August 7, 2008

VICTOR BENAVIDES
MANAGER, FORT WORTH DISTRICT

SUBJECT:   Audit Report – Equipment Maintenance in the Fort Worth District
                    (Report Number DA-AR-08-009)

This report presents the results of our self-initiated audit of the effectiveness of equipment maintenance in the Fort Worth District (Project Number 08YG024DA000). Our objectives were to determine whether the Fort Worth District has met targets for preventive maintenance and machine reject rates associated with letter mail operations. Click here to go to Appendix A for additional information about this audit.

## Conclusion

The Fort Worth District has generally met targets for preventive maintenance of letter mail processing equipment; however, opportunities exist to increase preventive maintenance completion rates to meet national standards at three of the district's five mail processing sites.  In addition, excessive reject rates indicate opportunities for both maintenance and operational functions to increase equipment performance to meet operational targets.  We commend the Fort Worth District for already having a cost to process 1,000 letter mailpieces below the national average.  However, addressing these issues at mail processing sites could have lowered costs by an additional $4.7 million for the past year and would lower letter mail processing costs by $9.4 million over the next 2 years.  Click here to go to Appendix B for our detailed analysis of this topic.

We recommend the Manager, Fort Worth District:

1.  Establish an action plan to increase equipment maintenance completion rates at the Lubbock, Wichita Falls, and Abilene mail processing facilities.

2.  Establish a shared maintenance and operational action plan for minimizing letter mail machine rejects at processing plants in the Fort Worth District.

3.  Develop procedures to ensure site compliance with letter mail operational standards for quality.

## Management's Comments

Management agreed with the findings and recommendations. Management began to correct maintenance deficiencies due to staff shortages in January 2008 and will continue to formally train staff over the next 2 years. As it pertains to machine rejects, management established an improvement team to reduce manual handling by the end of fiscal year (FY) 2009. Lastly, district management tested a plan to improve letter mail standards for quality at its Forth Worth plant and will implement this plan at all remaining plants by August 23, 2008.

Management disagreed with the monetary impact of over $14.2 million. Management stated that given a recapture rate of 31 percent for rejected mailpieces and routings that place this mail back into the automated mail stream, the monetary impact is $1,204,926.

Click here to go to Appendix C for management's comments in their entirety.

## Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments responsive to the findings and recommendations and management's corrective actions should resolve the issues identified in the report. However, we do not agree with management's assertion that the monetary impact is overstated because mail is recaptured in the automated mail stream. While we do not contest that management reprocesses letter rejects in an automated mode, our subsequent analysis reflects letter mail flows[1] to manual operations range from 2.4 percent to 6.5 percent of total mailpieces handled, on average, for various mail sorts at Fort Worth District processing sites. Since this is more than the reject rates presented in the report, we believe that the automation reprocessing may not be as effective as management indicates. Additionally, we could not validate the recapture rate management conveyed, as the Mail History Tracking System only tracks secondary mail volume information for 14 days. As such, we believe the monetary impact presented in the report is reasonable.

The OIG considers all the recommendations significant, and therefore requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. This recommendation should not be closed in the follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed.

---

[1] Web End of Run (WebEOR) First Handled Pieces in Manual Operations – Letter Mail.

We appreciate the cooperation and courtesies provided by your staff.  If you have any questions or need additional information, please contact Miguel Castillo, Director, Engineering, or me at (703) 248-2100.

E-Signed by Darrell E. Benjamin, Jr
VERIFY authenticity with ApproveIt

Darrell E. Benjamin, Jr.
Deputy Assistant Inspector General
  for Support Operations

Attachments

cc:   Dennis Stasa
        Ellis Burgoyne
        David Stafford
        Daryl Johnson
        Katherine S. Banks

## APPENDIX A:  ADDITIONAL INFORMATION

## BACKGROUND

As part of the OIG initiative to conduct risk-based audits, we identified letter mail automation risks in the Fort Worth District based on historical maintenance and machine performance data.

Key equipment used to process letter mail includes the Delivery Barcode Sorter (DBCS) and DBCS Input Output Subsystem (DIOSS).  When mail is rejected or cannot be processed by machinery, it must be processed using manual operations, which cost more than automation and may not be as accurate and timely.

U.S. Postal Service policies set standards for maintaining and effectively operating equipment.  Management maintenance orders outline preventive maintenance procedures that districts must perform.  Operational standards and guides give instructions for increasing productivity, reducing missorted mail, and controlling costs.

