



STATE OF TENNESSEE
COMPTROLLER OF THE TREASURY

DEPARTMENT OF AUDIT
DIVISION OF COUNTY AUDIT
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April 30, 2007

Hardeman County Mayor and
Board of County Commissioners
Hardeman County, Tennessee

To the County Mayor and County Commissioners:

In conjunction with the annual audit of Hardeman County, we have performed a limited review of the information systems in the Offices of County Mayor; Highway Superintendent; Director of Schools; Trustee; County Clerk; Circuit, General Sessions, and Juvenile Courts Clerk; Clerk and Master; Register; and Sheriff as of April 27, 2007. This letter transmits the results of our review.

Our audit of Hardeman County is required to be conducted in accordance with standards contained in Government Auditing Standards, issued by the Comptroller General of the United States. These standards specify that we perform general and application control reviews of computer-based accounting and information systems to determine whether an entity's existing procedures and controls provide adequate assurance of data accuracy and financial and operating statement reliability.

Because of inherent limitations in any internal control structure, errors, irregularities, or control weaknesses may exist and may not be detected. However, our information system reviews performed in the Offices of Highway Superintendent; Director of Schools; Trustee; County Clerk; Circuit, General Sessions, and Juvenile Courts Clerk; Clerk and Master; and Register did not reveal any matters that we considered to be a significant deficiency. Significant deficiencies, however, were identified in the Offices of County Mayor and Sheriff and may be included in the annual financial report of Hardeman County. These matters are also presented in detail in the enclosed Review of Internal Controls Regarding Information System Operations – Findings and Recommendations.

A brief summary of the significant deficiencies by office is presented below:

OFFICE OF COUNTY MAYOR

1. Sufficient user documentation for the Landfill Department's software application was not maintained.
2. The Landfill Department did not implement adequate controls to protect its information resources.

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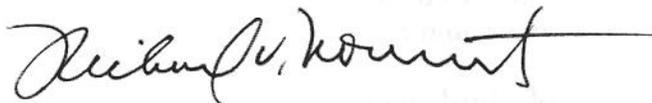
3. The Landfill Department had deficiencies in computer system back-up procedures.

OFFICE OF SHERIFF

1. The office had deficiencies in computer system back-up procedures.
2. The office did not develop a disaster recovery plan.
3. The office did not implement adequate controls to protect its information resources.

Please contact Penny Austin, Information Systems Audit Manager, or me if you have any questions regarding our review of the information systems in the aforementioned offices of Hardeman County, Tennessee.

Sincerely,



Richard V. Norment
Assistant to the Comptroller

RVN: pa

Attachment

cc: The Honorable David Sipes, Highway Superintendent
The Honorable Donald Hopper, Director of Schools
The Honorable Mary Powell, Trustee
The Honorable Jerry Armstrong, County Clerk
The Honorable Linda Fulghum, Circuit, General Sessions, and Juvenile Courts Clerk
The Honorable Janice Bodiford, Clerk and Master
The Honorable Lily Barnes, Register
The Honorable Delphus Hicks, Sheriff
Mr. Norm Norment, West Tennessee Audit Manager

HARDEMAN COUNTY, TENNESSEE
REVIEW OF INTERNAL CONTROLS REGARDING INFORMATION
SYSTEM OPERATIONS — FINDINGS AND RECOMMENDATIONS
AS OF APRIL 27, 2007

The review of controls over the information systems in the Offices of County Mayor and Sheriff indicated a need for improvement. It should be noted that this was the first information system review performed at the Landfill Department which is under the supervision of the Office of County Mayor. The following findings and recommendations have been made to aid these offices in the implementation of controls to better secure their computer systems and the information contained therein. We reviewed these matters with management to provide an opportunity for their response. Management offered oral responses to these items but did not submit written responses. We did not include the oral responses in this report.

OFFICE OF COUNTY MAYOR

RECOMMENDATIONS

1. **SUFFICIENT USER DOCUMENTATION FOR THE LANDFILL DEPARTMENT'S SOFTWARE APPLICATION SHOULD BE MAINTAINED**

Management of the Landfill Department should maintain user documentation pertaining to the software application. Management should contact their vendor and obtain current user documentation for all components of their computer system.

