of collection boxes through eLock technology, we randomly selected 15 Postal Service facilities with eLock compatible MDD-TRs to conduct interviews and observations (see Appendix A for a list of facilities reviewed).

> "We identified both external and internal factors that impacted MDD-TR functional efficiency."

Findings Summary

Overall, the deployment of MDD-TRs coupled with eLocks and additional public awareness efforts demonstrated the Postal Service's commitment to mail security and carrier safety. However, we identified both external and internal factors that impacted MDD-TR functional efficiency, such as connectivity, common weather conditions, lack of training, limited deployment of features, and a lack of oversight of battery capacity.

In addition, the Postal Service had no way to readily identify lost, stolen, or missing devices, because facility management did not maintain an accurate inventory of MDD-TRs in Ethos.[7] During our observations, the Postal Service reported 1,936 MDD-TRs as lost or stolen, which resulted in an unrecoverable loss of about █████ million.

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7   Ethos is an equipment excessing web application used to enter and submit requests for excessing equipment. Ethos is also utilized to track MDD-TR inventory.

Finding #1: Progress of Initiatives to Increase Security Measures and Crime Prevention Awareness

The Postal Service, in coordination with the USPIS, implemented security measures to deter mail theft and carrier robberies. Specifically, the deployment of MDD-TRs coupled with eLocks on collection boxes, along with various Project Safe Delivery initiatives, showed the Postal Service's commitment to mail security and carrier safety. Supervisors at six out of 10 facilities with eLock technology deployed, stated they felt the implementation of the eLocks made both their carrier's routes and mail safer with minimal impact to the time it took them to open collection boxes.

In addition, since the launch of Project Safe Delivery in May 2023, the Postal Service and USPIS have engaged in prevention awareness messaging to both Postal Service employees and customers on mail theft and employee safety. They also engaged in regular communication with the public to raise awareness of all efforts to protect employees and the mail. Specifically, they communicated plans to harden physical targets, such as arrow keys and mail collection boxes, against criminal activity and reduce

criminal acts through focused response to high crime areas. In March 2024, the Postal Service released the progress made on those initiatives (see Table 1).

> **"The Postal Service and USPIS have engaged in prevention awareness messaging to both Postal Service employees and customers on mail theft and employee safety."**

The news releases also contained a public service announcement titled, "Action the American Public Can Take to Help Prevent Mail Theft," that detailed best practices for the public to help promote safety for Postal Service carriers and mail security. Along with the issuance of this public service announcement, the reward for reporting postal mail theft information was increased, and collaboration and training with local police departments occurred.[8]

Table 1. Project Safe Delivery Progress Summary

May 2023 PLAN	March 2024 PROGRESS
Harden physical target by installing 12,000 High Security Blue Collection (HSBC) boxes nationwide.	15,000 HSBCs installed and 8,500 more ordered.
Harden physical target by replacing antiquated locks with 49,000 eLocks to make arrow keys less valuable to criminals.	28,000 eLocks installed.
Reduce criminal acts against employees.	From October 2023 to March 2024, USPIS made 73 percent more arrests for letter carrier robberies; reported a 19 percent decrease in robberies; and identified a 34 percent decrease in theft complaints, over the same time period the prior fiscal year.
Partner with federal, state, and local authorities to enforce laws.	Conducted targeted law enforcement surges in Chicago, San Francisco, and cities across Ohio, with more cities planned.

Source: USPS News Release. *USPS, Postal Inspection Service Roll Out Expanded Crime Prevention Measures To Crack Down on Mail Theft, Enhance Employee Safety and Strengthen Consumer Protections,* published May 12, 2023.

Source: USPS News Release. *USPS and USPIS Continue Nationwide Campaign to Combat Postal Crime and Protect Postal Employees,* published March 12, 2024.

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8   These mail security and carrier safety efforts were detailed in the USPIS' *2023 Annual Report to Congress.*

Electronic Locks on Hold

The Office of Inspector General (OIG) previously reported[9] on the Postal Service's plan for the installation of 99,809 eLocks within two separate phases. The first phase consisted of 49,809 eLocks, and the second phase consisted of 50,000 eLocks. As of June 11, 2024, the Postal Service had purchased 49,537 eLocks for the first phase. Of the purchased eLocks, installation of 12,270 were put on hold for various reasons, such as collection boxes being removed from the Collection Point Management System,[10]

> **"Of the purchased eLocks, installation of 12,270 were put on hold for various reasons."**

contract installation wait-times, insufficient facility equipment (for example, MDD-TRs and arrow keys), and incompatible collection box type (for example, outdated boxes). The Postal Service determined the second phase of the program, consisting of 50,000 eLocks, would be cancelled and replaced with a new lock capable of greater mail receptacle compatibility and less unlocking delay.

The 12,270 eLocks on hold cost the Postal Service about ▮ million.[11] Headquarters management stated that adjustments are being made, and verbally communicated their plans to have the remaining purchased eLocks installed by the end of calendar year 2024. However, they did not provide a documented plan. When fully installed, the eLocks will enhance delivery security, which is crucial to preventing mail theft and associated postal crimes, such as robberies of letter carriers. We encourage the Postal Service to continue to be proactive in implementing anti-crime strategies to protect the sanctity of the mail, customer interests, and Postal Service employees.