Two systems provide important information to help management effectively and efficiently operate equipment and process the mail.

- The Web End of Run (WebEOR) system reproduces, archives, and summarizes information captured during a mail processing run and presents this information in report form.  WebEOR offers standard reports on operations, maintenance, and machine configuration data.

- The Activity Based Costing (ABC) system provides detailed cost information on mail processing.  The ABC system transforms operational data into cost information to identify trends, spikes, and other anomalies and to support improvement targets at the plant level.

## OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to determine whether the Fort Worth District has met targets for preventive maintenance and machine reject rates associated with letter mail operations. To accomplish our objectives, we performed site visits at the Fort Worth, Lubbock, and Wichita Falls mail processing facilities and interviewed plant personnel.  To assess the maintenance completion success, we analyzed the completion rates for each site within the Fort Worth District for DBCS and DIOSS operations.  To test the effectiveness of maintenance, we reviewed letter mail gross acceptance and reject rates in the Postal Service *DBCS Standardization Work Instruction Guide* for mail processing and maintenance.  To identify the causes of the issues we identified, we analyzed pieces at risk reports for each site in the Fort Worth District.  To calculate the monetary impact, we compared the Fort Worth District's mail processing costs to average mail processing costs at the national level, reviewed the percentage of mailpieces processed manually

at each site, and applied manual handling rates recorded in the ABC system to excessive machine rejects.

We conducted this performance audit from April through August 2008 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 objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We discussed our observations and conclusions with management officials on June 5, 2008, and included their comments where appropriate.

## PRIOR AUDIT COVERAGE

We did not identify any prior OIG audits or reviews related to the objectives of this audit.

## APPENDIX B:  DETAILED ANALYSIS

### Preventive Maintenance Completion Rates

As shown in Chart 1, the Fort Worth District's weighted average was generally at the expected 95 percent completion rate for the second quarter[2] in FY 2008.  However, three of five mail processing plants in the district did not complete daily preventive maintenance routines in accordance with Postal Service maintenance policies for key letter mail processing equipment.  Daily completion averages for DBCS ranged from 81.5 percent to 99.8 percent for the period, on average, by site.  Likewise, daily completion averages for DIOSS ranged from 75.3 percent to 99.9 percent for the period, on average, by site.  According to Postal Service maintenance policy, daily preventive maintenance rates should be at or above 95 percent.

### Chart 1. Daily Rates for Completion of Preventive Maintenance

| Mail Processing Facility | *Number of* DBCS Machines | DBCS Percentage | *Number of* DIOSS Machines | DIOSS Percentage |
|---|---|---|---|---|
| Ft. Worth | 35 | 99.8 | 7 | 99.9 |
| Lubbock | 6 | 81.5 | 2 | 75.3 |
| Wichita Falls | 3 | 89.1 | 2 | 93 |
| Abilene | 4 | 94.5 | 1 | 94.9 |
| Amarillo | 8 | 99.1 | 1 | 98.9 |
| *District Weighted Average* | *56* | *96.8* | *13* | *94.6* |

**Maintenance completion targets:**
**>95 percent = green, 90 to 94.9 percent = yellow, <90 percent = red**

### DBCS/DIOSS Rejects[3]

To assess the effectiveness of maintenance, we reviewed equipment reject rates for letter mail at processing plants in the Fort Worth District for DBCS and DIOSS platforms.  As shown in Chart 2, all plants had excessive numbers of letter mail rejects or did not meet the gross machine acceptance target for these platforms.

---

[2] January 5 through April 4, 2008.
[3] Rejects are mailpieces that are nonconforming for the following reasons: No Read, No Code, Out of Sequence, Out of Sortplan, Mechanical Reject, Unreadable ID Code, or PostNET Verifier Error.

Postal Service operational standards[4] state that DBCS/DIOSS rejects should be limited[5] to approximately 1 percent of total pieces fed into the machines.  Limiting rejects to 1 percent is achievable, considering that 60 percent of DBCS operations nationwide achieved at least a 99 percent gross acceptance rate between April 2007 and March 2008.  Postal Service operational standards also recommend certification of maintenance to confirm that the process is operating according to the proper procedures.  This includes consistently achieving process results, as well as ensuring that key personnel comply with applicable procedures, guidelines, and other essential operating behaviors.  Key personnel include supervisors, craft, and maintenance support personnel.  Nonconforming mailpieces or rejects are addressed in the certification process using a quality metric.

