

Office of Inspector General | United States Postal Service

Audit Report

Mail Operations at the Denver, CO, Processing and Distribution Center

Report Number 21-151-R21 | July 27, 2021



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Transmittal Letter



OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

July 27, 2021

MEMORANDUM FOR: FELIPE FLORES
WESTERN DIVISION DIRECTOR,
PROCESSING OPERATIONS

A handwritten signature in black ink, appearing to read "Adam Bieda", is positioned below the recipient information.

FROM: Adam Bieda
Director, Plant Evaluation Team

SUBJECT: Audit Report – Mail Operations at the Denver, CO, Processing
and Distribution Center (Report Number 21-151-R21)

This report presents the results of our audit of Mail Operations at the Denver, CO, Processing and Distribution Center.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Adam Bieda, Director, Plant Evaluation Team, or me at 703-248-2100.

Attachment

cc: Postmaster General
Chief Logistics and Processing Operations Officer and Executive Vice President
Vice President, Western Region Processing Operations
Corporate Audit and Response Management

Results

Background

The U.S. Postal Service considers mail to be delayed when it is not processed in time to meet the established delivery day. Delayed mail can adversely affect Postal Service customers and harm the organization's brand.

Mail originating from one mail processing facility that requires additional processing at a destinating facility before delivery is part of the Managed Mail Program. Once managed mail is processed, it is prepared for Delivery Point Sequence (DPS), which is an automated process of sorting mail into delivery order. DPS requires sorting the mail twice, with a first pass to sequence the mail and a second pass to sort the sequenced mail by each carrier.

To track mail conditions at processing facilities, the Postal Service launched the Mail Condition Visualization (MCV) system in January 2019. The system provides near real-time visibility of a facility's on-hand volume, delayed processing volume, and delayed dispatch volume. Specifically, the MCV system calculates:

- Late arriving containers – containers that arrived from another processing plant after the Critical Entry Time¹ necessary to meet their delivery commitment for their class and shape.
- Delayed inventory – mailpieces that have not received their next expected processing operation scan by 6:59 a.m. for destinating final processing operations and by 6:00 a.m. for all other operations.
- Delayed dispatch containers – containers that have not received a final dock (departure) scan more than 15 minutes after the Dispatch of Value.²

From January 1, 2020, through March 31, 2021, the Denver, CO, Processing and Distribution Center (P&DC) reported 6,280 late arriving containers, 2.2 billion pieces of delayed inventory, and 168,490 delayed dispatch containers. This site was judgmentally selected based on the high number of delayed dispatch containers during this time period.

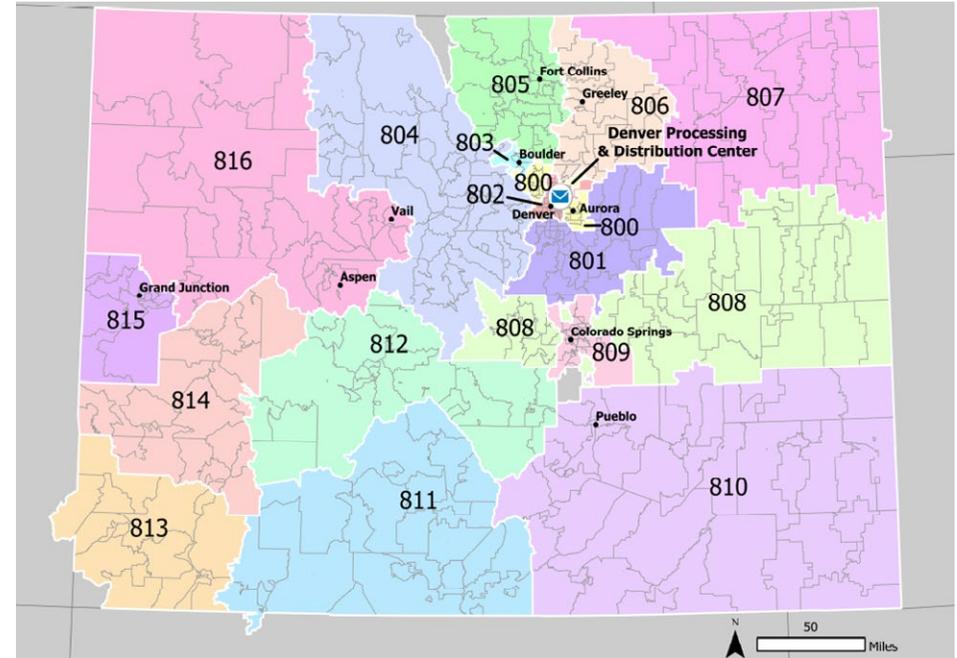
¹ The latest time that committed mail can be received in an operation and still be processed before clearance time to meet the service standard for mail processing, dispatch, and final delivery.

