

**Montgomery County, Maryland
Office of the County Executive
Office of Internal Audit**



**Radios, Laptops and Consulting Contracts Purchased under the
Public Safety System Modernization Capital Project**

April 4, 2013

Highlights

Why MCIA Did this Audit

The Public Safety System Modernization Capital Project (PSSM), which has a current cost estimate of \$108 million, has procured \$22.7 million in radios and laptops for Police and Fire and Rescue departments. Currently the project team is in the process of issuing procurement solicitations for the design and installation of the public safety first response systems such as Computer Aided Dispatch (CAD), Law Enforcement Records Management (LE RMS) and Voice Radio System are being issued. The Department of Technology Services created the PSSM Program Office to manage the implementation of the capital project. Contract and grant monitoring was identified as a high risk area by the Office of Internal Audit (MCIA) in its County Wide risk assessment completed. We performed this review of the PSSM Program Office contract administration and monitoring and assets safeguarding procedures for radios and other items as part of our continuous review of contracting by County Departments.

What MCIA Recommends

MCIA is making two recommendations; one to the Department of Technology Services (DTS) and the second, a joint recommendation, to the Police Department (MCPD) and DTS to improve the safeguarding of radios purchased as part of the PSSM project. DTS, the PSSM Program Office and Montgomery County Fire and Rescue Services told us that they have no comments on the report. MCPD responded that it believes security over spare radios in the radio shop is sufficient and improvements are unnecessary.

April 2013

Public Safety System Modernization Capital Project Contract Audit

What MCIA Found

Our review showed that DTS has adequately designed and implemented procedures and internal controls for contract monitoring and the PSSM Program Office followed those procedures for the 4 contracts reviewed as part of this audit. We found no errors in the areas of contract administration and monitoring and invoice review and approval.

However, in testing 2 contracts in which assets were purchased, we identified the following two opportunities for improving the safeguarding of assets where procedures and controls should be strengthened: (1) DTS' current inventory tracking database does not contain a full inventory of radios allocated to Fire and Rescue. (2) There has not been a periodic inventory count of the Police Department radios on loan to the DTS Radio Shop.

After fieldwork was completed for this audit the Radio Systems Manager for the Police Department advised MCIA of an inventory check performed on the spare radios stored at the radio shop. Details regarding the inventory check are disclosed in the Results Section of this report.

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Objectives

This report summarizes an audit performed by Cherry Bekaert LLP (the Firm or Cherry Bekaert) under contract with the Office of Internal Audit (MCIA) of the Montgomery County Public Safety System Modernization (PSSM) capital project contract. The scope of this engagement included reviewing and testing the effectiveness of contracting policies and procedures by the Department of Technology Services (DTS) and the safeguarding of assets purchased as part of the PSSM Capital Project. The objective of the audit was to:

- Review and test the effectiveness of contracting policies and procedures by the Department of Technology Services (DTS) to ensure
 - Vendor selection was in compliance
 - Contractor(s) performance is contractually compliant and being effectively monitored
 - Invoices are properly reviewed and approved for payment
- Review and test the effectiveness of the management and tracking of public safety radios and laptops purchased, in use and inventoried to ensure radios and laptops are properly safeguarded¹.

Background

PSSM Project

The Montgomery County PSSM capital project is to provide upgrades and modernization to the following County public safety first response systems: Computer Aided Dispatch (CAD), law enforcement records management system (LE RMS), and voice radio systems. Following is a table of the project appropriation and cost estimate since being added to Capital Improvement Program (CIP) in FY2009. As of FY13 \$37 million has been appropriated to the project another \$71 million will need to be appropriated to complete the project.

Table 1 – PSSM Project Appropriations and Cost Estimates (000)

Capital Improvement Budget²	Appropriation³	Cost Estimate⁴
Approved FY09-FY14 (FY09)	\$2,988	\$2,988
Amended FY09-FY14 (FY10)	\$3,043	\$3,043
Approved FY11-FY16(FY11)	\$5,477	\$54,863
Amended FY11-FY16(FY12)	\$25,029	\$52,509
Approved FY13-FY18(FY13)	\$37,699	\$108,083

*See discussion below regarding public safety radio purchase and the supplemental appropriation awarded during FY11

The PSSM Program Office was created as a division within DTS to facilitate the management of the PSSM Capital Project. The PSSM Program Office reports to the PSSM Executive Steering Group and the Executive Program Director. This project is expected to benefit the citizens of

¹ Custody of radios and laptops is shared by DTS, the Montgomery County Police Department and the Montgomery County Fire & Rescue Department.

