

# Audit

## Follow-Up

As of September 30, 2007



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### 800 MHz Radio System

(Report #0614, Issued May 3, 2006)

Report #0804

January 2, 2008

#### Summary

In report #0614, we noted areas where improvements could be made to increase preparedness for emergencies/disasters, improve oversight of the 800 MHz radio system, and increase the physical security of the various 800 MHz radio system infrastructure and radio tower locations.

The Information Systems Services Radio Communications Division (RCD) has completed nine of the 17 action plan steps that were due as of September 30, 2007. Of the remaining eight action plan steps, seven have been amended to be completed by September 30, 2008, and one was deleted as management has accepted the risks identified in the initial audit report.

Overall, to address the action plan steps due this follow-up period, RCD has:

- conducted an assessment of the radio system which evaluated the strengths, weaknesses, opportunities, and threats of the system;
- developed a process to document the activities/projects conducted by RCD;
- conducted and documented a risk assessment of disaster planning;
- conducted an impact analysis;
- developed and documented an emergency/disaster recovery plan;
- reviewed the 800 MHz system to ensure as many parts of the system were connected to the alarm system

as appropriate;

- developed a process whereby the alarm system is periodically tested and such testing is documented; and
- developed a record of the individual components and spare parts of the 800 MHz system.

While RCD has had success in completing nine of the action plan steps due, completion of several remaining steps will require direction from the Public Safety Communications Board (PSCB) that replaced the Management Oversight Committee (MOC) in July 2006.

In addition to the steps that were delayed, one step was deleted because management has decided to accept the risk the step was designed to mitigate. That step related to moisture sensors in the shelters that house components of the 800 MHz radio system infrastructure.

#### Scope, Objectives, and Methodology

We conducted this audit follow-up in accordance with the International Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit follow-up to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained

provides a reasonable basis for our findings and conclusions based on our audit follow-up objectives.

This follow-up was for the period April 1, 2007, through September 30, 2007.

### **Original Report #0614**

The scope of report #0614 included a review of selected computer controls over the 800 MHz radio system and of the performance and oversight of that system by RCD. The objectives were to evaluate whether RCD operated the 800 MHz radio system in an efficient and effective manner, selected computer controls were in place and functioning as intended, and the 800 MHz radio system met the needs of its users through an evaluation of the performance of the system.

### **Report #0804**

This follow up is to report on the progress and status of efforts by RCD to complete action plan steps due for completion during the period April 1, 2007, through September 30, 2007. This is our third follow-up on action plan steps identified in audit report #0614. To determine the status of the action plan steps, we interviewed staff and reviewed the relevant documentation provided by RCD.

### **Background**

The 800 MHz radio system is the primary means of radio communications for the public safety agencies of the City of Tallahassee, Leon County, and the local universities. As such, the availability and continued operability of the 800 MHz radio system during an emergency or disaster is very important. Additionally, other City and County departments use and rely on the 800 MHz radio system for their day-to-day operations.

The 800 MHz radio system is a computer based system radio system. Therefore, its

components should be protected and cared for in a manner similar to any other computer, and the equipment shelters should have controls in place similar to those for computer operations centers.

In 1999, the Management Oversight Committee (MOC) was formed to oversee and provide direction for the 800 MHz radio system. The MOC was in place and functioning for several years. Subsequent to the issuance of report #0614, the MOC was dissolved and a new governing board was created. The Public Safety Communications Oversight Board (PSCB) replaced the MOC as the 800 MHz radio system's governing body.

The PSCB is comprised of the City Manager, County Administrator, Sheriff, Police Chief, Fire Chief, and the County Emergency Management Services Director. The first issue assigned to the PSCB was the consolidation of dispatching calls for service for public safety agencies in Leon County. Because of the nature of this issue and the level of effort required to complete it, the issues identified in report #0614, relating to the 800 MHz radio system, have not been addressed yet. The day-to-day management and oversight of the 800 MHz radio system remains the responsibility of RCD.

### **Previous Conditions and Current Status**

This is the third follow up on audit report #0614, 800 MHz Radio System. In that report we made recommendations designed to:

- Improve the oversight of the 800 MHz radio system;
- Improve the preparedness for the recovery from emergencies or disasters;
- Improve the recording and tracking of system outages;

- Improve compliance with FAA regulations relating to radio tower lighting;
- Improve the reliance that can be placed on the alarm system that monitors the 800 MHz radio system;
- Review the emergency testing provisions of the 800 MHz radio system maintenance agreement and decisions previously made thereon;
- Evaluate the coverage of the 800 MHz radio system and take appropriate action based on that evaluation;
- Increase accountability and oversight of individual components and spare parts of the 800 MHz radio system;
- Improve and update the standard operating procedures governing the 800 MHz radio system;

- Improve the physical access controls relating to the various 800 MHz radio system locations;
- Improve the monitoring of the environment of the 800 MHz radio system locations; and
- Improve the logical security controls of the 800 MHz radio system.