² The last dispatch of the day that is loaded on transportation in time to meet the service standard for the mail class or destination.

³ A grouping of First-Class packages that meet a certain criterion, such as tubes, and require different processing.

The Denver P&DC is in the Western Division of the Western Processing Region. The facility processes letters, flats, and packages for ZIP codes throughout CO (see Figure 1). Additionally, the Denver P&DC processes some First-Class Mail Small Parcels and Rolls³ and Priority Mail for ZIP codes in WY.

Figure 1. ZIP Codes Serviced by the Denver P&DC



Source: Postal Service National Distribution Labeling List and Postal Service Office of Inspector General (OIG) analysis.

A portion of the audit scope and our site observations occurred during the COVID-19 pandemic. The Postal Service experienced decreased employee availability and increased package volume during this time, which impacted operations nationwide.

Objective, Scope, and Methodology

Our objective was to evaluate mail conditions at the Denver, CO, P&DC.

We interviewed Denver P&DC management and observed mail processing and dock operations from May 10–13, 2021. We also analyzed late arriving, delayed inventory, and delayed dispatch data in MCV from January 1, 2020, to March 31, 2021. Additionally, we looked at Surface Visibility Web (SVweb) scans and calculated volume processed using data from the Web Management Operating Data System. Furthermore, we reviewed Run Plan Generator (RPG) reports in Web End-of-Run (WebEOR) to identify operational clearance performance for the Denver P&DC compared to national targets and trends.

We assessed the reliability of data from these systems by interviewing agency officials knowledgeable about the data and reviewing related documentation. We determined that the data used were sufficiently reliable for the purposes of this report.

We conducted this performance audit from May through July 2021 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 July 9, 2021 and included their comments where appropriate.

Finding #1: Delayed Dispatch Containers Reported in Mail Condition Visualization

From January 1, 2020, to March 31, 2021, the Denver P&DC reported 168,490 containers of delayed dispatch, the fourth highest in the country (see Table 1).

Table 1. Top P&DC's with Highest Delayed Dispatch Container Volume

Facility Name	Delayed Dispatch
Sacramento, CA, P&DC	221,861
North Houston, TX, P&DC	172,612
West Valley, AZ, P&DC	172,416
Denver, CO, P&DC	168,490
Los Angeles, CA, P&DC	160,318
Richmond, VA, P&DC	156,549
Oakland, CA, P&DC	124,885
Mid Carolina, NC, P&DC	114,494
Raleigh, NC, P&DC	112,302

Source: MCV.

The high number of delayed dispatch containers at the Denver P&DC were caused by missed load scans⁴ and improper consolidate scans.⁵ These containers were not actually delayed and were dispatched timely, which resulted in the number of actual delayed dispatch containers being overreported in the MCV application.