² The Capital Improvement Program Budget is approved in odd fiscal years and amended in even fiscal years

³ Accumulated annual appropriation since project inclusion in CIP

⁴ Total Cost Estimate for the project thru the applicable CIP budget

Montgomery County by providing first responders⁵ with better emergency notification and communication tools. The project is based upon the Public Safety Systems Modernization plan completed in July 2009.

Public Safety Radio Purchase⁶

The Federal Communications Commission requires public safety radio systems operating in 800 MHz frequency range to “re-band” to a specific part of the 800 MHz frequency in order to reduce interference with Sprint/Nextel communications. The re-branding had to be completed by the end of 2011. The radios being used by the County in 2010 would not function on the new bandwidths that were being implemented. The planned upgrade of the voice radio system as part of the PSSM capital project included the replacement of mobile and portable radios and the replacement of voice radio communications infrastructure. The initial plan offered by Sprint/Nextel to the County was to develop a loaner program, in which the current County radios would be swapped for loaner radios for the duration of the re-banding process. Once the re-banding was complete, the loaner radios would be replaced with radios purchased by the County under the PSSM CIP project. The purchased radios would be compatible with the new bandwidth and the new voice radio system.

Originally, the County planned to take this approach to the program, subsequently; however, Sprint/Nextel offered to provide the County with a \$3.3 million credit toward the purchase of new radios that could function on the new bandwidth and would be compatible with the upgraded radio communications system if the County executed the purchase in 2010. DTS requested and gained approval for an additional \$19.6 million in appropriated funds in FY11 to purchase compliant radios that allowed the County to complete immediate re-banding within the 800 MHz frequency as required by the FCC. According to the approved resolution, the request did not increase the estimated project cost just the timing of when funds were appropriated and spent in the project lifecycle.

Other Major Project Purchases

Three other major procurements under the CIP project included the improvement of the CAD system, purchase of laptop computers and supplemental staffing for IT analysis. The CAD system used by Montgomery County is reaching the end of its useful life and is not meeting operational requirements, which impacted the response time of first responders to 9-1-1 calls. Array Information Technology was awarded a contract to develop detailed business and technical requirements for a new CAD system. The Fire and Police Departments were in need of a laptop upgrade.

To meet the above need, the County contracted with Advanced Computer Concepts to purchase 700 durable laptop computers in order to further the goal of modernizing technology and infrastructure. The PSSM project team needed additional resources for the development of

⁵ First Responders include Police, Fire and Rescue, Sheriff, Corrections and Rehabilitation, and Emergency Management and Homeland Security.

⁶ Montgomery County Council Resolution 16-1543, adopted October 26, 2010. The request was for \$21.6 million but approval was granted for \$19.6 million.

cost-benefit analysis and to define the technical requirements for the systems being upgraded or replaced. The County has a contract with Gartner, Inc. which provides the County flexibility to obtain professional IT support when needed. As of October 9, 2012, only one task order had been awarded to Gartner for one contract employee to join the project team. The role of that contract employee is to perform cost-benefit analysis on the operational and technical value of the planned radio infrastructure to be installed throughout Montgomery County, as well as assess alternatives for the PSSM project.

Management and Safeguarding of Radios and Laptops

The PSSM Program Office has responsibility for purchasing the radios and laptops purchased under the PSSM capital project. DTS received the assets when delivered to the County and transferred custody of the assets to the Police and Fire and Rescue departments. The Police (MCPD and Fire & Rescue (MCFRS) departments are responsible for distributing the radios and laptops to their respective workforces and installing in their respective vehicles. The Police and Fire and Rescue departments each have inventory systems to track the assets received.

Scope and Methodology

We performed our review of contracts awarded under the PSSM project as of September 2012, specifically, the contract to purchase new public safety radios and other consulting or purchase contracts. Four contracts were chosen for testing from four different vendors. Table 2 details the four vendors and their respective agreements under the PSSM project. The table also includes the total of all the contracts and/or task orders that had been awarded to the selected vendors as of the date we made our selections for testing. In addition; for items purchased under contracts being tested we conducted interviews and observations to determine measures taken to safeguard the assets purchased. DTS, Police and Fire & Rescue departments all have responsibilities for safeguarding the assets purchased.

