



March 5, 2009

PRANAB M. SHAH
MANAGING DIRECTOR, GLOBAL BUSINESS AND VICE PRESIDENT

SUBJECT: Audit Report – Controls Over International Air Transportation Payments
(Report Number CRR-AR-09-003)

This report presents the results of our audit of controls over the U.S. Postal Service's International Air Payments (Project Number 08RG018CRR000). Our objective was to evaluate the controls over the Postal Service's air transportation payments for international mail. The Postal Accountability and Enhancement Act of 2006 (the Postal Act of 2006) requires the U.S. Postal Service Office of Inspector General (OIG) to audit the data collection systems and procedures the Postal Service uses in its pricing process. This self-initiated audit addresses both financial and operational risks. See [Appendix A](#) for additional information about this audit.

Conclusion

Insufficient system and management controls over the Surface Air Support System (SASS) resulted in payment errors to air carriers transporting international airmail. The system design did not include all the necessary business logic to correctly calculate payments for the transportation of international airmail. The system deficiencies place the Postal Service's goodwill/branding and assets at risk. The value of assets at risk for fiscal years (FYs) 2005 to 2008 totaled \$807,128,168 in civilian mail.¹ Contract expenditures made to identify and correct payment errors totaled \$3,951,771.

Civilian international airmail transportation expenses are a component of the International Cost and Revenue Analysis (ICRA) model. The introduction of incorrect data into the ICRA impacts the pricing of international airmail products. Management uses the ICRA to calculate pricing proposals, and the Postal Regulatory Commission issues an annual report to Congress based on its evaluation of the ICRA.

¹ The U.S. Department of Defense reimburses military air carrier transportation costs in full; therefore, we are not including this amount in our *Semiannual Report to Congress*. Military mail transportation costs for FYs 2005 to 2008 totaled \$1.5 billion.

Application Controls

The SASS incorrectly calculated and paid international airmail transportation costs to more than 100 air carriers since its implementation in August 2005. This occurred because the system requirements for SASS were not fully defined and tested before deployment. Incorrect implementation of calculation logic resulted in both over- and underpayments to international air carriers.

Although Postal Service management has identified three types of issues, they have not done sufficient analysis or testing to identify all errors existing in the system. Based on the Postal Service's preliminary estimates, net overpayments totaled \$10.1 million for April 2006 through July 2008. Additional calculations were completed on January 31, 2009, to determine payment errors prior to April 2006.

Further, the Postal Service incurred additional contract costs to identify and correct system logic errors. See [Appendix B](#) for our detailed analysis of this topic.

We recommend the Managing Director, Global Business and Vice President direct the Executive Director, Global Business Strategy and Technology to:

1. Identify all potential payment deficiencies in the Surface Air Support System and implement system changes as needed.
2. Update system documentation as needed.
3. Consult with Supply Management concerning the contract payments to the initial contractor and pursue recoveries, as appropriate.

Management Controls

The processes for paying international air transportation costs did not include control mechanisms to detect and prevent payment errors. For example, no exception reports were available to identify payment errors, and management did not perform any reconciliations to validate the accuracy of payments. [REDACTED]

[REDACTED]. See [Appendix B](#) for our detailed analysis of this topic.

We recommend the Managing Director, Global Business and Vice President direct the Executive Director, International Operations to:

4. Develop exception reports capable of identifying errors in payments to air carriers.
5. Implement a reconciliation process to rectify payment errors to international air carriers in a timely manner.

Management's Comments

Management concurred with our findings and recommendations. Management's comments, in their entirety, are included in [Appendix D](#).

Evaluation of Management's Comments

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

The OIG considers recommendations 1, 3, 4, and 5 significant, and therefore requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. These 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.

Although management did not comment on the monetary and non-monetary impacts of our findings, we will report \$3,951,771 of monetary impact of recoverable questioned costs and \$807,128,168 of non-monetary impacts of assets at risk and goodwill/branding in our *Semiannual Report to Congress*.