**Chart 2. Fort Worth District: Letter Mail Rejects**

| Mail Processing Site | Fed Pieces (000) | Rejects (000) | Percentage Rejected |
|---|---|---|---|
| Abilene Processing and Distribution Facility (P&DF) | 329,129 | 4,671 | 1.42 |
| Amarillo P&DF | 496,219 | 7.798 | 1.57 |
| Fort Worth Processing and Distribution Center | 3,039,588 | 56,239 | 1.85 |
| Lubbock P&DF | 441,540 | 8,422 | 1.91 |
| Wichita Falls Mail Processing Annex | 188,982 | 2,409 | 1.28 |

**Source: WebEOR 4/01/07 – 3/31/2008**

## Causes

We observed that poor maintenance completion rates at the Wichita Falls and Lubbock processing facilities were primarily due to maintenance staff shortages or inexperienced personnel.

Our visit to the Fort Worth processing facility and analysis of pieces-at-risk reports showed that while maintenance routines were completed at consistently high rates, higher-than-expected numbers of letter mail rejects resulted from maintenance and operational shortcomings.  In particular, greater attention could be given to mail being processed on DBCS and DIOSS platforms that do not have a PostNet barcode or for which an identification tag cannot be located.  In addition, greater attention to ensuring the availability of teams to operate and optimize DBCS and DIOSS performance would lessen "stacker full" conditions, which contribute to excessive rejects.

---

[4] *DBCS Standardization: Work Instruction Guide Mail Processing & Maintenance Version. 0.9*, May 2006.
[5] For the percentage of rejects, we used a 1 percent estimate (1 minus Gross Acceptance Rate [GAR] of approximately 99 percent).  The actual GAR Delivery Point Sequencing (DPS) target was 99.1 percent.  The GAR non-DPS target was 98.8 percent.  The actual acceptance rate for barcoded mailpieces was 99.6 percent DPS and 99.5 percent non-DPS.

Our analyses of letter mailpieces-at-risk reports[6] for the Abilene, Amarillo, Lubbock, and Wichita Falls processing sites indicated that operator challenges, primarily out of sort plans, caused excessive rejects on the DBCS/DIOSS platforms more than equipment maintenance.

## Opportunity to Further Lower Mail Processing Costs

Excessive machine rejects contributed to higher processing costs, since mail was generally manually processed after being rejected by equipment. As shown in Chart 3, the Fort Worth mail processing site has the greatest opportunity to lower mail processing costs. For the 1-year period ending March 31, 2008, the cost to process 1,000 mailpieces manually was approximately $151.07, as reported in the ABC system. For the same period, the automation processing cost was approximately $8.85 for 1,000 mailpieces. Recognizing the tolerance for rejects, the cost of excessive rejects[7] for the same annual period totaled $4,738,201 million for the mail processing sites in the Fort Worth District. Because the sites could have minimized rejects by following operational standards, we will report this amount as unrecoverable questioned costs in our *Semiannual Report to Congress*. Since these costs are also avoidable in the next 2 years, we will report another $9,476,402 million as funds put to better use in our *Semiannual Report to Congress*.

### Chart 3. Fort Worth District: Financial Impact of Machine Rejects

| Mail Processing Site | Number of DBCS/DIOSS Machines | DBCS/ DIOSS Excess Machine Rejects (000) | Manual Processing Cost per 1,000 Pieces[8] | Annual Cost of Excess DBCS/DIOSS Rejects[9] |
|---|---|---|---|---|
| Fort Worth | 42 | 25,843 | $151.07 | $3,904,102 |
| Lubbock | 8 | 4,007 | $72.15 | $289,105 |
| Wichita Falls | 5 | 945 | $142.77 | $134,918 |
| Abilene | 5 | 1,380 | $119.66 | $165,131 |
| Amarillo | 9 | 2,836 | $86.37 | $244,945 |
| District Average | | | $114.41 | |
| National Average | | | $130.00 | |
| Total Unrecoverable Questioned Costs | | | | $4,738,201 |
| Funds Put to Better Use (2 Years) | | | | $9,476,402 |

---

[6] Source: Mail Image Reporting System, January – March 2008.
[7] For the period April 1, 2007, through March 31, 2008, excess rejects means that a given site, rejects were more than 1 percent of pieces fed.
[8] We use a cost rate based on the site average per 1,000 mailpieces, as reported in the ABC system for manual letter mail processing.
[9] This takes into account the automation costs to process the mailpieces.

