

March 15, 1999

WILLIAM J. DOWLING
VICE PRESIDENT, ENGINEERING

Subject: Tray Management System Deliverables
(Report Number DA-MA-99-001)

During an ongoing audit of the Tray Management System (Project Number 99PA007DA000), USPS officials expressed concern that a contractor had not satisfied several contractual requirements. These requirements included the re-supply requirements for spare parts and the satisfactory completion of both a parts provisioning document and a life cycle support plan. This Management Advisory Report details the results of our review of the requirements in question.

To assess these concerns, we interviewed USPS and Tray Management System contractor officials and reviewed USPS purchase orders and receipt dates. The contractor currently operates two Tray Management System sites at the Charlotte, North Carolina, and Seattle, Washington, Processing and Distribution Centers.

The Tray Management System automates the movement and staging of mail between most mail sorting operations in a processing plant. System components include conveying equipment, staging devices and interfaces to operations and controls for moving trays of mail within the Processing and Distribution Centers.

Observations

The Tray Management System contractor has not satisfied several contractual requirements. Specifically:

- The delivery of both emergency and non-emergency spare parts from August 1, 1998 through December 23, 1998 was delinquent; and
- USPS did not receive an acceptable parts provisioning document nor life cycle support plan.

Spare Parts

USPS data disclosed that the contractor did not meet the re-supply requirements for emergency and non-emergency spare parts from August 1, 1998 through December 23, 1998. The Charlotte and Seattle statements of work require the contractor to fill emergency part orders within 24 hours.¹ These statements of work do not address the time requirements for non-emergency part orders. However, based on the Phase III statement of work and discussions with USPS and contractor officials, we believe a reasonable re-supply time on non-emergency parts is three days.²

During the period August 1, 1998 through December 23, 1998, the Charlotte Processing and Distribution Center placed 122 emergency and 314 non-emergency line item part orders. During the same period, the Seattle Processing and Distribution Center placed 72 emergency and 799 non-emergency line item part orders. According to USPS records:

- Over 70 percent of the Charlotte emergency part orders were delinquent. Over 65 percent of these orders were delinquent by more than 4 days.
- Over 50 percent of the Charlotte non-emergency part orders were delinquent. Over 50 percent of these orders were delinquent by 10 days or more.
- Over 80 percent of the Seattle emergency part orders were delinquent. Over 60 percent of these orders were delinquent by more than 4 days.
- Over 65 percent of the Seattle non-emergency part orders were delinquent. Over 40 percent of these orders were delinquent by 10 days or more.

In addition, 15 Charlotte part orders and seven Seattle part orders placed prior to November 1, 1998 remained unfilled as of December 23, 1998.

The contractor believed the delay in supplying spare parts was due to a combination of issues, including: (1) the two Processing and Distribution Centers ordering a greater volume of parts than was

¹ The Charlotte, North Carolina, Processing and Distribution Center Tray Management System is one of three prototype systems funded under the Phase II Decision Analysis Report. The Seattle, Washington, Processing and Distribution Center Tray Management System is covered under its own Statement of Work.

² Phase III of the project is to construct Tray Management Systems in an additional 23 Processing and Distribution Centers.

originally planned, and (2) requiring parts the contractor did not believe would ever require replacement. The contractor contended that some part failure was due to inadequate preventive maintenance by USPS.

USPS officials stated that delinquent spare parts delivery had not resulted in significant system downtime. USPS management also stated delays in receiving replacement parts had disrupted its operations. For example, officials indicated that one USPS site “cannibalized” underutilized storage towers as a source for parts when contractor orders were delayed. Although officials were unable to quantify the hours involved in this process, we believe this process was an unnecessary increase in Tray Management System maintenance. Also, in some cases the sites had to order spare parts from local vendors.

Both USPS and contractor officials are aware of the replacement parts situation, but no agreement has been reached on how to resolve the problem.

Other Deliverables

The statements of work also required the contractor to provide a parts provisioning document and a life cycle support plan. These documents were due at the acceptance of each Tray Management System.³ To date, neither document has been delivered.

The parts provisioning document is a report of items in mail processing equipment down to subassemblies and individual parts. Parts are identified in the parts provisioning document through the use of the original equipment manufacturer number. This allows USPS to procure parts by manufacturer and specific part number. We found that due to a lack of standardized documentation, at times the Charlotte and Seattle centers had to fax photocopies or detailed descriptions of the needed part to the contractor.

Without the parts provisioning document, the contractor and USPS have not been able to hold a parts provisioning conference. This conference is used to develop the range and depth of spare parts for the Tray Management System sites.

At the January 1999 technical review meeting, the contractor indicated they would provide a parts provisioning document and a life cycle support plan to the USPS by the end of February 1999. USPS officials stated the completion of these deliverables was

³ The Charlotte Tray Management System was accepted in July, 1998. The Seattle Tray Management System was accepted in April, 1998.

critical to ensure that sites will not be left without spare parts support.

The contractor has been awarded four additional Tray Management System sites. We are concerned that additional sites have been awarded when there are unresolved problems with the current operating sites. We are also concerned that as the additional Tray Management System sites become operational, the demand for parts and other deliverables will increase.