Missed Load Scans

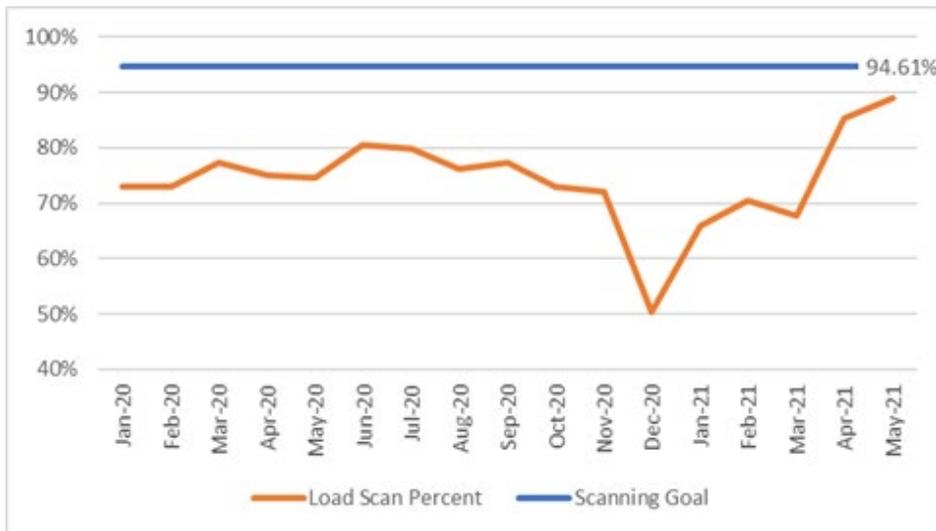
Denver P&DC employees were not performing the container load scan consistently before dispatching it to the next facility. From January 1, 2020, to March 31, 2021, the Denver P&DC's average monthly load scans were 72.4 percent (out of 100 percent).

⁴ Performed when the container is loaded onto the trailer for dispatch.

⁵ Performed when a loaded trailer is changed or consolidated into another trailer.

Denver P&DC management initiated a Lean Six Sigma⁶ project on March 31, 2021, to improve overall scanning⁷ at the facility. Since the Lean Six Sigma project started, the Denver P&DC has increased its load scan scores; however, the load scan scores were still below the scanning goal of 94.61 percent (see Figure 2). Denver P&DC management stated the lower load scan performance in December 2020 was due to record mail volumes during peak season.

Figure 2. Denver P&DC Average Monthly Load Scan Performance from January 1, 2020 – May 31, 2021



Source: SVweb.

Improper Consolidate Scans

Denver P&DC employees were not completing the consolidate scans properly. Specifically, P&DC management stated that employees had not been trained on how to properly perform consolidate scans when containers had to be moved to a new trailer. The consolidate scan transfers all mail that had load scans from one trailer to another trailer. This usually occurs when two trailers going to the same destination are not full or one trailer breaks down and all the mail must be moved to another trailer. When consolidate scans are not performed correctly, the containers will be tied to the original trailer that was scanned, resulting in delayed dispatch containers.

When load scans are missed or consolidate scans are improperly completed, containers are counted as delayed dispatch in the MCV application. Since the data did not reflect actual mail conditions at the Denver P&DC, management was unable to accurately determine the actual amount of delayed dispatch containers and could not rely on the MCV data to make operational decisions.

Recommendation #1

We recommend the **Western Division Director, Processing Operations**, develop a plan based on Lean Six Sigma project results to further increase load scan scores to meet or surpass the scanning goal.

Recommendation #2

We recommend the **Western Division Director, Processing Operations**, develop and train employees on how to properly complete consolidate scans.

⁶ A method that relies on a collaborative team effort to improve performance by systematically removing waste and reducing variation.

⁷ This includes assign, close, load, and unload container scans.

Finding #2: Delayed Inventory Mail Reported in Mail Condition Visualization

From January 1, 2020, to March 31, 2021, the MCV application reported over 2.2 billion pieces of delayed inventory at the Denver P&DC. Specifically, the top six categories of delayed inventory mail represented 96 percent of all delayed inventory mail for the Denver P&DC (see Table 2).