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

Tammy L. Whitcomb
Deputy Assistant Inspector General
for Revenue and Systems

Attachments

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APPENDIX A: ADDITIONAL INFORMATION

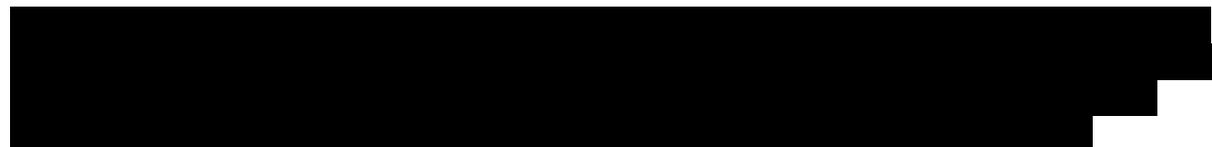
BACKGROUND

The Postal Service originally developed the SASS to manage domestic mail transportation needs. The Postal Service subsequently modified the system and began using it in August 2005 to process payments to air carriers for transporting civilian and military mail to foreign destinations. During FYs 2006 through 2008, about 120 airlines transported international mail for the Postal Service. Payments for outbound international mail transport during FY 2008 totaled \$827 million, including \$515 million for military mail transport reimbursable by the U.S. Department of Defense.

Five international service centers (ISCs) process outbound mail to 210 destinations.² The ISCs consolidate outbound letters, parcels, and Express Mail® mailpieces into receptacles. Each receptacle is weighed and scanned into the Global Business System (GBS) Dispatch application, which manages mail data on outbound international mail. Dispatches containing one or more receptacles are grouped into consignments, which are packaged in containers and delivered to air carriers for transport. A container may contain multiple consignments, and a consignment may contain only one receptacle.

To process payments, SASS combines handling unit scan data from GBS Dispatch, vendor arrival and departure information, and rate management information³ from the Logistics Contract Management System. The handling unit data becomes the assignment data for the trip, which automatically initiates the payment process in the system. Different contract rates apply to different types of air transportation contracts. These contract rates are established by the U.S. Department of Transportation (DOT), the Universal Postal Union (UPU), International Air Transport (IAT) agreements, and International Surface Airlift (ISAL) agreements.

Calculation methods for air transportation costs also vary depending on the contract type. For example, transportation contracts for IAT containers are based on container weights, which apply to containers of at least 750 pounds of mail per flight, with no more than 5 percent of the mail consisting of letter class by weight. ISAL contracts provide a reduced-rate bulk mailing system for publications, advertising, catalogs, and directories.



Employees at the International Accounting Branch (IAB) in St. Louis, MO, processed and manually reconciled international air transportation payments before implementation of the SASS.

² The ISCs are located in New York, NY; Miami, FL; Chicago, IL; and San Francisco and Los Angeles, CA.

³ Rate management information includes such information as authorized carriers, DOT-approved rates, contract rates, and distance.

The SASS was initially sponsored by the Networks Operations group and developed by a contractor. The contractor, with oversight from management, developed the system requirements and designed and developed the system. The contractor also provided maintenance support. In August 2005, the Executive Director of Global Business Strategy and Technology assumed project sponsorship for the SASS. Currently, the Manager, Network Operations and Business Systems Portfolio provides software development support. During February 2007, management reassigned system maintenance support responsibility to another contractor to assist in identifying and correcting calculation errors in the SASS payment logic. Expenditures made to the replacement vendor to correct the payment logic errors and implement system modifications totaled \$3,951,177.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to evaluate controls over the Postal Service's air transportation payments for international mail. To accomplish our objective, we reviewed available policies and procedures. We reviewed systems documentation for the SASS, including the documentation for change requests. We analyzed international air carrier payments for FYs 2005, 2006, 2007, and portions of 2008. We interviewed key officials in Global Business, conducted site visits to selected ISCs, observed operations, and interviewed employees at the St. Louis IAB.

We conducted this performance audit from June 2008 through March 2009 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 officials on January 8, 2009, and included their comments where appropriate. We used manual and automated processes to assess the reliability of data used for our analysis, and we concluded the data were sufficiently reliable to support the audit objective.

PRIOR AUDIT COVERAGE

We have conducted no prior audits of this issue.

APPENDIX B: DETAILED ANALYSIS

Application Controls

The SASS incorrectly calculated amounts payable to air carriers for transporting international mail. This occurred because the calculation logic for international air carrier payment was not correctly identified and implemented during system conversion.

[REDACTED]

The Postal Service estimated that net overpayments to 13 air carriers were approximately \$10.1 million from April 2006 through July 2008.⁴ The system deficiencies place the Postal Service's goodwill/branding and assets at risk. The value of assets at risk for FYs 2005 to 2008 includes \$807,128,168 in civilian mail transportation costs.