Suggestions

The Vice President, Engineering, should:

- 1) Direct Tray Management System Program personnel, working with the contractor, to review the circumstances surrounding the part failures and delays in re-supply and take necessary corrective action.
- 2) Instruct USPS contracting officials to enforce the satisfactory re-supply of spare parts and the completion of a parts provisioning document and a life cycle support plan.

Management Comments

The full text of management comments is in Appendix A. Management agreed the contractor's performance was not up to the standards set forth in the statements of work. The contractor also admitted to this deficiency, and has pledged to come into compliance.

Management is proposing the following actions to address the delinquency of deliverables:

- Require the contractor to report parts replenishment performance at all future technical review meetings.
- Move the spare parts replenishment function in-house, under the responsibility of the Topeka Material Distribution Center.
- Require the contractor to update the USPS monthly on the completion of the parts provisioning document and the life cycle support plan.
- Continue to monitor the contractor's performance and enforce satisfactory compliance as needed.

**Evaluation of
Management
Comments**

We believe management's comments are responsive to the issues raised in the report. The proposed corrective actions should correct the delinquency of the Phase II deliverables. We wish to emphasize that we believe continued monitoring of contractor performance is imperative to ensure that all current and future deliverables are timely.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions please contact Tracy A. LaPoint, Director, Developmental at (703) 248-2167 or myself at (703) 248-2300.

//Signed//

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Assistant Inspector General
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cc: Alan Kiel
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APPENDIX A



March 3, 1999

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SUBJECT: Tray Management System Deliverables

In response to your letter of February 16, I would like to thank you for your suggestions, and also provide you with the information you requested regarding Siemens' TMS deliverables. Your Office has been working closely with the TMS Program Office, and has been attending the monthly technical review meetings (TRMs) for all three vendors. We do appreciate the additional perspective and attention directed at improving the performance of our TMS suppliers, and we'll continue to work towards gaining full compliance from our vendors on all requirements and deliverables.

Spare Parts

As the numbers in your letter suggest, parts replenishment performance by Siemens has not been up to the standards set forth in the statements of work. Siemens has admitted to this deficiency, and has pledged to come into compliance. Siemens has also provided some reasoning behind their difficulty in keeping up with the demands for parts in Charlotte and Seattle as referenced in your original letter, namely (1) a greater volume of parts than originally planned for and (2) parts being ordered that were never envisioned to need replacement.

The actions taken/to be taken to address the situation are as follows:

1. Discussed Siemens deliverables issues with OIG representatives in Merrifield. **December 30, 1998**
2. Added deliverables status updates (Phase II and III) to the agendas of all future monthly TRMs, beginning January 1999. **January 20, 1999**
3. Received proposal from Siemens for Central Parts Depot Replenishment. **January 29, 1999**
4. Rejected Siemens proposal for parts replenishment. Decision made to bring parts replenishment activity in-house, under the responsibility of Topeka Material Distribution Center (TMDC). **February 12, 1999**
5. Entered into contract with Siemens for continued spares replenishment beyond end of warranty period in Charlotte. In effect until TMDC is fully ramped up. **February 28, 1999**
6. Added requirement that Siemens report parts replenishment performance, filtered by site and by days after receipt of order (ARO), at all future TRMs beginning March, 1999. **February 18, 1999**

APPENDIX A

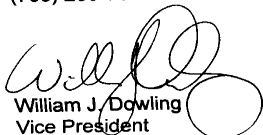
Other Deliverables

Parts provisioning documentation (PPD) is used to set the appropriate depth and range of spares at the central depot, as well as to adjust the levels of the site spares parts kits (SSPK). The parts provisioning list (PPL) is the initial deliverable that allows productive parts provisioning conference to occur. Siemens is currently completing the verification of it's PPL against the TMS technical data package, and expects 100% completion by March 5, 1999, with a provisioning conference to be scheduled soon thereafter. As with the parts replenishment issue, Siemens is required to update the Postal Service on their progress every month at the TRM.

The Life Cycle Support Plan (LCSP) identifies how the Postal Service should provide for supporting the system over its entire life, focusing on parts obsolescence, etc. Indeed Siemens has not been timely in their delivery of a TMS LCSP. At the January TRM, an action was taken by TMDC to provide a boilerplate version of a typical LCSP to aid Siemens in its development. This was supplied to Siemens on February 1, 1999. Siemens has agreed to provide a draft LCSP for Postal Service review on March 2, 1999. As with the parts replenishment and PPD issues, Siemens is required to update the Postal Service on their progress with this deliverable every month at the TRM.

TMS Program Office personnel, as well as representatives from MTSC and TMDC, have been directed to review the circumstances surrounding these issues, and will continue to take the action necessary to ensure we get the documentation we need to support the fielded Siemens sites. Both MTSC and TMDC, the authors of these requirements in the SOW and the principal users of the deliverables, are well represented at the TRMs. In addition, our contracting officials in Automation Purchasing will continue to monitor the situation, and are prepared to enforce satisfactory compliance in support of the Program Office.

If you have any questions, please contact Wes Goode, Manager, Tray Management Systems, at (703) 280-7040.


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Vice President
Engineering