Table 2. Top Delayed Mail Types at the Denver P&DC⁸

Denver P&DC Processing Operation	Delayed Inventory	Percentage to Total Delayed Inventory
Marketing Letters (second pass DPS)	696,339,427	31%
First-Class Letters (second pass DPS)	689,559,790	31%
First-Class Letters (first pass DPS)	407,839,478	18%
Marketing Letters (first pass DPS)	187,640,156	8%
First-Class Incoming Primary Letter	97,127,026	4%
First-Class Outgoing Primary Letter	75,860,925	3%
Subtotal	2,154,366,802	96%
Other	92,503,178	4%
Total	2,246,869,980	100%

Source: MCV.

Note: Differences are due to rounding.

⁸ This table represents the top six classes of mail for delayed inventory.

⁹ The first sorting operation for incoming mail.

Not all of this mail was actually delayed but was reported as delayed inventory in the MCV application. Specifically, Denver P&DC management stated they could not reconcile differences between the delayed inventory reported in the MCV application and their physical count of delayed mail at the facility. During our site visits from May 10–13, 2021, over 1.1 million pieces of delayed inventory were reported in the MCV application, while Denver P&DC management estimated almost 128,000 pieces as delayed during their physical count (see Table 3).

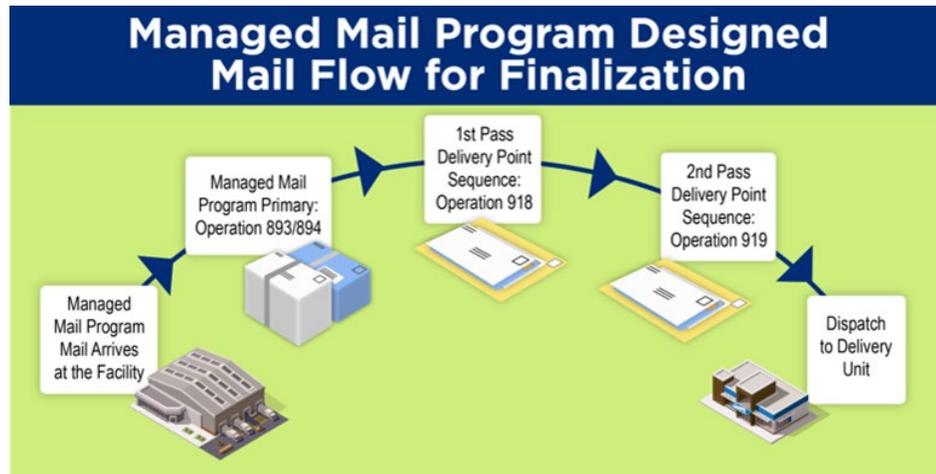
Table 3. Comparison MCV Delayed Inventory to Physical Count

Day of Week	MCV Delayed Inventory	Physical Count	Percent Variance
Monday, May 10, 2021	308,364	24,410	92.1%
Tuesday, May 11, 2021	229,439	37,831	83.5%
Wednesday, May 12, 2021	280,452	20,521	92.7%
Thursday, May 13, 2021	308,615	45,155	85.4%
Total	1,126,870	127,917	88.6%

Source: MCV and Denver P&DC delayed inventory counts.

The MCV application expects mail to be processed in accordance with the designed mail flow. At the Denver P&DC, management processes mail on an incoming primary operation⁹ (operation numbers 893 and 894). The next processing operations after that are first and second pass DPS (operation numbers 918 and 919, respectively) before mail is dispatched to delivery units (see Figure 3).

Figure 3. Mail Flows at the Denver P&DC



Source: Handbook F-95, Statistical Programs Management Guide, dated September 2020; and observance of mail flow during an OIG visit to the Denver P&DC, May 10-13, 2021.

However, when first and second pass DPS scans do not occur, the mail is recorded as delayed inventory in the MCV application. Furthermore, delayed inventory is also reported in the MCV application for up to five days, which inflates the daily delayed volumes for processing operations. For mail to be finalized and dispatched to the next facility and not be counted as delayed inventory, MCV expects the following:

- Operation numbers that are considered last expected processing operations¹⁰ (i.e., operation number 919 – second pass DPS).
- Content Identification Number (CIN)¹¹ codes¹² that remove a mailpiece from the delayed inventory condition in the MCV application.