As of September 30, 2007, nine of the 17 action plan steps due this follow up period have been completed. Of the remaining steps, seven have had their completion dates amended to September 30, 2008. One step was deleted due to management accepting the risk the step was designed to mitigate. Table 1 identifies the action plan steps due and describes their current status. The completion date for the remaining seven steps has been amended to September 30, 2008.

Table 1

**Action Plan Steps from Report #0614  
due as of September 30, 2007, and Current Status**

Action Plan Steps	Current Status
<i>To improve oversight of the 800 MHz system</i>	
<ul style="list-style-type: none"> <li>• Conduct an annual assessment of the 800 MHz system and document the results. The assessment will evaluate the strengths, weaknesses, opportunities, and threats of the system.</li> </ul>	<p>✓ <b>Complete.</b> The RCD developed an assessment of the 800 MHz system. That analysis identifies the strengths, weaknesses, opportunities, and threats of the system.</p>
<ul style="list-style-type: none"> <li>• Develop and document a process whereby activities/projects conducted by RCD staff will be reviewed by the System Manager to help ensure that the tasks are satisfactorily completed.</li> </ul>	<p>✓ <b>Complete.</b> A status report of ongoing activities/projects is included in the monthly report to the PSCB by the System Manager. The development of this report assists the System Manager in ensuring the completion of applicable projects.</p>

<i>To improve the preparedness for the recovery from emergencies or disasters</i>	
<ul style="list-style-type: none"> <li>• Conduct and document a risk identification/assessment (as it relates to disaster planning) of the 800 MHz system.</li> </ul>	<p>✓ <b>Complete.</b> A risk assessment was conducted and documented.</p>
<ul style="list-style-type: none"> <li>• Conduct and document an impact analysis.</li> </ul>	<p>✓ <b>Complete.</b> An impact analysis was prepared by RCD. Aspects of the risk assessment are addressed in the impact analysis.</p>
<ul style="list-style-type: none"> <li>• Develop a documented disaster/emergency recovery plan. That plan will be based on the risk assessment and impact analysis previously conducted.</li> </ul>	<p>✓ <b>Complete.</b> A disaster/emergency recovery plan, based on the previously developed risk assessment and impact analysis, was developed.</p>
<ul style="list-style-type: none"> <li>• Periodically test (annually at a minimum) the disaster plan. The exact composition of the tests should vary from year to year and will be determined by RCD management.</li> </ul>	<p>♦ <b>Amended Completion Date.</b> RCD has planned for tests to occur; however, to date, tests have not taken place. Therefore, the completion of this action plan step has been amended to September 30, 2008.</p>
<ul style="list-style-type: none"> <li>• Review and revise the plan annually, or more frequently as appropriate.</li> </ul>	<p>♦ <b>Amended Completion Date.</b> Until the first tests are conducted, and the results are evaluated, the test plan cannot reasonably be revised for improvement. As such, the completion of this action plan step is amended to September 30, 2008.</p>
<i>To improve the reliance that can be placed on the alarm system that monitors the 800 MHz system</i>	
<ul style="list-style-type: none"> <li>• Review all aspects of the 800 MHz system to ensure appropriate parts of the system that can/should be monitored are connected to the alarm system (MOSCAD) that monitors the 800 MHz system.</li> </ul>	<p>✓ <b>Complete.</b> The 800 MHz system and the MOSCAD were reviewed to ensure that as many possible parts of the system were monitored as was reasonable.</p>
<ul style="list-style-type: none"> <li>• Develop a process whereby the alarm system monitoring various parts of the 800 MHz system is periodically tested.</li> </ul>	<p>✓ <b>Complete.</b> The testing of the MOSCAD has been added to the maintenance contract; therefore, the MOSCAD is tested on an ongoing periodic basis.</p>