# APPENDIX C: MANAGEMENT'S COMMENTS

District Manager
Fort Worth District

**UNITED STATES
POSTAL SERVICE**

August 1, 2008

Lucine Willis
Director, Audit Operations
1735 North Lynn St.
Arlington, VA 22209-2020

SUBJECT: Project Number 08YG024DA000, Dated June 26, 2008

Ms. Willis,

Thank you for the opportunity to review and comment on the subject draft audit report.

The Fort Worth District agrees with the OIG findings that opportunities exist to increase preventive maintenance completion rates to meet National standards at three of the District's five mail processing sites. In addition, the Fort Worth District agrees with the OIG findings that opportunities exist to increase equipment performance to meet operational targets and reduce reject rates.

The Fort Worth District disagrees with the OIG calculations of $14,214,603 by addressing the two findings of maintenance completion rates and reducing reject handlings. The Fort Worth District requests consideration is given to recapture rates of rejected mail pieces and routings that place this mail back into automated mail streams. It is the position of the Fort Worth District that 31% of the volume is recaptured; when recalculated, this is $1,204,926. Thirty-one percent is calculated through analysis of 8,000 sort plans having processed volumes in the Mail History Tracking System (MHTS).

### Recommendation [1]:
Establish an action plan to increase equipment maintenance completion rates at the Lubbock, Wichita Falls, and Abilene mail processing facilities.

### Response
The Fort Worth District agrees with the OIG findings and has begun implementing an action plan to increase completion rates. Wichita Falls and Abilene have had new Plant Managers installed. Since David Farrar was installed in Abilene, there is a completion rate of 98.9 on DBCS machines and 98.7 on DIOSS machines. Since Daryl Johnson was installed in Wichita Falls, there is a completion rate of 88.7 on DBCS machines and 95.1 on DIOSS machines. Lubbock P&DF had impacts due to staffing shortages and began correcting this in January 2008 by hiring three new Electronic Technicians (ET's). Formal training has started and will be completed in approximately two years. Plant Manager David Stafford is monitoring compliance with National targets.

4600 MARK IV PKWY
FORT WORTH, TX 76161-9100
(817) 317-3301
FAX: (817) 317-3320

Project Number 08YG024DA000, Dated June 26, 2008
August 1, 2008
Page 2

### Recommendation [2]:
Establish a shared maintenance and operational action plan for minimizing letter mail machine rejects at processing plants in the Fort Worth District.

### Response
The Fort Worth District agrees with the OIG findings and has begun implementing a shared action plan to reduce machine rejects. While this has been a daily item for resolution, the OIG findings illustrate the need for a formal action plan. Lynn Kersten, Fort Worth District OSS, has been named as DPS Improvement Team Coordinator for the District. Her responsibilities are to reduce manual handling with regards to DPS processing, and the team will be at goal by the end of Fiscal Year 2009. Mel Abraham, Maintenance Manager, has been appointed to lead operations in reducing reject handlings outside of DPS processing. His responsibilities are to reduce manual handling with regards to sort plans outside of DPS processing, and the team will be at goal by the end of Fiscal Year 2009. There are daily and weekly meetings to discuss progress towards goals and refinements needed to achieve those goals.

### Recommendation [3]:
Develop procedures to ensure site compliance with letter mail operational standards for quality.

### Response
The Fort Worth District agrees with the OIG findings and has begun implementing an action plan to ensure site compliance with letter mail operational standards for quality. Over the past two years, Fort Worth P&DC has developed a daily report covering operator efficiencies in respect to correctly handling volumes that have been rejected. Those volumes are normally handled by placing them back into the correct automated mail stream. This methodology is tested daily and has proved beneficial to the reduction of mail leaving the automated mail stream in the Fort Worth P&DC. The Fort Worth District will roll this project out to the remaining Plants within the District with an effective date of August 23, 2008. Each Plant Manager will be responsible for testing mail processing efficiencies and reporting results to the District level. Mel Abraham, Maintenance Manager, will also review each processing facility's maintenance indicators on a daily basis with a consolidated report to be discussed by August 23, 2008.

We do not believe that this report contains any propriety or business information and may be disclosed pursuant to the Freedom of Information Act.

Sincerely,

Victor M. Benavides

Project Number 08YG024DA000, Dated June 26, 2008
August 1, 2008
Page 3


cc:    Ellis Burgoyne, Southwest Area Vice President
       Katherine S. Banks, Manager, Corporate Audit and Response Management
       Dennis Stasa, Senior Plant Manager, Fort Worth
       David Stafford, Plant Manager, Lubbock P&DF
       Daryl Johnson, Plant Manager, Wichita Falls MPA