¹⁰ The last expected mail processing operation before delivery of the mailpiece.

¹¹ 3-digit numeric codes that convey information about mail class, shape, sort level, and barcode status. Content Identification Numbers are used to direct mail to the next appropriate operation and/or facility.

¹² These codes can provide an exception to the requirement to see a last processing operation scan.

¹³ A delivery service for a fee at a post office to customers with large volumes of mail to customers needing multiple separations, or to customers who need a Post Office Box number address when no Post Office Boxes are available.

¹⁴ Intercepts mail identified as undeliverable-as-addressed during processing by matching a change-of-address record in the national database with the name and delivery address on the mailpiece.

At the Denver P&DC, some of the delayed inventory was caused by high density caller services¹³ mail and Postal Automated Redirection System (PARS)¹⁴ mail being run on operation number 893, which is not a last processing operation. Additionally, the CIN codes used (046 and 242, respectively) did not tell the MCV application to remove this mail from the delayed inventory condition.

For the PARS mail, the Denver P&DC sends it to the Colorado Springs, CO, P&DC to receive the correct mailing address. During our site observations from May 10–13, 2021, we found over 50,000 pieces of PARS mail that were run on operation number 893 but did not receive first or second pass DPS scans before being sent to the Colorado Springs P&DC (see Table 4).

Table 4. PARS Mail from May 10–13, 2021

	May 10	May 11	May 12	May 13	Total
Total PARS Mail	9,026	14,257	12,610	14,722	50,615

Source: WebEOR and OIG analysis.

Since Denver P&DC management could not reconcile the differences between the delayed inventory reported in the MCV application and their physical count of delayed mail at the facility, they did not rely on the MCV data to measure their performance and make operational decisions. Data integrity becomes an issue when management is unable to accurately determine the actual amount of delayed mail or rely on MCV data to make operational decisions.

Recommendation #3

We recommend the **Western Division Director, Processing Operations**, review operation numbers and Content Identification Number codes to determine if the right sort plans are being used to ensure delayed inventory data is accurate.

Recommendation #4

We recommend the **Western Division Director, Processing Operations**, develop a plan to assist plant management with understanding how delayed inventory is calculated and how to analyze the Mail Condition Visualization data to identify causes for delayed inventory.

The Postal Service uses a Run Plan Generator to forecast mail volume so it can develop a schedule of mail processing operations. During our site observations on May 11–12, 2021, planned mailpiece volume was significantly below actual mailpiece volume on some of the Delivery Bar Code Sorter (DBCS)¹⁵ machines. Specifically, we found planned letter volume was between 55.2 percent to 241.0 percent under forecasted on certain DBCS machines (see Table 5).

Finding #3: Planned Versus Actual Mailpiece Volume

Table 5. Comparison of Planned and Actual Mailpiece Volume

May 11, 2021				May 12, 2021			
Machine	Planned Mailpiece Volume	Actual Mailpiece Volume	Percentage Difference	Machine	Planned Mailpiece Volume	Actual Mailpiece Volume	Percentage Difference
DBCS 33	139,195	353,900	154.2%	DBCS 29	110,861	378,015	241.0%
DBCS 43	117,243	259,304	121.2%	DBCS 33	135,299	414,938	206.7%
DBCS 29	116,528	237,676	104.0%	DBCS 13	165,404	348,675	110.8%
DBCS 30	196,927	310,707	57.8%	DBCS 8	206,844	389,118	88.1%
DBCS 37	220,657	344,482	56.1%	DBCS 55	210,392	352,968	67.8%
DBCS 35	262,097	406,867	55.2%	DBCS 25	222,428	370,381	66.5%
				DBCS 30	187,010	310,271	65.9%
				DBCS 37	212,157	345,050	62.6%
				DBCS 22	206,136	334,675	62.4%
				DBCS 31	232,700	372,560	60.1%

Source: WebEOR.

