



**Memorandum from the Office of the Inspector General**

June 25, 2015

TVA Board of Directors  
Rebecca C. Tolene, WT 7B-K  
Daniel A. Traynor, SP 3A-C

**REQUEST FOR MANAGEMENT DECISION – AUDIT 2015-15292 – ELECTRONIC COMMUNICATIONS BY TVA'S BOARD OF DIRECTORS**

Attached is the subject final report for your review and management decision. You are responsible for determining the necessary actions to take in response to our findings. Please advise us of your management decision within 60 days from the date of this report.

Information contained in this report may be subject to public disclosure. Please advise us of any sensitive information in this report that you recommend be withheld.

If you have any questions or wish to discuss our findings, please contact Phyllis R. Bryan, Director, Information Technology Audits, at (865) 633-7332 or David P. Wheeler, Deputy Assistant Inspector General (Audits), at (865) 633-7373. We appreciate the courtesy and cooperation received from your staff during the audit.

Richard W. Moore

MPA:BSC

Attachment

cc (Attachment):

William D. Johnson, WT 7B-K  
Dwain K. Lanier, MR 3K-C  
Justin C. Maierhofer, WT 7B-K  
Jeffrey T. McKenzie, WT 7C-K  
R. Windle Morgan, WT 4D-K  
Mary Margaret Painter, WT 7B-K  
Ricardo Perez, MR 3A-C  
Philip D. Propes, SP 3L-C  
OIG File No. 2015-15292



Office of the Inspector General

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## *Audit Report*

To the TVA Board of Directors and  
the Vice President, Natural  
Resources and Real Property  
Services, and the Chief Information  
Officer, Information Technology

# **ELECTRONIC COMMUNICATIONS BY TVA'S BOARD OF DIRECTORS**

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Audit Team  
Sarah E. Huffman  
Michael P. Anderson  
Joshua M. Brabson  
Weston J. Shepherd

Audit 2015-15292  
June 25, 2015

## **ABBREVIATIONS**

IT	Information Technology
OIG	Office of the Inspector General
PFRAA	Presidential and Federal Records Act Amendments
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority

## **SYNOPSIS**

The Office of the Inspector General (OIG) performed an audit of electronic communications by the Tennessee Valley Authority's (TVA) Board of Directors. The objective was to evaluate controls over the electronic distribution of TVA business information to and from the TVA Board by non-TVA managed mediums.

In summary, we determined current TVA Board e-mail practices are consistent with the Presidential and Federal Records Act Amendments of 2014 (PFRAA) Federal law. In addition, we found the third-party service used to distribute sensitive documents to the Board had appropriate processes and controls in place as reported by another independent audit company. However, improvements could be made to reduce the risk of exposing TVA business information.

The OIG recommends:

1. The TVA Board utilize only TVA e-mail addresses to communicate TVA business and Board activities to reduce risk and comply with TVA Standard Programs and Processes (SPP).
2. The Chief Information Officer, Information Technology (IT), and the Vice President, Natural Resources and Real Property Services, collaborate to develop a plan to:
  - a. Periodically reinforce the TVA Board's understanding of their security responsibilities for handling TVA information and accessing TVA information systems.
  - b. Train Directors' assistants about their security responsibilities for handling TVA information and accessing TVA information systems.

The chair of the TVA Board agreed with our recommendations and stated the Board is continuing to explore options around the recommendation for using TVA e-mail addresses. See the Appendix for TVA management's complete response.

## **BACKGROUND**

In 2004, TVA's corporate governance structure was changed by Congress for the first time in TVA's history through legislation that established a nine-member part-time TVA Board in place of the three-member full-time Board. Whereas the previous three full-time members were tasked with daily management responsibility, the new corporate-like part-time body of nine members was tasked with setting agency policy and direction.

The part-time TVA Board was not provided TVA-managed e-mail accounts because they did not require access to TVA systems or networks to fulfill their duties. Therefore, the Board has utilized non-TVA managed e-mail addresses to communicate electronically.

In 2011, TVA contracted with Diligent, a third-party software provider, to provide a secure, yet user-friendly method of transmitting more sensitive documents to the TVA Board electronically.

In November 2014, the PFRAA<sup>1</sup> was enacted. These amendments included disclosure requirements for executive agency officers and employees use of nonofficial electronic messaging accounts requiring messages sent outside of nonofficial e-mail be either copied at the time of transmission or forwarded within 20 days to an official e-mail account of the agency.

In March 2015, a national news event occurred regarding a high ranking government official's use of a personal e-mail account to conduct federal business. The OIG initiated this audit to evaluate TVA's current process and controls surrounding the use of personal e-mail accounts and Diligent to transmit business information electronically.

## **OBJECTIVE, SCOPE, AND METHODOLOGY**

The audit objective was to evaluate controls over the electronic distribution of TVA business information to and from the TVA Board by non-TVA managed mediums. The audit scope included the TVA Board's e-mails, communications, and applications used to view or transmit TVA business information.

To meet the audit objective, we reviewed applicable laws, contracts, standards and TVA policy to establish criteria; conducted interviews and reviewed documentation to obtain an understanding of current processes and controls; performed a review of processes and controls to determine if they are designed to appropriately address applicable risk, laws, and TVA policy; reviewed a sample of TVA Board e-mails; assessed documentation of third-party controls; and reviewed qualifications of work performed by another auditing firm.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

## **FINDINGS**

In summary, we determined current TVA Board e-mail practices are consistent with the PFRAA Federal law. In addition, we found the third-party service used to distribute sensitive documents to the Board had appropriate processes and controls in place as reported by another independent audit company. However, improvements in TVA Board e-mail practices could be made to reduce the risk of exposing TVA business information and improve compliance with TVA policies.