The Postal Service deployed the SASS for international air payments in August 2005. The initial systems requirements specifications, design, and testing were inadequate, resulting in processing and payment calculation errors. The Postal Service's evaluation showed the following.

- For payments based on IAT, ISAL, UPU, and DOT rates, the system calculated payments based on transportation segments, regardless of the contract type. In cases where multiple stops occurred between the origin and the final destination, the system calculated transportation costs for each segment using the origin and destination of that segment as calculation factors. The system then made payment to the applicable air carrier for the individual transportation segments. The combined costs for the individual segments would be higher than the contracted cost for the origin-final destination pair. As an example, for a transportation contract between San Francisco, CA, and Okinawa, Japan, the payment calculation would be for two segments: San Francisco to the intermediate city of Narita, Japan, and from Narita to Okinawa. The combined cost for the two segments is higher than the contracted transportation cost between San Francisco and Okinawa. The system did not have built-in controls to ensure that the payment was actually for transporting mail from the origin to the final destination in accordance with the contract terms.
- When a container had more than one consignment and one of the consignments had only one receptacle, the system calculated a payment record for each consignment at the container rate. When calculating the payment, the system did not take into account the consignment weight or the container weight. In these cases, the calculated amount should be the container rate multiplied by the ratio of the consignment weight to the container rate.

⁴ The Postal Service overpaid \$12.7 million and underpaid \$2.6 million to air carriers, resulting in net overpayments of \$10.1 million.

- For reimbursement from the military for transportation of military mail, the system did not correctly allocate the respective transportation costs to different military branches. When one container had receptacles belonging to multiple branches of the military, the system allocated the entire cost of the consignment to the branch listed as the last receptacle in the consignment.

When the Postal Service modified the original system to accommodate international mail transportation needs, it did not fully incorporate all the business logic for correct calculation of international mail transportation expenses under different contract types. Although the Postal Service used contractors to complete the system changes, inadequate oversight by management resulted in deficiencies in requirements identification and testing. This resulted in a system that produced calculation errors of various types. Adhering to the Postal Service's systems development guidelines and best practices would help ensure that critical business systems such as SASS process data accurately.

Best practices require that policies, procedures, practices, and organizational structures be designed to provide reasonable assurance that the Postal Service will achieve business objectives and prevent undesired events or detect and correct them.

[REDACTED]

The Postal Service appointed a new contractor to identify and rectify deficiencies in the SASS. As of October 2008, contract expenditures made to identify and correct payment errors totaled \$3.95 million. If the system modification had incorporated the international transportation requirements and the subsequent testing had been adequate, the Postal Service could have avoided most of these additional expenses.

Although Postal Service management has identified the three types of issues listed above, [REDACTED]. During our review, the Postal Service began consultations with an independent third party to audit the source code of the application to identify additional errors.

Management Controls

The procedures used to ensure the accuracy of payments need strengthening. [REDACTED]. The absence of mitigating controls resulted in payment errors from August 2005 through September 2008. Implementing controls would enable the Postal Service to safeguard its assets and reduce the need for contractor resources for remedial actions.

Prior to SASS deployment, IAB employees received detailed information for processing and reconciling international air carrier payments. The processing performed by IAB employees allowed the detection and correction of payment errors. When the GBS assumed ownership of the SASS, they also assumed responsibility for ensuring the accuracy of air carrier payments. However, the design of the SASS and the subsequent change to accommodate international air carrier payments did not incorporate control procedures to detect or identify payment errors in a timely manner. [REDACTED]

Incorporating exception reports and performing regular reconciliations will help management ensure air carrier payments are accurate.

According to best practices, management should implement automated edits and checks to ensure the accuracy and completeness of transaction processing. Additionally, operating reports should be integrated and reconciled with financial and budgetary reporting system data and used to manage operations on an ongoing basis, and management should be aware of inaccuracies or exceptions that could indicate internal control problems. Management should also compare production or other operating information obtained during daily activities to system-generated information and follow up on any inaccuracies or other problems.

Management Actions

Management initiated change requests to address the three scenarios identified as causing payment errors. On September 17 and October 3, 2008, management deployed changes that corrected the three types of payment errors.

Based on the Postal Service's preliminary estimates, the net overpayments were \$10.1 million for 13 air carriers for the period April 2006 through July 2008. Management developed an independent engine for recalculating all prior payment data using historical air carrier data. After management completed this engine, they began performing comprehensive evaluations of air carrier payments by fiscal year. This evaluation determined that the net payment error for FY 2008 was \$5 million.