Additionally, we found instances where planned mailpiece volume was over 50 percent above actual mailpiece volume on the High Throughput Package Sorter (HTPS)¹⁶ machines and two DBCS machines (see Table 6).

¹⁵ Machines that sort letters and use a computerized camera to read the addresses on the mail and sort it for delivery by the letter carrier.

¹⁶ Machines that sort packages and use a computerized camera to read the addresses on the mail and sort it to the delivery unit.

Table 6. Comparison of Planned and Actual Mailpiece Volume

Machine	Planned Mailpiece Volume	Actual Mailpiece Volume	Percentage Difference
DACS 2	363,789	122,750	66.3%
HTPS 2	69,672	31,754	54.4%
HTPS 1	80,718	36,958	54.2%
DACS 44	325,893	150,544	53.8%

Source: WebEOR.

Volume forecasts are generated based on the history of mail processed at a facility, and the latest recent trend in volume growth. In a prior OIG report,¹⁷ we recommended the Postal Service ensure RPG volume forecasts are accurate and attainable. The Postal Service agreed and developed an agreement to review RPG volume forecasts. Management is now required to create RPG plans with accurate volume forecasts.

The differences between planned and actual mailpiece volume at the Denver P&DC occurred because management was not using accurate numbers to forecast planned volumes correctly. When management inaccurately forecasts planned volumes, there is increased risk the mail will not be processed on time or employees will not be scheduled correctly, which could lead to mail being delayed and unnecessary increased costs.

Recommendation #5

We recommend the **Western Division Director, Processing Operations**, review the methodology for calculating planned volumes to ensure they are accurate.

Finding #4: Mail Separations

During our site visit from May 10–13, 2021, management did not have a system to separate managed mail based on its intended delivery date. The Postal Service is required to provide prompt, reliable, and efficient service.¹⁸ However, advanced, committed, and late arriving mail was being co-mingled in the same containers scheduled to be taken to the machines for processing. Advanced mail receives a processing operation scan which makes the predicted delivery date earlier than its expected delivery date. Committed mail is the latest time for mail to complete operations and make its planned dispatch for delivery, while late arriving mail is received after the Critical Entry Time.

Mail was being co-mingled because management had not established a process to separate the mail to ensure employees processed it in the correct order. The separation of managed mail enables the facility to process mail according to its intended delivery standard and ensure advanced mail is not processed before committed and late arriving mail. It also ensures advanced mail is not processed ahead of mail that is already delayed or at risk of being delayed.

Recommendation #6

We recommend the **Western Division Director, Processing Operations**, develop a process to separate advanced, committed, and late arriving mail to ensure it is processed according to its intended delivery standard.

Management's Comments

Management agreed with the findings and recommendations in this report. See [Appendix A](#) for management's comments in their entirety.

Regarding recommendation 1, management stated they will continue to identify opportunities for improving load scan scores through completion of the Lean Six Sigma project. The target implementation date is January 28, 2022.

¹⁷ *Use of the Run Plan Generator* (Report Number NO-AR-17-004, dated January 26, 2017).

¹⁸ Title 39 U.S. Code, Chapter 1, Section 101, Postal Policy.

Regarding recommendation 2, management stated they will continue to identify opportunities for consolidating MTEL's through completion of the Lean Six Sigma project. The target implementation date is January 28, 2022.

Regarding recommendation 3, management stated they have reviewed their primary and finalization sort plans for accuracy and In-Plant Support will review the sort plans daily to address any variances. Management also reviewed PARS and determined that the volume was not impacting MCV inventory as it is finalized at the Colorado Springs P&DC. The target implementation date is September 1, 2021.

Regarding recommendation 4, management stated they will provide refresher training to existing supervisors, managers, and newly promoted staff utilizing the MCV slide deck as a guide. The target implementation date is September 30, 2021.