Table 2 – Listing of Vendors Selected for Testing and Amount Expended with Vendor

Vendor	Description of Contacts, Task Orders and Purchase Orders with Vendor	Total Amount Expended with Vendor as of 9/25/12⁷	Value of Task/Purchase Order being Tested
Motorola, Inc.	-One time purchase order of 4,849 radios that are compatible with the re-banded system. The contract with Motorola, Inc. was a bridge contract ⁸ -Purchase orders for Radio	\$20,949,797	\$20,900,000

⁷ Source: PSSM Project Expenditure Summary provided by PSSM Program Director. Includes total expenditures for all task/purchase orders with the respective vendor

⁸ Per the Office of Procurement, Procurement Guide dated February 2008, a bridge contract is an award made to a contractor using the competitive bid prices and specifications from another public entity contract.

Vendor	Description of Contacts, Task Orders and Purchase Orders with Vendor	Total Amount Expended with Vendor as of 9/25/12 ⁷	Value of Task/Purchase Order being Tested
	replacements and parts		
Array Information Technology	-One task order with three purchase orders ⁹	\$239,203	\$422,400
Advanced Computer Concepts, Inc.¹⁰	-One time task order for the purchase of 700 durable laptop computers	\$0	\$1,831,617
Gartner, Inc.	-One task order to perform cost-benefit analysis on the operational value of the new radio infrastructure -Contract awarded to Gartner, Inc. for IT Professional Services under task orders issued	\$ 149,390	\$149,390

The key documents reviewed for each vendor are detailed below

Table 3 – Listing of documents reviewed

All Contracts	Contract Specific
Contracts	Purchase Order Quote
Amendments	Task Order Proposal
Invoices	Task Order Proposal Responses
Invoice Approvals	Ratings Sheet
Invoice Payment Approvals	Interview Assessment Sheet
	Shipping Documents
	RFQ Vendor Response
	Status Reports

Cherry Bekaert interviewed staff with responsibility for monitoring contracts and safeguarding of assets. The Firm also observed with staff how assets were stored and safeguarded:

Table 4 – Listing of Individuals Interviewed for the Contracts Tested

Staff Interviewed	Motorola, Inc.	Array Information Technology	Advanced Computer Concepts, Inc.	Gartner, Inc.
Manager of Radio Communications	X			
Police Radio Systems Manager (Officer)	X			

⁹ The task order relating to Array contains three purchase orders, on relating to the prior year's hours worked, one relating to this year's hours worked (both are \$192,000), and the final is for an extension of hours totaling \$38,400.

¹⁰ The laptops had been ordered and were scheduled for delivery as of the date of the PSSM Program Director schedule. The laptops were received on September 28, 2012.

Staff Interviewed	Motorola, Inc.	Array Information Technology	Advanced Computer Concepts, Inc.	Gartner, Inc.
Fire & Rescue Captain	X		X	
MCPD Technology Supervisor (Officer)	X			
DTS Operations Manager		X	X	
DTS Project Manager		X	X	
DTS PSSM Program Manager				X

Tables 5 -7 detail the attributes that were tested as part of this audit

Table 5– Attributes for PSSM Administration/Monitoring Testing

Attribute Tested	
A -	Monitoring of contractor performance milestones delivery
B -	Reviewing of contractor status and performance reports
C -	Receiving, inspecting, and/or accepting of contractor work
D -	Certifying costs incurred for payment
E -	Visual observations of contractor work
F -	Monitoring procedures performed in accordance with contract terms
G -	Identification and reporting of contract problems timely

Table 6 – Attributes for PSSM Invoice Review and Approval Testing

Attribute Tested	
A -	Services or goods invoiced in accordance with contract terms
B -	Supporting documentation required by the contract was submitted
C -	Unallowable costs do not appear to be included in invoice submission
D -	Invoice signed by Vendor, if applicable
E -	Invoice approved by Contract Administrator
F -	Voucher approved by appropriate finance department person
G -	Voucher approved by A/P
H -	Amount per invoice agrees to amount paid
I -	Invoice signed by Contract Administrator's supervisor, if applicable

Table 7– Attributes for Safeguarding of Radios and Laptops Testing

Attribute Tested	
A -	Assets secured in a room
B -	Assets tracked in inventory system

Results

Our review found that for the contracts under review PSSM Program Office project procurements and contract monitoring were generally performed in accordance with applicable County policies and procedures, department practices, and contract or grant terms and conditions. We have found no errors in the areas of contract administration and monitoring and invoice review and approval. However, we have identified opportunities for improvement involving the safeguarding of assets regarding the inclusion of information of all radios purchased in the DTS inventory system and the inventorying of Police Department radios on loan to the DTS Radio Shop.