Management advised us that on January 31, 2009, they completed a recalculation of all payment data dating back to August 2005 by fiscal year. They then started communicating with air carriers to settle payment differences with them and adjust accounting records.

APPENDIX C: CALCULATION OF RECOVERABLE QUESTIONED COSTS

The Postal Service incurred \$3,951,771 in additional contracting costs for identifying and correcting payment calculation issues related to international air payments in the SASS.

| Number of Contract Modifications | Description | Amount |
|---|---|---------------|
| 4 | Contract cost of correcting SASS issues related to international air transportation payment errors. | \$3,951,771 |

APPENDIX D: MANAGEMENT'S COMMENTS

PRANAB SHAH
MANAGING DIRECTOR, GLOBAL BUSINESS
AND VICE PRESIDENT



March 3, 2009

MS. WILLIS

SUBJECT: Draft Audit Report – Controls Over International Air Transportation Payments
(Report Number CRR-AR-09-DRAFT) – Amended Response

On January 30, 2009, the OIG issued the subject draft report. The report contains 5 recommendations. The OIG considers recommendations 1, 3, 4, and 5 as significant and requires the OIG's concurrence for closure.

Recommendation 1: We recommend the Managing Director, Global Business and Vice President direct the Executive Director, Global Business Strategy and Technology to:

1. Identify all potential payment deficiencies in the Surface Air Support System and implement system changes as needed.

Response: Concur

We agree with the OIG's recommendation to identify payment deficiencies in the SASS system and implement changes as needed. We were in the process of identifying payment deficiencies prior to the start of the audit and will continue to do so until all payment issues are resolved. In addition, all future deficiencies will be documented and addressed. As explained at our exit conference, tasks numbers 21 and 22 in the existing SASS contract address this issue. Recalculation of air carrier payment data as previously discussed with the OIG was completed by our targeted date of January 31, 2009 and we are currently in the process of communicating this data with the air carriers. Initial correspondence to the air carriers outlining the payment data was completed on February 17, 2009.

Recommendation 2: Update system documentation as needed.

Response: Concur

We agree with this recommendation. The technology service provider is working with our IT Portfolio Manager and International Network Operations on an ongoing basis to document system requirements. Customer Acceptance Test documents and current release notes are on file with our International Network Operations Group.

Recommendation 3: Consult with Supply Management concerning the contract payments to the initial contractor and pursue recoveries, as appropriate.

Response: Concur

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We agree with the recommendation to consult with Supply Management concerning any possible recoveries of payments for the initial SASS contract. Initial meetings were held with Supply Management on February 26 and March 3, 2009. They have agreed to work with us to help us determine what warranties if any apply, e.g., has the statute of limitations passed on "latent defects", based on accepted technical proposals can USPS provide expert witness as to the exact cause of defect, etc. We will continue to work with Supply Management and our IT Portfolio Manager to work through these issues to determine if legal recourse is feasible.

Recommendation 4: We recommend the Managing Director, Global Business and Vice President direct the Executive Director, International Operations to:

Develop exception reports capable of identifying errors in payment to air carriers.

Response: Concur

Global Business has been attending monthly forecast meetings with Corporate Finance wherein we prepare monthly forecasts for future retroactive review of performance against the forecast. We also produce and review reports twice a month that show our actual monthly spend against SPLY. This process has been in place since July FY08. We have been participating in corporate forecasting for the past two years. In addition, Global Business is currently planning on using pay data on a monthly basis via a separate reconciliation engine to compare air carrier payments and identify payment errors. The system has been designed and we will begin testing in the next two weeks. We are targeting the middle of March for deployment.

Recommendation 5: Implement a reconciliation process to rectify payment errors to international air carriers in a timely manner.

Response: Concur

Recalculation of air carrier payment data as previously discussed with the OIG was completed by our targeted date of January 31, 2009. We completed initial correspondence of this data to the air carriers on February 17, 2009. We expect continued communication with the air carriers until all payment discrepancies are resolved. We will continue to work with the OIG to provide monthly updates as these issues are resolved.

A handwritten signature in cursive script that reads "Pranab Shah".

Pranab Shah

- cc: Susan Brownell
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- Michael J. Nappi
- Harold E. Stark
- Ronald L. Middlebrooks
- Katherine S. Banks