Regarding recommendation 5, management stated that training on RPG compliance has been provided by an Operations Specialist for Division Support to the Plant Manager; Manager, In-Plant Support; and Senior Lead Manager Distribution Officer. Management further stated they will review the RPG weekly to verify volume accuracy for DPS. The target implementation date is September 3, 2021.

Regarding recommendation 6, management stated they have a process in place to separate non-committed volume and have identified a machine that will capture any late arriving volume. The target implementation date is October 1, 2021.

Evaluation of Management's Comments

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

All recommendations require OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. 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.

Appendix A: Management's Comments



July 21, 2021

Joseph Wolski
Director, Audit Operations

Subject: Mail Operations at the Denver, CO, Processing and Distribution Center
(Project Number 21-151-DRAFT)

Management agrees with the OIG findings.

Recommendation 1: We recommend the **Western Division Director, Processing Operations**, develop a plan based on Lean Six Sigma project results to further increase load scan scores to meet or surpass the scanning goal.

Management Response/Action Plan:

Management agrees with the recommendation and will continue to identify opportunities with load scan scores through completion of the LSS Project.

Target Implementation Date: January 28, 2022

Responsible Official: Denver P&DC Sr. Lead MDO

Recommendation # 2: We recommend the **Western Division Director, Processing Operations**, develop and train employees on how to properly complete consolidate scans.

Management Response/Action Plan:

Management agrees with the recommendation and will continue to identify opportunities with consolidating MTEL's through completion of the LSS Project.

Target Implementation Date: January 28, 2022

Responsible Official: Denver P&DC Sr. Lead MDO

Recommendation # 3: We recommend the **Western Division Director, Processing Operations**, review operation numbers and Content Identification Number codes to determine if the right sort plans are being used to ensure delayed inventory data is accurate.

Management Response/Action Plan:

Management agrees with the recommendation and have reviewed our primary and finalization sort plans for accuracy and In Plant Support will review daily to address any variances. We reviewed PARS and determined the volume was not impacting our MCV inventory as it is finalized in Colorado Springs P&DC.

Target Implementation Date: September 1, 2021

Responsible Official: Manager, In Plant Support

Recommendation # 4: We recommend the **Western Division Director, Processing Operations**, develop a plan to assist plant management with understanding how delayed inventory is calculated and how to analyze the Mail Condition Visualization data to identify causes for delayed inventory.

Management Response/Action Plan:

Management agrees with the recommendation and will provide refresher training to existing supervisors, managers, and newly promoted EAS and 204-B's utilizing the MCV slide deck as a guide.

Target Implementation Date: September 30, 2021

Responsible Official: Manager, In Plant Support and Sr. Lead MDO

Recommendation # 5: We recommend the **Western Division Director, Processing Operations**, review the methodology for calculating planned volumes to ensure they are accurate.

Management Response/Action Plan:

Management agrees with the recommendation and training has been provided by Operations Specialist for Division Support to the Plant Manager, Manager, In Plant Support, and Sr. Lead MDO on RPG compliance. This team will review the RPG the week prior on Tuesday's for volume accuracy for DPS.

Target Implementation Date: September 3, 2021

Responsible Official: Plant Manager, Manager, In Plant Support, and Sr. Lead MDO

Recommendation # 6: We recommend the **Western Division Director, Processing Operations**, develop a process to separate advanced, committed, and late arriving mail to ensure it is processed according to its intended delivery standard.

Management Response/Action Plan:

Management agrees with the recommendation and have a process in place to separate the non-committed volume. Operations has identified a LAMM machine that will capture any late arriving volume.

Target Implementation Date: October 1, 2021

Responsible Official: Manager, In Plant Support and Sr. Lead MDO



Felipe Flores Jr.
Sr Division Director Processing Operations
Western Division

cc: Corporate Audit and Response Management

Larry Munoz, Vice President, Western Regional Processing Operations
Lisa Jackson, Exec Mgr. Finance & Budget, Western Region

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(703) 248-2100

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