2. **THE OFFICE SHOULD IMPLEMENT ADEQUATE CONTROLS TO PROTECT ITS INFORMATION RESOURCES**

The office should implement adequate controls to protect its information resources. This recommendation does not identify specific vulnerabilities that could allow someone to exploit the office's information system or misuse county funds. Disclosing those vulnerabilities could present a potential risk by providing the readers with information that might be confidential pursuant to Section 10-7-504(i), Tennessee Code Annotated. We provided the official with detailed information regarding the specific vulnerabilities we identified, as well as our recommendations for improvement. The office should ensure that adequate controls over information systems and the resources associated with those systems are implemented.

3. **SYSTEM BACK-UP PROCEDURES SHOULD BE IMPROVED**

Management of the Landfill Department should improve system back-up procedures. Backups should be performed on a daily basis. Backups should be rotated to a secure off-site location on a weekly basis. Year-end backups should also be stored off site and retained indefinitely. Some possibilities for an off-site storage location would be another county office building with a fireproof vault or a safe deposit box at a local bank. Furthermore, a current log of all backups that includes label descriptions, date of creation, contents, and storage location should be maintained.

OFFICE OF SHERIFF

**THE OFFICE HAD DEFICIENCIES IN COMPUTER
SYSTEM BACK-UP PROCEDURES**

1. FINDING

The following weaknesses regarding computer system back-up procedures in the office were identified:

- A. System backups were not performed on a routine basis. Inadequate back-up procedures could result in the loss of data in the event of a hardware or software failure. Without current system backups, the cost of re-creating data could be substantial.
- B. System backups were not rotated off site on a weekly basis. In the event of a disaster, all back-up data could be destroyed, resulting in costly delays in generating and recording information accounted for through the automated process.
- C. A back-up log was not maintained. If system backups are not labeled and inventoried systematically, discrepancies may occur and affect the integrity of system backups in the event of a hardware or software failure.

RECOMMENDATION

Management should implement daily system back-up procedures. A backup labeled for each day of the week should be maintained. Management should store these backups in a secure, fireproof location. In addition to daily system backups, a weekly system backup should be performed, and two copies of this backup should be maintained. These backups should be rotated off site on a weekly basis. A complete systems backup should also be performed at fiscal year-end. These year-end backups should be stored off site and retained indefinitely. Some possibilities for an off-site storage location would be another county office building with a fireproof vault or a safe deposit box at a local bank. Furthermore, a current log of all backups that includes label descriptions, date of creation, contents, and storage location should be maintained.

THE OFFICE DID NOT DEVELOP A DISASTER RECOVERY PLAN

2. FINDING

The office did not develop a disaster recovery plan to assist in re-creating its data processing environment in the event of a disaster. Without a formal, written plan, critical computerized applications could be disrupted indefinitely until the system could be repaired or a back-up facility could be found and made operational.

RECOMMENDATION

Management should develop and regularly update a disaster recovery plan defining procedures for personnel to follow in the event of a major hardware or software failure, or temporary or permanent destruction of facilities. The plan should contain

provisions for a contingency operations site as well as the adequate backup of data files, system programs, user documentation, supplies, and computer hardware so that operations could continue as normally as possible. A copy of the plan should be kept in a secure area within the office as well as at a secure, off-site location.

**THE OFFICE DID NOT IMPLEMENT ADEQUATE CONTROLS
TO PROTECT ITS INFORMATION RESOURCES**

3. FINDING

The office did not implement adequate controls to protect its information resources. This finding does not identify specific vulnerabilities that could allow someone to exploit the office's information system or misuse county funds. Disclosing those vulnerabilities could present a potential risk by providing the readers with information that might be confidential pursuant to Section 10-7-504(i), Tennessee Code Annotated. We provided the official with detailed information regarding the specific vulnerabilities we identified, as well as our recommendations for improvement.

RECOMMENDATION

The office should ensure that adequate controls over information systems and the resources associated with those systems are implemented.

PRIOR AUDIT RECOMMENDATIONS NOT IMPLEMENTED

(Ref: Review of Internal Controls Regarding
Information System Operations as of August 18, 2004)

OFFICE OF SHERIFF

Finding Number	Page Number	Subject
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1	1	System back-up procedures should be improved
1	2	The office should develop a disaster recovery plan

PRIOR AUDIT RECOMMENDATIONS IMPLEMENTED

(Ref: Review of Internal Controls Regarding
Information System Operations as of August 18, 2004)

OFFICE OF SHERIFF

Finding Number	Page Number	Subject
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1	3	Management should formally document policies and procedures for computer operations
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