> **"The 12,270 eLocks on hold cost the Postal Service about ▮ million."**

Recommendation #1

We recommend the **Vice President, Delivery Operations**, develop a formal documented plan that details the installation schedule for the remaining electronic locks on hold.

Postal Service Response

Management agreed with the finding and with recommendation 1.

Regarding recommendation 1, management stated that a formal, documented plan for 223 eLocks is ready for deployment; however, it is on hold until after the General Election. In subsequent communication with Postal Service Headquarters management on November 1, 2024, it confirmed that a plan will also be developed for those remaining eLocks without a pending installation date. The target implementation date is February 28, 2025.

OIG Evaluation

The OIG considers management's comments responsive to recommendation 1, and corrective actions should resolve the issues identified in the report.

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9   USPS OIG audit report, *Mail Theft Mitigation and Response - Queens, NY* (Report Number 24-037-R24), dated May 21, 2024.
10   The Collection Point Management System is a Postal Service data collection system that manages data pertaining to its vast network of mail collection points.
11   This is the total equipment cost and does not include other potential costs associated with eLock installation.

Finding #2: External Factors Impacting MDD-TR Functional Efficiency

External factors, such as inconsistent connectivity with cellular towers, GPS, facility servers, and common weather conditions impacted MDD-TR functional efficiency at all 15 facilities observed.

Connectivity Issues

Facility management and carriers at 14 facilities reported inconsistent MDD-TR connectivity. Specifically:

- At 12 facilities, carriers experienced delayed mailpiece sampling[12] requests, delayed hazard map alerts, and inaccurate alerts — such as notifications at incorrect locations or receiving alerts for another carrier's routes.

- At eight facilities, supervisors reported issues with the MDD-TRs not communicating with facility servers, including issues with MDD-TRs not uploading scanning information to Regional Intelligent Mail Server (RIMS)[13] and not downloading updates when cradled.

These issues occurred because the MDD-TRs could not always connect to Postal Service's cellular network provider, limiting functionality and GPS connectivity. In addition, facility servers experienced intermittent hardware, software, or network issues that had to be addressed to restore connectivity to the MDD-TRs. According to Postal Service guidance,[14] it is facility managements' responsibility to confirm data collection devices are in working order and to verify information is downloading properly. However, facility management did not take appropriate action to maintain data collection devices and supporting infrastructure.

> "Facility management did not take appropriate action to maintain data collection devices and supporting infrastructure."

Facility management could have used RIMS to reconfigure GPS coordinate transmissions from the MDD-TRs to improve GPS location accuracy and device communication; however, headquarters management never made them aware of that capability.

As a result of connectivity issues, carrier safety may be adversely impacted due to inaccurate location information impacting hazard map accuracy and preventing consistent communication with facilities. In addition, misinformation may be relayed to both Postal customers and Postal Service management when MDD-TR performance is affected.

Common Weather Conditions

Facility management and carriers at all 15 facilities reported diminished MDD-TR performance as a result of common weather conditions, such as rain, snow, high heat, and freezing cold. Specifically, issues were reported with unresponsive touchscreens, reduced battery performance, unwanted logouts, delayed prompts, forced reboots, and impaired scanning.

Even though the Postal Service delivers in rain, sleet, and snow six or seven days a week,[15] the MDD-TRs were not designed to endure wet conditions. Additionally, the protective casing did not sufficiently prevent issues caused by exposure to water or significant temperature changes.[16]

As a result, carrier efficiency was reduced when the MDD-TR did not function properly. Specifically, the diminished MDD-TR performance disrupted and delayed mail collection and delivery — especially when carriers had to restart devices, log back in, or re-enter prompts.

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12 Postal Service employees scan an indicated number of mailpieces at collection and delivery points to capture data to calculate service performance, which measures how the Postal Service is performing against new DFA standards.
13 RIMS is primarily an application that supports Delivery Operations by collecting and sending data to mobile scanners nationwide.
14 Handbook M-39, *Management of Delivery Services*, section 128.4, dated June 2019.
15 *DFA Second Year Progress Report,* dated April 2023, and multiple Postal Service advertisements, dated January 2017.
16 *Zebra Site Installation Guide*, dated April 2021.

Recommendation #2

We recommend the **Vice President, Engineering Systems,** and **Vice President, Technology Applications,** enhance the geo-location coordinates associated with each delivery point address and update the Address Management System files downloaded to the Mobile Delivery Device – Technology Refresh.

Recommendation #3

We recommend the **Vice President, Delivery Operations**, reiterate to facility management to use Regional Intelligent Mail Server tools for the Mobile Delivery Device – Technology Refresh and to confirm the devices are transmitting information properly.

Recommendation #4

We recommend the **Vice President, Engineering Systems**, develop an actionable plan to address screen precision and sensitivity to minimize water and heat interference with the Mobile Delivery Device – Technology Refresh through hardware protections or software solutions.

Postal Service Response

Management agreed with the finding and with recommendations 2, 3, and 4.

Regarding recommendation 2, management stated it enhanced geo-location accuracy in June 2017. In subsequent communication with Postal Service Headquarters management on October 30, 2024, it confirmed that documentation will be provided to show an example of how geo-location enhancements are completed and downloaded to the MDD-TR devices. The target implementation date is November 30, 2024.

