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SUBJECT: Management Advisory – Project Management Challenges in Engineering Programs (Report Number DA-MA-08-001)

This report summarizes audit reports the U.S. Postal Service Office of Inspector General (OIG) issued to the Vice President, Engineering, from August 2004 through August 2007 (Project Number 07YG062DA000) and suggests an action to address recurring project management challenges in Engineering programs.

Background

The OIG has reviewed various Engineering programs in the past 3 years, and identified many project management weaknesses. For example, we have reviewed the deployment, testing and acceptance, and administration of contracted equipment for the Automated Package Processing Systems (APPS), the Intelligent Mail Data Acquisition System (IMDAS), and the Postal Automated Redirection System (PARS). The U.S. Postal Service realized mixed results compared to the expected benefits on these projects because of various project management challenges.

In a review of the technology acquisition process, we assessed organizational functions and processes designed to ensure the Postal Service properly supports, documents, approves, and controls acquisitions. Subsequently, the OIG worked with Engineering under a value proposition to develop, standardize, and document Engineering's internal procedures. This effort resulted in a draft *Technology Acquisition Management (TAM) Process Guide*.¹ This guide established project management processes, procedures, roles, and responsibilities governing the initiation, definition, design, development, deployment, operation, maintenance, management, and closeout of major Engineering equipment programs. As of September 2007, the Postal Service has not implemented the *TAM Process Guide*.

¹ *Draft Technology Acquisition Management Guide*, September 2006; updated August 2007.

Objective, Scope, and Methodology

The objective of this review was to identify project management challenges in Engineering programs and assess whether the drafted TAM process guide minimizes them. To accomplish our objective we summarized the findings of OIG Engineering audit reports issued from August 2004 through August 2007. We also reviewed policies and processes that could improve, change, or affect the issues we identified. Our review summarizes the findings in the reports listed in the appendix.

We conducted this review from July through October 2007 in accordance with the President's Council for Integrity and Efficiency, *Quality Standards for Inspections*.

Prior Audit Coverage

We did not identify any prior audits or reviews related to the specific objectives of this review. However, as previously stated, this review summarizes prior Engineering audits and our conclusions based on those audits.

Results

We identified three recurring challenges that increase risk to performance, schedule, and/or cost of Engineering programs. These challenges include delays in deployment, conditional acceptance of systems not fully meeting requirements, and unclear financial management responsibilities. Our review of audits conducted since August 2004 revealed:

- Five programs² experienced delays in deployment primarily due to the vendor not meeting contract performance requirements. Engineering has taken steps to reduce delays in deployment. For example, the primary goal of developing life cycle management in the draft *TAM Process Guide* is to influence the outcome of the acquisition process in delivering the right capabilities on schedule and at the lowest cost.
- The Postal Service deployed systems related to four programs³ even though they did not fully meet requirements. We believe Engineering can do more to clearly define the acceptance process. As of August 2007, the draft *TAM Process Guide* was still limited in addressing conditional acceptance⁴ criteria though we previously recommended detailed

² Flat Remote Encoding System, APPS, PARS, Flat Recognition Improvement Program (FRIP), and IMDAS.

³ Flats Identification Code Sort, APPS, PARS, and Delivery Input Output Sub-System.

⁴ Conditional acceptance is a practice used when the vendor delivers systems with minor performance issues.

guidelines.⁵ In particular, the draft *TAM Process Guide* does not specifically define the criteria for accepting systems that do not meet minor performance parameters.

- For two programs,⁶ we noted questionable Postal Service actions benefiting the vendor as a result of not following purchasing guidelines and contract administration procedures. Engineering can more clearly define and/or cross-reference the contract officer representative roles and responsibilities to Postal Service purchasing guidelines, particularly, certifying invoices for payment. The September 2006 draft *TAM Process Guide* provided detailed steps for certifying invoices by verifying the receipt of services and goods. The August 2007 draft removed verification steps in certifying invoices.

We also recommended improvements for managing contracted programs in our prior reports of audit. We believe consistent application of life cycle project management guidelines, such as those contained in the draft *TAM Process Guide*, may help alleviate some of the above challenges. Specifically, the draft *TAM Process Guide* addresses the production and deployment phase to include first article test, acceptance, deployment, and financial management procedures. In an era of greater accountability required by the new Postal Law,⁷ we believe expediting implementation of the draft *TAM Process Guide* is critical in meeting these demands.

Suggestion

We suggest the Manager, Technology Acquisition Management, set a timeline to update, issue in final, and implement the *TAM Process Guide*.

On September 25, 2007, we discussed a draft of this management advisory report. We have considered management's feedback that includes emphasizing the finalization and issuance of the *TAM Process Guide* by March 2008. Therefore, no response is necessary.

⁵ *Technology Acquisition Management Process Guide – Phase 3 and 4 Production, Deployment, and Maintenance* (Report Number DA-WP-06-002, dated September 22, 2006).