Below is a summary of our findings:

Observations of Good Business Practices

- For the two goods-based contracts (Motorola Inc. #0344000335-AA and Advanced Computer Concepts #7345000068-AF) it was noted that PSSM Program Office did properly confirm receipt of all items ordered for both radios and laptops. In addition, the databases used by Police and Fire & Rescue to track their respective radios and laptops were very detailed and appeared to be up to date.
- For the two service-based contracts (Array #7341000118-HJ and Gartner #7341000173-AA) it was noted that the PSSM Program office staff performed daily monitoring of the activities of the consultants and obtained evidence of work completed by the consultants prior to payment of the invoices.

Observations of Policy and Procedure Improvements

Contract #0344000335AA – Motorola, Inc.

1. Safeguarding of Assets (Attribute B): DTS' current inventory tracking database does not contain a full inventory of radios allocated to Fire and Rescue. DTS staff confirmed during interviews that the DTS inventory database did not include serial numbers of all the radios issued to Fire and Rescue. To confirm the statements by DTS staff regarding the incomplete nature of the department's inventory listing of radios assigned to Fire and Rescue, we performed a random search in the DTS inventory database for one radio assigned to Fire and Rescue and were unable to find a record for the radio. DTS does not have access to the Fire and Rescue inventory database and therefore is updating their inventory system based upon reports provided by Fire and Rescue to the department. While the DTS inventory system is incomplete, the department does have a record of all radios received and deployed to the respective public safety departments. In addition, we did find that both the Police and Fire and Rescue departments maintain inventory records of radios assigned to their respective departments.

Per discussion with the Manager of the DTS Radio Shop, it was determined; DTS has a list of all radio serial numbers in Excel which it received from the vendor in early 2011. However, after the radios were received by the County, the Fire and Rescue department and the vendor agreed in early 2012 to upgrade the radios purchase to a new radio model just being issued by the vendor. DTS did not update the department's inventory database with information on the Fire and Rescue department radio's because of the plan to receive the upgraded radio models that would replace the radios received in 2011. The replacement of the purchased radios with the upgraded models was completed in September 2012.

2. Safeguarding of Assets (Attribute B): There had not been a periodic inventory count of the Police Department radios on loan to the DTS Radio Shop. At the time of our review approximately 50¹¹ spare radios and accessories assigned to Police are stored in one of three locations within the DTS Radio Shop: the locked Police storage closet, DTS storage closet, and the DTS bay area. The radios stored at the DTS radio shop are a mix of handheld, motorcycle and vehicle install and have an approximate value of \$213,234¹². The Police Radio Systems Manager does track in the Police inventory records the movement of the radios as they are pulled from the various storage locations and put into use.

Subsequent to the completion of our fieldwork for this audit and in response to our discussion with County officials on our preliminary results, the Radio Systems Manager for the Police Department advised us that he conducted an inventory check of the spare radios. The Radio Systems Manager told us that in conducting the inventory check the location of all spare radios was identified. According to MCPD it observed no differences between radio locations as recorded in the inventory record and the actual radio location during the inventory check. We did not perform any review of the subsequent inventory check procedures or results.

In addition, per the Radio Systems Manager the radios are periodically reprogrammed with system updates, however the last reprogramming occurred in mid-2011 which was approximately a year prior to the start of this audit in September 2012.

While the value of the radios are below the current County threshold of \$10,000 for required annual inventory counts, the mobility of the radios make it important that periodic counts and reconciliations to inventory records does occur. Without the periodic validation between the physical inventory and inventory records there is a risk that the identification of lost, stolen, or misplaced radios will not occur timely.

¹¹ Per MCPD response to the report as of March 4, 2013 there were 36 radios stored at the Radio Shop.