Regarding recommendation 3, management stated it will create a stand-up talk with best practices on the use of RIMS tools and proper transmission of information via the MDD-TR devices. The target implementation date is January 31, 2025.

Regarding recommendation 4, management stated it will develop an actionable plan to address screen precision and sensitivity — including various review of information/data, identification of best practices in wet conditions, and monitoring of devices exposed to excessive heat. The target implementation date is January 31, 2025.

OIG Evaluation

The OIG considers management's comments responsive to recommendations 2, 3, and 4, and corrective actions should resolve the issues identified in the report.

Finding #3: Internal Factors Impacting MDD-TR Functional Efficiency

Internal factors—such as a lack of training for supervisors and carriers, headquarters' limited deployment of MDD-TR features, and inadequate supervisor oversight of MDD-TR battery capacity level—impacted MDD-TR functional efficiency at all 15 facilities visited during observations.

Insufficient Training on MDD-TR Features

Carriers within 11 facilities reported difficulty with using new MDD-TR features. Specifically, 22 out of 60 carriers interviewed (or about 37 percent) experienced challenges making minor edits to addresses, accessing hazard maps, marking packages as out for delivery, and selecting or changing routes they were assigned to that day. Additionally, carriers experienced challenges with learning how to use the ▮▮▮▮▮▮▮▮ when it was initially deployed.

> " A lack of training prevents carriers from efficiently using MDD-TR features, which can increase their route times. "

According to Postal Service guidance,[17] managers and supervisors must provide training, as needed, and provide carriers with training in proper methods and procedures. However, the challenges carriers experienced occurred because neither supervisors nor carriers received formal training on how to manage or fully use the devices. Out of the 60 carriers and 15 supervisors interviewed, 47 stated they did not receive formal training on the MDD-TR. For example, carriers at two facilities (Irvine, CA and Flint, MI) reported the ▮▮▮▮▮▮▮▮ was deployed on their MDD-TR without notice or training from supervisors. This caused one carrier to contact another carrier from a different facility to learn how to properly use the feature. Additionally, at the Irvine,

CA, facility, a supervisor tasked a carrier to manually process minor address edits on paper forms, instead of training all carriers on how to process these changes on the MDD-TR.

The MDD-TR program was created to update functionality and improve the carriers' on-street performance. However, the intended impact is decreased when training on MDD-TR features is inconsistent and insufficient. Additionally, a lack of training prevents carriers from efficiently using MDD-TR features, which can increase their route times as they learn new features on their own.

Limited Deployment of the 24-Hour Arrow Key Management System

Postal Service Headquarters did not fully deploy the 24-Hour AKMS MDD-TR feature to devices nationwide. For example, only one facility we visited, Emerald, NV, had the 24-Hour AKMS deployed on the MDD-TR, while the remaining 14 facilities used paper logbooks to account for arrow keys. At the Crosby, TX, facility, management stated it was using AKMS, but later lost access to the feature causing it to revert to the less efficient paper logbooks.

The limited deployment of MDD-TR features occurred based on a headquarters' management decision to purposely limit the AKMS to only Tier-1 offices.[18] The determination of when it will be expanded to all facilities will be made by the Chief Retail and Delivery Officer team. However, no explanation could be provided — either by headquarters or local management — as to why the Crosby, TX, facility originally had access to the enhanced MDD-TR feature to account for arrow keys, and then lost it.

Not deploying the AKMS to all MDD-TRs limits the benefits of ensuring daily reconciliation of arrow key inventory, increasing accountability, and reducing risks associated with lost or stolen arrow keys. As shown during site observations, 10 facilities using paper logbooks did not properly manage arrow/

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17   Handbook M-39, *Management of Delivery Services,* sections 111.2 and 234.33, dated June 2019.
18   USPIS has categorized each postal facility into one of three facility security levels: Tier 1 (Most Critical), Tier 2 (Critical), and Tier 3 (Least Critical).

modified arrow lock[19] keys per Postal Service policies[20] and procedures.[21] Specifically:

- Six facilities did not maintain a daily sign in/sign out log that demonstrated supervision of arrow/modified arrow lock key inventory.

- Nine facilities did not safeguard arrow/modified arrow lock keys in secured locations (see Figure 1).

Figure 1. Unsecured Arrow Keys

Source: OIG photo taken at the St. Charles Post Office, St. Charles, MO, on May 29, 2024.

> **"Arrow keys are specific target items involved in mail theft and carrier assaults."**

In addition, arrow keys are specific target items involved in mail theft and carrier assaults; knowledge of unsecured arrow keys may cause the facility and its employees to become a target of theft or robbery. The Postal Service risks a diminished reputation and public trust in the nation's mail system by not adhering to guidance regarding arrow key security.

Inadequate Oversight of MDD-TR Battery Capacity Levels

Facility management at 12 facilities did not ensure MDD-TRs had adequate battery capacity levels. Specifically, 158 out of 833 (about 19 percent) MDD-TRs observed, had a red-light status (see Figure 2) during site visits. According to the *MDD-TR Installation Guide Version 3.0*, a steady red light on the MDD-TR indicates charging is complete, but the battery is at the end of its useful life.