⁶ APPS, FRIP.

⁷ The Postal Accountability and Enhancement Act requires the Postal Service to comply with Section 404 of the Sarbanes Oxley Act (SOX), Management Assessment of Internal Control, by 2010. TAM sets a foundation for internal controls over developmental activities in Engineering, as required by SOX.

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

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

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APPENDIX

ENGINEERING PROGRAM AUDIT REPORTS AUGUST 2004 - AUGUST 2007

1. *Management of the Flats Recognition Improvement Program (FRIP)* (Report Number DA-AR-07-002(R), dated February 22, 2007) identified over \$21.3 million in questioned costs associated with upgrading flats 1000 equipment. Management disagreed with the questioned costs but agreed with recommendations to reevaluate the need for further FRIP software enhancements and to evaluate FRIP Phase 2 and modify the contract accordingly.
2. *Automated Package Processing System (APPS) Status and Administration* (Report Number DA-AR-07-001, dated January 26, 2007) reported that there were unexpected small package bundle sorter operation and maintenance costs and that improvements were needed for certain contracting activities to better support program requirements. Management agreed with recommendations to remove and reassess the impact of operating the Small Parcel Bundle Sorter (SPBS) machines and ensure future contracts adequately detail maintenance specifications. In addition, management agreed to make specific contract administration improvements.
3. *Biohazard Detection System (BDS) Consumables* (Report Number DA-AR-06-006, dated September 30, 2006) indicated the Postal Service needed synchronization between BDS and the Advanced Facer Canceler System to minimize expenses. Management agreed with the recommendations to seek a technological solution and to re-communicate established operating procedures but disagreed with the monetary impact presented.
4. *Automated Package Processing System Deployment* (Report Number DA-AR-06-004, dated March 21, 2006) identified significant performance challenges at APPS deployment sites and questioned test plans. Management disagreed with our findings, but agreed with the recommendation to test performance in accordance with the statement of work before acceptance.
5. *Flat Remote Encoding System (FRES) for Automated Flats Sorting Machine 100* (Report Number DA-AR-06-003, dated February 10, 2006) identified issues with the equitable adjustment (consideration) process for program delays resulting from first article test failures. Management agreed with the recommendations to require the contracting officer to carry out contract administration duties for determining whether the proposal for consideration is fair and reasonable and to assess opportunities to improve the process for evaluating future considerations.

6. *Flat Recognition Improvement Program* (Report Number DA-AR-06-002, dated January 25, 2006) reported that incentive payment procedures overlooked and deviated from contract terms and conditions. Management agreed with our recommendations to immediately reject contractor invoices and not hold them in anticipation of performance, enforce contract terms and conditions for contractor billing and payment, and communicate lessons learned to program managers.
7. *Intelligent Mail Data Acquisition System (IMDAS)* (Report Number DA-AR-06-001, dated December 22, 2005) identified the risk of higher maintenance costs due to deployment delays. Management agreed with the recommendation to ensure the recovery plan minimizes delays in deployment and to negotiate consideration if needed.
8. *Flats Identification Code Sort (FICS) for Automated Flats Sorting Machine 100s* (Report Number DA-AR-05-001, dated September 30, 2005) concluded that performance and DAR expectations were achieved with daily, rather than the contracted weekly, preventive maintenance. Management agreed with our recommendation to require compliance with contract requirements or seek consideration.
9. *Advanced Facer Canceler System (AFCS) Improvements* (Report Number DA-AR-04-004, dated September 30, 2004) reported that system upgrades might not achieve program performance goals or protect revenue. Management agreed to delay deployment of the upgrades until the vendor meets contract requirements.
10. *Postal Automated Redirection System (PARS) First Article Testing* (Report Number DA-AR-04-002, dated September 15, 2004) identified performance issues related to the Change of Address Form Processing System. No recommendations were provided due to the Postal Service's proactive approach to resolving the issues identified during the course of the audit.
11. *Automated Package Processing System First Article Test* (Report Number DA-AR-04-001, dated August 20, 2004) identified problems with throughput performance during the testing phase and issues related to facility modification costs. Management agreed with our findings and recommendations to capture relevant costs and provide detailed specifications to the sites affected.
12. *Optical Reader Enhancements, Delivery Input Output Sub-System (DIOSS)* (Report Number DA-AR-07-004, dated August 27, 2007) identified that performance and reliability challenges were limiting the reduction in manual letter and automated letter workhour savings, and that investment performance metrics were not tracked and monitored. Management agreed

with the recommendations to develop a formal plan to identify and address reliability and performance issues prior to warranty expiration and to establish roles and responsibilities for tracking program performance on a continuous basis.

13. *Technology Acquisition Management (TAM)* (Report Number DA-AR-04-003, dated September 24, 2004) reported that TAM did not have formal policies and procedures to ensure that the Postal Service properly supports, documents, approves, and controls acquisitions. Management agreed with recommendations to develop written policies and procedures to manage acquisitions.