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Subject: Vehicle Management Accounting System Conversion Effort (IS-MA-98-001)

During another review, we became aware of problems involving contractor efforts to implement the new Vehicle Management Accounting System (VMAS). This is a Management Advisory Report, which highlights our concerns related to VMAS and offers suggestions for improvement.

During our review, we interviewed individuals from various Vehicle Maintenance Facilities (VMF), Operations Support personnel, and Information Systems personnel. Also, we reviewed electronic correspondence exchanged between VMF personnel. In addition, we performed a limited on-site review of VMAS at the VMF training center in Norman, Oklahoma. Our review was conducted during the period September 1997 to February 1998.

Results in Brief

During another review, we discovered that the new VMAS did not perform many of the tasks specified in the VMAS statement of work. Upon further inquiry, we were told that most, if not all, of the VMFs that received the first release of the new VMAS were having major problems with basic operations. Several VMF officials we spoke to indicated they were spending considerable time trying to recover data that the system unexpectedly deleted. As a result of our review, three areas exist that we believe need your attention:

- Contract management;
- Project management; and
- System security.

Background

VMAS is the system used to manage a fleet of over 210,000 postal-owned vehicles. The system tracks maintenance on vehicles; documents the maintenance workload; and contains parts, vehicles, and fuels inventories. VMAS has been converted from an IBM System/36 environment (also called VMAS) to a client-server architecture at 99 postal VMFs around the country. The new VMAS was being developed under a time and materials contract. The original contract to complete module one of VMAS was awarded in August 1995 for approximately $430,000. By the time VMAS was accepted in September 1997, the United States Postal Service (USPS) had paid the contractor almost $2 million to complete all four VMAS modules.

Contract Management

The VMAS contract had been modified four times since its inception, the cost had more than quadrupled,[1] and the system did not meet contract specifications. We believe there were two primary factors that contributed to these problems: the contracting method and the lack of clearly defined requirements.

Originally, Information Systems (IS) personnel only wanted the parts module of the VMAS system to be completed by a contractor. Upon successful completion of the parts module, IS planned to award a new contract to complete the other modules. However, soon after contract inception, Operations Support personnel requested, and IS approved, development of a complete VMAS system. As the system was being tested at prototype sites, widespread performance problems were identified and reported to the VMAS Project Manager. Without adequately addressing these problems, management continued to deploy the system. Near the expiration of the contract, USPS engaged the same contractor as a consultant to fix the known problems.

The original and all modifications to the VMAS contract did not specify an agreed upon deliverable. Rather, the contract was a time and materials contract with no penalty clause to give the USPS recourse if the contractor did not meet the contract terms. In an effort to ascertain the contract requirements, we spoke with a number of USPS officials. They were not able to agree as to whether a fully functioning VMAS was the deliverable under this contract.

During a meeting with IS personnel on February 19, 1998 we learned that USPS was preparing to let another contract to complete the VMAS system. However, the type of contract, the contract requirements, and proposed specifications were not completed.

[1] The requirements of the original contract only called for a parts module which was to make up 25% of the VMAS system.

Project Management

VMAS project management by Operations Support, IS, and the contractor was not effective. VMAS project management was a shared responsibility among IS personnel, Operations Support personnel, and the contractor. The IS Business System Manger for VMAS recognized that the software offered by the contractor did not meet the contract requirements and advised Operations Support personnel against its deployment. In fact, IS personnel suggested returning to the old system because of the problems associated with the new VMAS. However, Operations Support elected to continue VMAS development and implementation.

At least two factors contributed to VMAS development problems. First, system deficiencies were not surfaced fast enough to the appropriate level of management. Second, the contractor was located in Virginia, while IS personnel assigned to manage VMAS development were located in California.

Vehicle maintenance employees discovered, more than a year ago, many of the problems brought to our attention during this review. At the time of our review, some of the more serious problems with the system included:

- Vehicles not reflected in inventory,
- Vehicles not on scheduled maintenance reports,
- Labor fuel costs not tracked correctly,
- Parts not properly transferred and recorded,
- Inventory contained duplicate part numbers,
- Parts inventory dropped out of the system.

IS personnel stated that VMAS Version 1.1, which was released after our review, corrected many of the defects we identified. However, audit work to confirm the statement has not been performed.

System Security

The VMAS includes an accountable vehicles and parts inventory as well as VMF performance indicators. Therefore, the data needs to be protected from manipulation. A security requirement was included as part of the VMAS development to ensure that all VMAS databases were password protected to prevent erroneous data entry and unauthorized changes. Raleigh Integrated Business System Support Center personnel were the only individuals who possessed the password that would enable them to perform system maintenance activities.

In an effort to assist VMF personnel in correcting their VMAS database errors, IS personnel compromised the VMAS password. We

reviewed e-mail correspondence between various VMFs and IS personnel. Our review disclosed that the VMAS password was exchanged to allow VMFs to correct the database errors themselves. While their intentions were well placed, IS did not ensure that passwords were quickly changed and brought back under the system administrator's control after the errors were corrected.[2]

Conclusion

If not corrected, we believe potential problems face VMF officials nationwide. These include:

- Overlooking vehicles needing repairs,
- Scheduling unnecessary repairs,
- Slowing repairs because parts are not on-hand,
- Increasing potential for loss, theft, fraud and abuse,
- Overpaying (underpaying) vendors,
- Misstating performance results, and
- Reducing productivity because VMF managers are entering and reentering VMAS data lost or destroyed by the system instead of carrying out their assigned responsibilities.

Since the completion of our original review, version 1.1 of VMAS has been released. It is our understanding that this version contains at least 90 changes from the first version of VMAS. IS personnel indicated that these changes corrected many of the defects we identified. We have not performed additional work to determine if that is the case. However, we have received correspondence from several VMFs indicating that many problems still exist with VMAS version 1.1.

Suggestions

The Vice President of Information Systems should direct IS personnel, in conjunction with Purchasing personnel, to establish a firm fixed price contract with an independent information systems consultant to evaluate VMAS. If the evaluation warrants changes to VMAS, a firm fixed price contract containing deliverables and penalty clauses should be established to complete VMAS.[3]

[2] IS personnel recently stated that the VMAS database password has been changed.

[3] The contractor performing the evaluation should be different from the contractor completing VMAS.

If you have any questions or need additional information, please contact [ ] or me at (703) 248-2300.

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