Figure 2. Red-Light Indicators on MDD-TRs
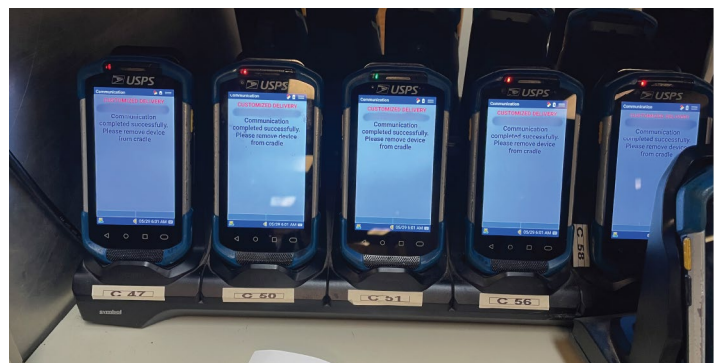
Source: OIG photo taken at St. Charles Post Office, St. Charles, MO, on May 30, 2024.

This occurred because there is no policy to monitor MDD-TR battery capacity levels or battery replacement. Specifically, supervisors at seven facilities did not understand the meaning of the red-light battery indicator and did not replace batteries at the end of their useful life. In addition, MDD-TRs report to RIMS whether the device's battery will last for the entirety of a carrier's route. If the battery needs to be replaced, an alert will also display on the MDD-TR screen (see Figure 3). However, not all supervisors used these tools to actively monitor the battery status and take timely corrective actions to restore battery capacity.

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19 Modified arrow lock keys are used by carriers to open mail receptacles, such as collection boxes and apartment mailboxes. Arrow keys are accountable items and are subject to strict controls.
20 *Administrative Support Manual* Issue 13, sections 273.461, 273.462, 273.474, and 278.12, dated July 1999 – updated through January 31, 2024.
21 *Arrow Key Guidebook Standard Work Instruction*, dated August 2023.

Figure 3: Examples of MDD-TR Battery Capacity Displays

Displayed in RIMS for Supervisors

DEVICE ID	LAST PING DATETIME	SW VERSION	CHARGE CYCLES	BATTERY FULL CAPACITY	ESTIMATED UPTIME MINUTES	BATTERY HEALTH STATUS
▉	10-SEP-24 11.14.59 AM	▉	324	55	.1	BAD
▉	17-SEP-24 09.39.32 AM	▉	925	549	1.3	BAD
▉	13-SEP-24 07.58.05 PM	▉	744	1980	4.6	POOR
▉	02-SEP-24 03.01.18 AM	▉	681	1988	4.6	POOR
▉	17-SEP-24 07.18.22 AM	▉	737	1992	4.6	POOR
▉	17-SEP-24 07.31.04 AM	▉	606	2022	4.7	MODERATE
▉	17-SEP-24 09.26.08 AM	▉	479	3002	7.0	GOOD
▉	17-SEP-24 02.01.57 AM	▉	473	4251	9.9	EXCELLENT

Source: RIMS Battery Replacement report for the North Carolina District on September 17, 2024.

Displayed on MDD-TR

Battery Replacement

The battery needs to be replaced on this device!

The present battery capacity is 2000 mAH.

Press ENTER to close

ENTER

Source: "Battery Find Me" PowerPoint, provided by Postal Service management on July 12, 2024.

We project between 10.2 and 27.7 percent of all MDD-TR batteries in facilities nationwide needed replacement.[22] Without proper oversight of MDD-TR battery capacity levels, the Postal Service may waste resources through decreased carrier and supervisor efficiency, increased fuel consumption, and increased workhours. Specifically, carriers at seven facilities reported having to take back-up devices on their routes, returning to facilities to replace batteries or devices, or supervisors meeting carriers en route with replacements.
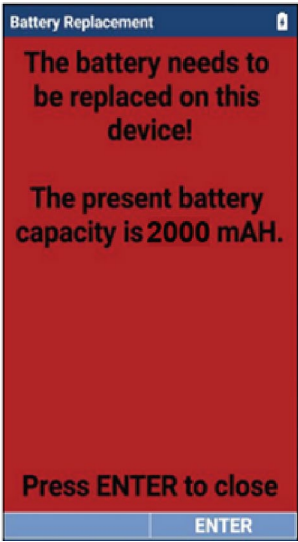
Recommendation #5

We recommend the **Vice President, Delivery Operations**, require facility management to certify supervisors and employees complete formal, and release update, training on Mobile Delivery Device – Technology Refresh functionalities.

Recommendation #6

We recommend the **Vice President, Delivery Operations**, require facility management to provide guidance to supervisors and employees of all major Mobile Delivery Device – Technology Refresh functionality updates.

Recommendation #7

We recommend the **Vice President, Delivery Operations**, develop a deployment plan with actionable milestones for the 24-Hour Arrow Key Management System to all facilities using the Arrow keys nationwide, contingent upon the completion of the pilot program.

Recommendation #8

We recommend the **Vice President, Delivery Operations**, reiterate to facility management the requirement to follow the Arrow Key Standard Work Instructions including reporting lost or stolen keys to the Postal Inspection Service as required.