<ul style="list-style-type: none"> <li>Develop a process whereby the testing of the alarm system is documented to help ensure that all critical components and connections have been tested.</li> </ul>	<p>✓ <b>Complete.</b> The testing is conducted by First Communications through the Motorola maintenance contract. Supporting documentation is maintained by First Communications.</p>
<p><i>To review the emergency testing provisions of the 800 MHz system maintenance agreement and decisions previously made thereon</i></p>	
<ul style="list-style-type: none"> <li>Clarify, and expand upon as needed, the scope of emergency testing to be conducted pursuant to the maintenance contract with Motorola.</li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Amended Completion Date.</b> This issue required input and guidance from the PSCB as to what level of testing is needed. The PSCB has been working on replacing/upgrading the existing 800 MHz system and developing a joint dispatch center. To date, the PSCB has not addressed the topic of emergency testing. The completion of this action plan step has been amended to September 30, 2008, the final follow-up period for this audit.</li> </ul>
<ul style="list-style-type: none"> <li>The MOC will review the decision to not conduct emergency tests (based on the scope as clarified above) of the 800 MHz system and a decision will be made as to whether such emergency testing should occur.</li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Amended Completion Date.</b> The completion of this step is dependent on the PSCB, which has not addressed emergency testing. The completion of this action plan step has been amended to September 30, 2008, the final follow-up period for this audit.</li> </ul>
<ul style="list-style-type: none"> <li>Emergency testing will or will not occur as determined by the MOC. If the decision is made to NOT conduct emergency tests, then the provisions for such tests will be removed from the maintenance agreement.</li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Amended Completion Date.</b> The completion of this action plan step is dependent on the decisions of the PSCB regarding emergency testing. The completion of this action plan step has been amended to September 30, 2008, the final follow-up period for this audit.</li> </ul>
<p><i>To increase accountability and oversight of individual components and spare parts of the 800 MHz system</i></p>	
<ul style="list-style-type: none"> <li>Develop a record of the individual components and spare parts of the 800 MHz system. These records will serve as a subsidiary inventory of the assets as recorded in the City fixed asset records.</li> </ul>	<p>✓ <b>Complete.</b> The RCD has developed a record of the individual components and spare parts of the 800 MHz system. That record will serve as a subsidiary inventory of the assets comprising the 800 MHz system.</p>

<ul style="list-style-type: none"> <li>• Conduct an annual verification of the assets in the subsidiary inventory records and resolve any discrepancies.</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Amended Completion Date.</b> The subsidiary record of the individual components and spare parts was completed this follow-up period. As such, the completion date of the annual verification of the assets has been amended to September 30, 2008, (one year after the completion of the development of the inventory records).</li> </ul>
<p><i>To improve and update the standard operating procedures governing the 800 MHz system</i></p>	
<ul style="list-style-type: none"> <li>• Create a committee comprised of current Public Safety users of the 800 MHz system to review and make suggestions for revisions to the 800 MHz system SOPs. The System Manager is responsible for drafting and promulgating the SOPs with the MOC's approval.</li> </ul>	<ul style="list-style-type: none"> <li>♦ <b>Amended Completion Date.</b> The completion of the action plan step is dependent on the input and participation of the PSCB. To date, the PSCB has not addressed the day-to-day operation of the 800 MHz system (which would include the standard operating procedures). As such, the completion of this step has been amended to September 30, 2008.</li> </ul>
<p><i>To improve the monitoring of the environment of the 800 MHz system locations</i></p>	
<ul style="list-style-type: none"> <li>• Review environmental sensors at every 800 MHz system location to ensure compliance with AP 809 and that the environment is adequate to support the functioning of the 800 MHz system.</li> </ul>	<ul style="list-style-type: none"> <li>✘ Management has reviewed the environmental sensors and determined that the lack of moisture sensors at 800 MHz system locations (as required by AP 809) is a risk that will be accepted. Therefore this step is deleted.</li> </ul>
<p><b>Table Legend:</b></p>	
<ul style="list-style-type: none"> <li>• Issue addressed in the original audit</li> </ul>	<ul style="list-style-type: none"> <li>✓ Issue addressed and resolved</li> </ul>
<ul style="list-style-type: none"> <li>♦ On-going activities, completion date has been amended</li> </ul>	<ul style="list-style-type: none"> <li>✘ Risk associated with the issue accepted by management</li> </ul>

## Conclusion

As noted in Table 1, nine of the 17 action plan steps due for completion this period have been completed. The change in the oversight of the 800 MHz system from the MOC to the PSCB has delayed the completion of some of the action plan steps. Therefore, seven of the action plan steps have been amended to be completed by September 30, 2008. The final action plan step due this follow-up period (of the 17) was deleted. After further consideration, management elected to accept the risk of water damage to the system that potentially could be caused due to a lack of timely action through a lack of water sensors in the radio equipment shelters.

We would like to commend RCD on the actions taken to date and encourage them to emphasize to the PSCB the importance of completing the remaining action plan steps identified in audit report #0614, 800 MHz Radio System. We also appreciate the cooperation and assistance of RCD during this audit follow-up.

## Appointed Official's Response

### City Manager:

The 800 MHz is an extremely important system as it provides radio coverage to our public safety and operating departments. The Public Safety Communications Board (PSCB) will be addressing the uncompleted items at future PSCB meetings. I would like to thank the City Auditor's Office and DMA/ISS for their efforts.

Copies of this audit follow-up or audit report #0614 may be obtained from the City Auditor's website (<http://talgov.com/auditing/index.cfm>) or via request by telephone (850 / 891-8397), by FAX (850 / 891-0912), by mail or in person (Office of the City Auditor, 300 S. Adams Street, Mail Box A-22, Tallahassee, FL 32301-1731), or by e-mail ([auditors@talgov.com](mailto:auditors@talgov.com)).

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