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DEPARTMENT OF AUDIT
DIVISION OF COUNTY AUDIT
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January 22, 2007

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

To the County Mayor and County Commissioners:

In conjunction with the annual audit of Fayette County, we have performed a limited review of the information systems in the Offices of County Mayor; Public Works Superintendent; Director of Schools; Trustee; County Clerk; Circuit, General Sessions, and Juvenile Courts Clerk; Clerk and Master; and Register as of January 2, 2007. This letter transmits the results of our review.

Our audit of Fayette 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 Public Works Director, Trustee, County Clerk, Clerk and Master, and Register did not reveal any matters that we considered to be reportable conditions. Reportable conditions were identified in the Offices of County Mayor; Director of Schools; and Circuit, General Sessions, and Juvenile Courts Clerk. These reportable conditions may be included in the annual financial report of Fayette County. These matters are also presented in detail in the enclosed Review of Internal Controls Regarding Information Systems Operations – Findings and Recommendations.

A brief summary of the reportable conditions by office is presented below:

COUNTY MAYOR

1. The Solid Waste Department did not have formal policies and procedures for computer operations.
2. The Solid Waste Department had deficiencies in computer system back-up procedures.
3. The Solid Waste Department did not implement adequate controls to protect its information resources.

DIRECTOR OF SCHOOLS

1. The office had deficiencies in computer system back-up procedures.

CIRCUIT, GENERAL SESSIONS, AND JUVENILE COURTS CLERK

1. 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 Fayette County, Tennessee.

Sincerely,



Richard V. Norment
Assistant to the Comptroller

RVN: pa

Attachment

cc: The Honorable James Smith, Public Works Supervisor
The Honorable Myles Wilson, Director of Schools
The Honorable Barbra Parker, Trustee
The Honorable Sue Culver, County Clerk
The Honorable Connie Doyle, Circuit, General Sessions, and Juvenile Courts Clerk
The Honorable Vip Lewis, Clerk and Master
The Honorable Edward Pattat, Register
Mr. Norm Norment, West Tennessee Audit Manager

FAYETTE COUNTY, TENNESSEE
REVIEW OF INTERNAL CONTROLS REGARDING INFORMATION
SYSTEM OPERATIONS — FINDINGS AND RECOMMENDATIONS
AS OF JANUARY 2, 2007

The review of controls over the information systems in the Offices of County Mayor; Director of Schools; and Circuit, General Sessions, and Juvenile Courts Clerk indicated a need for improvement. It should be noted that this was the first information system review performed at the Solid Waste 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. The written response of the budget director is paraphrased in this report. The other officials offered oral responses that we did not include in this report.

OFFICE OF COUNTY MAYOR

RECOMMENDATIONS

1. **MANAGEMENT SHOULD FORMALLY DOCUMENT POLICIES AND PROCEDURES FOR COMPUTER OPERATIONS**

Management of the Solid Waste Department should prepare a computer policies and procedures manual that defines policies and procedures for operations such as system startup/shutdown, application access, system access security, system backup and retention schedules, output distribution, hardware/software maintenance, and other general data processing functions. Upon completion, the manual should be distributed to all appropriate personnel.

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

Management of the Solid Waste Department should improve system back-up procedures. Backups should be performed on external media on a daily basis. Backups should be rotated off site 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.

MANAGEMENT'S RESPONSE - BUDGET DIRECTOR

A procedure for daily, weekly, and yearly backups has been instituted and a form for documenting these procedures is used.

3.

THE OFFICE SHOULD IMPLEMENT ADEQUATE CONTROLS TO PROTECT ITS INFORMATION RESOURCES

Management of the Solid Waste Department 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 security 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.

MANAGEMENT'S RESPONSE - BUDGET DIRECTOR

The mayor has written a letter to the vendor requesting corrections to the software.

OFFICE OF DIRECTOR OF SCHOOLS

THE OFFICE HAD DEFICIENCIES IN COMPUTER SYSTEM BACK-UP PROCEDURES

1. **FINDING**

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

- A. Although system backups were performed on a daily basis, only two tapes were used. The reliability of magnetic media declines as back-up tapes are continually reused. Magnetic media failure can lead to the inability to retrieve data if system backups are not reliable. The cost of re-creating data can be substantial.
- B. System backups were not stored off site. 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

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.

OFFICE OF CIRCUIT, GENERAL SESSIONS, AND JUVENILE COURTS CLERK

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

1. 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 security 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. Also, the office should take steps to establish or improve any compensating controls until these conditions are remedied.

PRIOR AUDIT RECOMMENDATIONS IMPLEMENTED

(Ref: Review of Internal Controls Regarding
Information System Operations as of November 25, 2003)

OFFICE OF DIRECTOR OF SCHOOLS

Finding Number	Page Number	Subject
1	1	The office had deficiencies involving its warrant-signing machine