Recommendation #9

We recommend the **Vice President, Engineering Systems**, and **Vice President, Delivery Operations**, implement recurring communication regarding existing tools to monitor battery capacity, and proactively replace batteries, as needed, for the Mobile Delivery Device – Technology Refresh.

22 Projection was based on a 90 percent confidence level.

Postal Service Response

Management agreed with the finding and with recommendations 5, 7, 8, and 9, and partially agreed with recommendation 6.

Regarding recommendation 5, management stated it will provide supervisors and employees with MDD-TR functionality training and certify completion. The target implementation date is April 30, 2025.

Regarding recommendation 6, management stated that employees currently receive messaging for all major functionality updates directly through their MDD-TR; however, it agreed to create a repository for these updates for supervisors to review and reference. The target implementation date is April 30, 2025.

Regarding recommendation 7, management stated — pending the outcome of the 24-Hour Arrow Key Management System pilot — it will establish milestones for deployment to all facilities using arrow keys. The target implementation date is May 31, 2025.

Regarding recommendation 8, management stated it will issue a stand-up talk reiterating use of the Arrow Key Standard Work Instructions, including reporting lost or stolen keys to the Postal Inspection Service. The target implementation date is January 31, 2025.

Regarding recommendation 9, management stated it will implement and document recurring stand-up talks and Learn & Grow Sessions reminding supervisors of tools to monitor MDD-TR battery capacity, and proactively replace batteries, as needed. The target implementation date is April 30, 2025.

OIG Evaluation

The OIG considers management's comments responsive to recommendations 5, 6, 7, 8, and 9, and corrective actions should resolve the issues identified in the report.

Finding #4: Lost, Stolen, and Missing MDD-TRs

Of the 814 MDD-TRs assigned to the 15 facilities, 163 (or about 20 percent) were unaccounted for at the time of site observations. Of the unaccounted for MDD-TRs:

- 47 were reported to be at other facilities;

- Five were found at the facility after site observations concluded;[23]

- Seven were reported to be lost or stolen in Ethos after site observations concluded;

- Three were re-assigned during peak season; and

- 101 were missing,[24] and management could not provide supporting documentation.

Further, there were an additional 182 MDD-TRs found at the 15 facilities that were not assigned to them in Ethos. During our observations, in May 2024, we were informed that Postal Service Headquarters management conducted the annual physical MDD-TR inventory for Ethos. The inventory evaluation included 291,938 deployed MDD-TRs, and 1,932 of these were reported as lost, and four were reported as stolen.

The issues surrounding lost, stolen, and missing MDD-TRs occurred due to four main reasons:

1. Facility management did not routinely review its assigned inventory in Ethos and update, as needed.

   a. Except for the annual inventory verification, management at nine of the 15 facilities stated it did not use Ethos to monitor the MDD-TR inventory.

   b. No written policy required an annual, or more frequent, MDD-TR inventory verification.

2. Supervisors and assigned clerks were not overseeing the carrier's check-in of MDD-TRs, as required.[25] Instead, supervisors stated they

> **"Of the 814 MDD-TRs assigned to the 15 facilities, 163 (or about 20 percent) were unaccounted for at the time of site observations."**

performed a visual inspection at the end-of-shift to determine whether the carriers properly placed the MDD-TRs in their assigned cradles.

3. Two facilities (Flint, MI, and Charlottesville, VA) converted to Sorting and Delivery Centers[26] (S&DCs) in February 2024. Facility management at both locations stated most of the MDD-TRs were returned to the Postal Central Repair Facility in Topeka, KS, and the S&DCs received new devices. Facility management did not review and update its MDD-TR inventory in Ethos after this major network change.

4. Facility management did not always follow the process for reporting lost, stolen, and missing MDD-TRs.

   a. Management at eight facilities were unaware of the process for reporting lost, stolen, and missing MDD-TRs. Instead, some supervisors stated they would notify senior management at their facility.

   b. Guidance also contradicted reporting lost, stolen, and missing MDD-TRs to USPIS. For example, the *MDD – Lost Reference Guide* requires management to contact the local USPIS office if an MDD-TR is lost, missing, or stolen. However, the AS-701, *Asset Management Handbook,* states it is at the discretion of the installation head to report lost or stolen MDD-TRs to the local USPIS office.

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23 Facility management provided the OIG with photographs of the MDD-TRs to confirm possession.
24 OIG followed up with facility management regarding MDD-TRs not observed during the 15 site visits, and 101 of the 163 were not located.
25 Handbook M-39, *Management of Delivery Services*, dated June 2019.
26 A consolidation of multiple facilities and package sortation operations into one facility.

Because management at 14 out of 15 facilities did not maintain an accurate inventory of their MDD-TRs in Ethos, they had no way to readily identify lost, stolen, or missing devices.

As a result of not maintaining an accurate inventory of MDD-TRs, no requirement to conduct frequent physical inventory checks, and a lack of clear guidance on reporting lost or stolen devices, the Postal Service is exposed to an increased risk of both data and monetary loss. Based on our site observations, we project, at minimum, there are 7,209 missing MDD-TRs nationwide, or about ███ million of assets at risk of loss.[27] Additionally, based on the 2024 annual physical MDD-TR inventory verification, the monetary impact for the 1,936 lost or stolen MDD-TRs is about ███ million.