¹² Spare Radio Value Calculation based on purchase price: handheld radios = \$ 165,200 (40 units * \$ 4,130 per unit); vehicle mounted radios = \$ 42,910 (10 units * \$ 4,291 per unit); \$ 5,124 (1 unit * \$ 5,124 per unit).

Conclusions

DTS has designed and implemented monitoring and invoicing controls intended to ensure compliance with Montgomery County Regulations that the PSSM Program Office is following those procedures for the contracts under review. Cherry Bekaert found that the contract administration and invoicing review and approval procedures are operating as intended. Our audit did identify a deficiency related to the maintenance of a complete inventory listing and opportunities to improve the internal controls over the safeguarding of assets regarding periodic inventories of MCPD radios on loan to DTS. We believe the recommendations described below will provide DTS and the Police Department an effective means of addressing the issues outlined in this report.

Recommendations

1. The Director of the Department of Technology Services should develop and implement a plan to update the DTS radio inventory database with the necessary subscriber counts and user date regarding the radios assigned to the Fire and Rescue Department. In addition, procedures should be implemented to ensure that the DTS radio database is periodically updated with all subscriber counts and user data from all using departments.
2. The Chief of the Montgomery County Police Department and Director of the Department of Technology Services should develop and implement a joint department policy regarding the inventorying of Police Department radios on loan to DTS. The policy should result in the performance of periodic inventory counts of the loaner radios and reconciling the count results to the Police Department inventory records. The counts should be performed by staff independent of the management of the radios and without day-to-day access to the radios.

Comments and MCIA Evaluation

We provided the PSSM Project Office, DTS, MCPD and MCFRS with a draft of this report for review and comment on March 4, 2013. MCPD provided us with a written response on March 4, 2013 (see Appendix A). DTS, the PSSM Project Office and MCFRS advised us they had no comments on the report. MCPD's response to recommendation 2, states that they do not feel it is necessary to develop a joint policy with DTS on inventorying radios that are held by DTS as spare radios. MCPD has also deferred to DTS with respect to the need for independent parties to perform periodic inventories. MCPD did note that any changes in DTS procedures should be coordinated with the MCPD Radio Systems Manager.

We continue to believe that given the aggregate value of the assets, their importance to the mission of the department and their portable nature, that formalizing a periodic inventory policy is critical to the proper safeguarding and maintenance of the radios. In addition, the development of a policy jointly with DTS ensures that both parties assume an appropriate level of responsibility for the safeguarding of the assets.

Aside from the inventory issue, our draft report to management also contained a recommendation with respect to enhancing physical security and control over the radios on loan from MCPD to DTS. After reviewing comments received from MCPD, we reconsidered that recommendation and determined that the existing physical security over the radios is sufficient. Therefore, we deleted that recommendation from the final report.

Appendix A: Responses to Audit - MCPD

From: Manger, Tom
Sent: Monday, March 04, 2013 2:51 PM
To: Dyckman, Larry
Cc: Segal, Sonny; Davis, Betsy; Felsen, Alan
Subject: FW: Request for formal comment: PSSM draft audit report

Larry,

Here are the comments from the Police Dept. I concur with these comments.

To specifically respond about page 8 recommendation 2, we do not feel it is necessary for you to develop a joint policy with DTS on inventory of those radios. We are satisfied with the security of those radios inside an alarmed secure facility with key card access. If DTS needs to have an outsider do a count of the radios from time to time they can develop that process without our assistance. We only ask that if they want to change any procedures as far as storage and access to these radios that they coordinate with the MCPD Radio Systems Manager.

On page 7, number 2, paragraph 1: it should be noted the total number of radios since the initial report was reduced from 50 to 36.

On page 7, number 2, paragraph 2: EACH radio inventoried was noted and its' exact location was forwarded as to exactly where the radio was located. It should also be noted that any radio the audit team asked to check from the other almost 4,000 was provided and verified upon their request.

On page 7/8, number 3, paragraph 1: Unauthorized access would imply someone NOT of police, fire, other govt, or radio shop personnel would have access to the secure area. Due to the nature of its' location, security, and physical presence of Radio Shop employees, the police department does not fear unauthorized access at any additional risk then criminal activity at any other secure county facility.

On page 8, recommendations, 2.a.: The radios in question are under the control of DTS. The police department is satisfied with their current policies and procedures. Should they elect to change them, we only ask it is vetted through the police department's Radio Systems Manager.

- Chief Tom Manger