Recommendation #10
We recommend the **Vice President, Delivery Operations**, reinforce the policy for local management to ensure carriers have returned their Mobile Delivery Device – Technology Refresh to the appropriate cradles and information has been downloaded.

Recommendation #11
We recommend the **Vice President, Supply Management**, include and publish language in the updated version of the AS-701 to clarify the requirements to report lost, stolen, or missing assets or materials to the Postal Inspection Service.

Recommendation #12
We recommend the **Vice President, Delivery Operations**, evaluate and establish a policy to require increased frequency of a nationwide inventory evaluation.

Postal Service Response
Management agreed with the finding, monetary impact and recommendations 10 and 11, and partially agreed with recommendation 12.

Regarding recommendation 10, management stated it will issue a stand-up talk reinforcing policies for employees to properly cradle their MDD-TR device and for supervisors to validate information is subsequently downloaded to them. The target implementation date is January 31, 2025.

Regarding recommendation 11, management stated it will include a dedicated section specifically on lost, stolen, or missing assets in a future update to the AS-701 Asset Management process. The target implementation date is April 30, 2025.

Regarding recommendation 12, management stated it already has an annual verification process in place; however, it agreed to conduct this physical verification semi-annually moving forward. The target implementation date is March 31, 2025.

OIG Evaluation
The OIG considers management's comments responsive to recommendations 10, 11, and 12, and corrective actions should resolve the issues identified in the report.

Looking Forward

By modernizing equipment such as the MDD-TRs, the DFA 10-year plan is intended to improve employee efficiency and add new functionality for both safety and security. In response to a surge in mail theft and related violent crimes, the Postal Service committed to the Safety Intervention and Recognition program and collaborated with USPIS on Project Safe Delivery. For these plans to succeed, the Postal Service must ensure initiatives are fully and effectively implemented while considering monetary cost and public awareness. Achieving these plans in the years ahead should improve the safety of mail and Postal Service employees.

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27 Based off the 101 MDD-TRs that were missing during site observations, we project at a 90 percent confidence level between 7,209 (or 3.7 percent) and 41,448 (or 21.1 percent) of the 196,438 total MDD-TRs were missing in our universe.

Appendices

Appendix A: Additional Information

Scope and Methodology

Our objective was to assess the functional efficiency of the MDD-TR and the impact on physical security of collection boxes through the deployment of eLock technology and public awareness campaigns.

To accomplish our objective, we:

- Analyzed data from Ethos,[28] RIMS,[29] and Power BI dashboards. Our overall universe included 4,836 facilities with 196,438 total MDD-TRs. We then randomly select 15 facilities with 17 or more ████████████ MDD-TRs (See Table 2):

Table 2. Randomly Selected Facilities

Facility	City, State	MDD-TR Inventory Count	eLock Mail Collection Box
Ann Arbor Main Post Office (PO)	Ann Arbor, MI	122	██████
Charlottesville S&DC	Charlottesville, VA	44	
Country Fair Station	Canton, OH	29	
Crosby PO	Crosby, TX	21	
Emerald Station	Las Vegas, NV	62	
Firestone Park Station	Akron, OH	29	
Flint S&DC	Flint, MI	36	
Henderson PO	Henderson, NC	29	
Irvine Harvest Station	Irvine, CA	65	
New Lenox PO	New Lenox, IL	26	
Newport PO	Newport News, KY	53	
North Huntingdon Carrier Annex	Irwin, PA	52	
O'Fallon PO	O Fallon, MO	111	
St. Charles South Station	Saint Charles, MO	75	
Salina General Mail Facility	Salina, KS	60	

Source: OIG analysis and data obtained from Ethos on April 11, 2024.

- Conducted site visit observations at the 15 facilities to:

  - Verify MDD-TR inventory and cradling compliance.

  - Verify how facilities accounted for and ensured their MDD-TRs and arrow keys were secured.

  - Observe the process of carriers using the MDD-TRs with eLock technology at selected collection boxes.

- Conducted site visit interviews at the 15 facilities to:

- Obtain facility policies and procedures on MDD-TRs function, usage, and accountability.

- Obtain knowledge of carriers' experience with MDD-TRs including specific features/updates, and their interaction with eLocks on mail collection boxes, if applicable.

- Obtain knowledge of supervisors' roles and responsibilities managing the MDD-TRs, eLocks, and security of arrow keys.

- Researched, identified, and obtained Decision Analysis Reports for Phase 1 and Phase 2 of the MDD-TR Program as well as existing

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28 Ethos is an equipment excessing system web application used to enter and submit requests for excessing equipment. Ethos is also used to track MDD-TR inventory.
29 RIMS is primarily an application that supports Delivery Operations by collecting and sending data to mobile scanners nationwide.

documentation of policies, procedures, handbooks, and guides pertaining to MDD-TRs and software updates.

- Interviewed Postal Service Headquarters throughout our fieldwork to gain understanding of the MDD-TR program and oversight.

- Interviewed the USPIS to obtain an understanding of the efforts in reducing mail theft, carrier robberies, and public awareness.

- Assessed follow-up information provided by headquarters and management from the above 15 facilities to determine compliance with existing policies, procedures, handbooks, and guides regarding MDD-TRs.

We conducted this performance audit from April 2024 through November 2024 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on October 3, 2024, and included their comments where appropriate.

In planning and conducting the audit, we obtained an understanding of the security and efficiency of the MDD-TRs and eLocks internal control structure to help determine the nature, timing, and extent of our audit procedures. We reviewed the management controls for overseeing the program and mitigating associated risks. Additionally, we assessed the internal control components and underlying principles, and we determined these four components were significant to our audit objective:

- Control Environment

- Control Activities

- Information and Communication

- Monitoring

We developed audit work to ensure that we assessed these controls. Based on the work performed, we identified internal control deficiencies related to Control Environment; Control Activities; Information and Communication; and Monitoring significant within the context of our objectives. Our recommendations, if implemented, should correct the weaknesses we identified.

We assessed the reliability of MDD-TR data obtained through Ethos by consulting internal data experts, conducting interviews, and comparing what was identified through physical observations at facilities we visited with Ethos inventory records. We determined that the data were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

Report Title	Objective	Report Number	Final Report Date	Monetary Impact
Mobile Delivery Device Security Controls Assessment	To assess the security controls of the MDD-TRs deployed at Postal Service facilities.	22-175-R23	July 7, 2023	██████
U.S. Postal Service Response to Mail Theft	To evaluate the U.S. Postal Service's efforts to respond to mail theft.	22-178-R23	September 28, 2023	$1,008,976
Arrow Key Management Controls	To assess the effectiveness of the U.S. Postal Service's management controls for arrow keys.	19-033-R20	August 31, 2020	N/A
Delivery Operations – Undelivered and Partially Delivered Routes	To assess the Postal Service's management of undelivered and partially delivered routes.	21-262-R23	December 16, 2022	N/A
Mail Theft Mitigation and Response – Queens, NY	To assess the U.S. Postal Service's actions taken to mitigate and respond to mail theft in Queens, NY.	24-037-R24	May 21, 2024	N/A
Mail Theft Mitigation and Response – San Francisco, CA	To assess the U.S. Postal Service's actions taken to mitigate and respond to mail theft in San Francisco, CA.	24-099-R24	August 30, 2024	N/A
Mail Theft Mitigation and Response – Chicago, IL	To assess the U.S. Postal Service's actions taken to mitigate and respond to mail theft in Chicago, IL.	24-100-R24	September 19, 2024	N/A

Appendix B: Management's Comments

10/28/2024

JOHN CIHOTA
DIRECTOR, AUDIT SERVICES

SUBJECT: *Management Response: and Efficiency of the New Carrier Scanners and Electronic Locks (24-089-DRAFT)*

Thank you for providing the Postal Service with an opportunity to review and comment on the findings and recommendations contained in the draft audit report, *Management Response: Security and Efficiency of the New Carrier Scanners and Electronic Locks.*

The Postal Service agrees with the findings, recommendations and monetary impact associated with this report. Exceptions include finding #4 as stated below; and recommendations #6 and #12, where management has partially agreed.

Supply Management agrees with Finding #4: Lost, Stolen, and Missing MDD-TRs and Recommendation 11. However, as concerns the specific Finding under paragraph 4)b, the OIG states that, "Guidance also contradicted reporting, lost, stolen, and missing MDD-TRs to United States Postal Inspection Service (USPIS)." Management views it necessary to note that the AS-701, Asset Management Handbook, was purposefully written to provide appropriate discretion to installation heads concerning potentially lost, stolen, and missing Postal assets and materials based on the specific facts of the circumstance. The AS-701 is broader than and does not specify or apply to only MDD-TR assets, and intends a determination by the installation head of an affirmative finding and evidence of loss or theft to trigger reporting. Accordingly, this supports, but is not in contradiction to the guidance within the MDD – Lost Reference Guide issued by the Postal Service's Delivery organization program office.

Following are our comments on each of the twelve recommendations.

Recommendation 1:
We recommend the **Vice President, Delivery Operations,** develop a formal documented plan that details the installation schedule for the remaining electronic locks on hold.

Management Response/Action Plan:
Management **agrees** with this recommendation.

A formal documented plan for the remaining 223 electronic locks is ready for deployment however it is currently on hold until after the November 5, 2024, General Election.

Target Implementation Date: 02/28/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 2:
We recommend the **Vice President, Engineering Systems,** and the **Vice President Technology Applications,** enhance the geo-location coordinates associated with each delivery point address and update the Address Management System files downloaded to the Mobile Delivery Device – Technology Refresh.

Management Response/Action Plan:
Management **agrees** with this recommendation.

While we agree that enhancing geo-location accuracy is important, this is work that was completed in June of 2017. This is an unnecessary recommendation as the system has had this capability for over 7 years.

Target Implementation Date: 11/30/2024

Responsible Official: Vice President, Engineering Systems, and the Vice President Technology Applications

Recommendation 3:
We recommend the **Vice President, Delivery Operations,** reiterate to facility management to use Regional Intelligent Mail Server tools for the Mobile Delivery Device – Technology Refresh and to confirm the devices are transmitting information properly.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will create a Stand-Up Talk with best practices on the Regional Intelligent Mail Server tools to include the the proper transmission of information via the Mobile Delivery Device – Technology Refresh devices.

Target Implementation Date: 1/31/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 4:
We recommend the **Vice President, Engineering Systems,** develop an actionable plan to address screen precision and sensitivity to minimize water and heat interference with the Mobile Delivery Device - Technology Refresh through hardware protections or software solutions.

Management Response/Action Plan:
Management **agrees** with this recommendation.

An actionable plan should include education and sharing of best practices in addition to hardware protections or software solutions.

Management will develop an actionable plan to address screen precision and sensitivity to minimize water and heat interference.

The plan will include but not be limited to:
- Review helpdesk tickets to understand reported scenarios.
- Review of repair data to understand how many are sourced to Hardware fault.
- Review WAN/ GPS behavior to reduce the WAN and GPS utilization based on temperature.
- Review of Over temperature application log behavior between manufacturer and USPS application / architecture teams.
- Identify education or best practices for use in wet conditions.
- Monitoring will be implemented to quantify areas where excessive heat is a problem.
- Investigate and potentially implement the monitoring of heat on the device and preventing damage to the device by taking action to shut down the device prior to overheating.

Target Implementation Date: 01/31/2025

Responsible Official: Vice President, Engineering Systems

Recommendation 5:
We recommend the **Vice President, Delivery Operations,** require facility management to certify supervisors and employees complete formal, and release update, training on Mobile Delivery Device – Technology Refresh functionalities.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will provide supervisors and employees with Mobile Delivery Device – Technology Refresh functionalities training and certify upon completion.

Target Implementation Date: 04/30/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 6:
We recommend the **Vice President, Delivery Operations,** require facility management to provide guidance to supervisors and employees of all major Mobile Delivery Device – Technology Refresh functionality updates.

Management Response/Action Plan:
Management **partially agrees** with this recommendation.

Employees currently receive messaging for all major functionality updates directly through the Mobile Delivery Device – Technology Refresh when released. Management will create a repository for all major Mobile Delivery Device – Technology Refresh functionality updates for supervisors to review and reference when needed.

Target Implementation Date: 4/30/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 7:
We recommend the **Vice President, Delivery Operations,** develop a deployment plan with actionable milestones for the 24-Hour Arrow Key Management System to all facilities using the Arrow keys nationwide, contingent upon the completion of the pilot program.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will establish milestones for deployment to all facilities using Arrow Keys of the 24-Hour Arrow Key Management System upon completion of the pilot program if deployed.

Target Implementation Date: 05/31/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 8:
We recommend the **Vice President, Delivery Operations,** reiterate to facility management the requirement to follow the Arrow key Standard Work Instructions including reporting lost or stolen keys to the Postal Inspection Service as required.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will issue a Stand-Up Talk reiterating use of the Arrow Key Standard Work Instructions and stressing the importance of reporting lost or stolen keys to the Postal Inspection Service.

Target Implementation Date: 1/31/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 9:
We recommend the **Vice President, Engineering Systems,** and the **Vice President of Delivery Operations,** implement recurring communication regarding existing tools to monitor battery capacity, and proactively replace batteries, as needed, for the Mobile Delivery Device – Technology Refresh.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will implement and document recurring Stand-Up Talks and Learn & Grow Sessions reminding supervisors of the resources available with respect to the

existing tools to monitor battery capacity, and proactively replace batteries for the Mobile Delivery Device – Technology Refresh.

Target Implementation Date: 04/30/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 10:
We recommend the **Vice President, Delivery Operations,** reinforce the policy for local management to ensure carriers have returned their Mobile Delivery Device – Technology Refresh to the appropriate cradles and information has been downloaded.

Management Response/Action Plan:
Management **agrees** with this recommendation.

Management will issue a Stand-Up Talk reinforcing policies for employees to return Mobile Delivery Device – Technology Refresh to the appropriate cradles and for supervisors to validate information has been downloaded.

Target Implementation Date: 1/31/2025

Responsible Official: Vice President, Delivery Operations

Recommendation 11:
We recommend the **Vice President, Supply Management,** include and publish language in the updated version of the AS-701 to clarify the requirements to report lost, stolen, or missing assets or materials to the Postal Inspection Service.

Management Response/Action Plan:
Management **agrees** with the recommendation.

As the Postal Service continues implementation of updates to the AS-701 Asset Management process, we will include a dedicated section specifically on lost, stolen, or missing assets that will clarify the need for installation heads to report and also be aware of local and program office policy concerning specific equipment that may supplement the broader focus of the AS-701 process.

Target Implementation Date: 04/30/2025

Responsible Official: Senior Director, Asset Management, Supply Management

Recommendation 12:
We recommend the **Vice President, Delivery Operations,** evaluate and establish a policy to require increased frequency of a nationwide inventory evaluation.

Management Response/Action Plan:
Management **partially agrees** with this recommendation.

Management already utilizes an Annual MDD-TR Physical Verification process. To improve upon current inventory status, an additional MDD-TR Physical Verification process will be added to inventory semi-annually moving forward.

<u>Target Implementation Date</u>: March 31, 2025

<u>Responsible Official:</u> Vice President, Delivery Operations

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Tyrone M. Williams
Vice President, Delivery Operations (A)

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Linda M. Malone
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cc: *Corporate Audit & Response Management*

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