<sup>1</sup> Presidential and Federal Records Act Amendments 44 United States Code 2911.

## **TVA BOARD E-MAIL PRACTICES**

Prior to March 2015, the TVA Board utilized non-TVA managed e-mail addresses to communicate electronically. Subsequently, TVA has assigned e-mail addresses to the Board. The Board was provided instructions to (1) use the TVA e-mail addresses to send and receive TVA-related messages or copy the address when using a private e-mail account for TVA business and (2) forward to the TVA e-mail address any TVA business-related messages sent from their private e-mail addresses dating back to November 26, 2014, the effective date of the PFRAA amendments.

We interviewed the TVA Board to determine (1) the content and nature of the e-mail messages and (2) the means by which they intend to use the TVA e-mail addresses. We also reviewed a sample of e-mails to validate information obtained in interviews.

In our interviews, a majority of the TVA Board indicated (1) the content and nature of their TVA-related e-mail messages included Board meeting logistics and informational messages from TVA and (2) plans to continue using private e-mail addresses while sending copies to their assigned TVA e-mail address. Also, two Board members confirmed discussing meeting agenda items over their private e-mail.

We reviewed TVA related e-mails the TVA Board Chair as well as committee chairs forwarded to TVA e-mail accounts for the month of January 2015. We confirmed a majority of e-mails were related to scheduling and meeting logistics. However, we also identified e-mails containing the following types of information:

- Committee meeting agendas, minutes, and follow-up discussions.
- Discussions regarding potential consulting services.
- Messages from the public.
- Preliminary press release details.
- Other nonpublic information.

## **THIRD-PARTY SERVICE**

TVA Board Services utilizes a third-party service provided by Diligent to distribute documents to the TVA Board. In audit interviews, the Board confirmed using Diligent to review electronic documents, and two Directors confirmed having assistants access Diligent on their behalf to print documents for review.

## Assessment of Third Party Controls

To review controls and processes used by Diligent to secure TVA information, the OIG obtained copies of related policies and reviewed work conducted by an independent third-party auditing firm with appropriate qualifications and accreditations.

Based on our review of the third-party auditing firm's work, we determined Diligent has appropriate processes and controls in place to protect the confidentiality, integrity, and availability of TVA data.

## COMPLIANCE WITH LAW AND TVA SPP

We compared the requirements of PFRAA and applicable TVA SPPs with the current e-mail practices of the TVA Board. Table 1 summarizes our results.

Requirement	Audit Results
PFRAA requires messages sent outside of nonofficial e-mail be either copied at the time of transmission or forwarded within 20 days to an official e-mail account of the agency.	<p>TVA Board e-mails sent on or after November 26, 2014, may not have met the 20 day forwarding requirement. TVA created e-mail addresses for the Board in March 2015 and instructed them to:</p> <ol style="list-style-type: none"> <li>1. Forward past e-mail messages from their private addresses dating back to November 26, 2014.</li> <li>2. Use the government e-mail addresses to send/receive TVA-related messages or copy this account when using a private e-mail address.</li> </ol> <p>We determined the current practice to be consistent with requirements of PFRAA.</p>
TVA-SPP-12.01, Acceptable Use of Information Resources, requires that only TVA e-mail accounts and electronic messaging applications shall be used to conduct government business electronically. In addition, the SPP states user identifications and passwords are intended to be used solely for the performance of an individual's official TVA job function and users must protect their individual account passwords from disclosure. This policy applies to TVA employees, contractors, and other individuals who access TVA's information resources.	The Board's use of personal e-mail accounts and the sharing of Diligent access credentials are not consistent with TVA-SPP-12.01.
TVA-SPP-12.02, Information Management Policy, requires that TVA Sensitive Information, TVA Restricted Information, and TVA Confidential Information must not be sent to/from personal non-TVA e-mail accounts due to the unknown security status of those services. The only type of information allowed to be transmitted via personal e-mail accounts is public information.	The Board's use of personal e-mail accounts is not consistent with TVA-SPP-12.02.

**Table 1**

## RISKS ASSOCIATED WITH CURRENT PRACTICES

The practice of sending TVA Board related information to private e-mail accounts introduces the following potential risks:

- Exposure of TVA information, due to compromise of non-TVA owned e-mail accounts and equipment, with or without TVA IT's knowledge.
- Improper handling of TVA information.
- Lack of preservation of official TVA records.
- TVA employee perception that TVA policy does not apply to the TVA Board.
- Reputational criticism of the TVA Board.

In audit interviews, several Directors indicated assistants external to TVA had access to the private e-mail accounts they use for TVA business, as well as the ability to log into Diligent to access TVA documents. Since the Directors' assistants are not TVA employees, they have not been trained on handling TVA information.

Improvements in TVA Board e-mail practices would display consistency with federal law and TVA policy as well as set an example for TVA employees regarding the importance of handling TVA business information in a manner that minimizes the risk of exposure.

## RECOMMENDATIONS

The OIG recommends:

1. The TVA Board utilize only TVA e-mail addresses to communicate TVA business and Board activities to reduce risk and comply with TVA SPPs.
2. The Chief Information Officer, IT, and the Vice President, Natural Resources and Real Property Services, collaborate to develop a plan to:
  - a. Periodically reinforce the TVA Board's understanding of their security responsibilities for handling TVA information and accessing TVA information systems.
  - b. Train Directors' assistants about their security responsibilities for handling TVA information and accessing TVA information systems.

**TVA Management's Comments** – The chair of the TVA Board agreed with our recommendations and stated the Board is continuing to explore options around the recommendation for using TVA e-mail addresses. See the Appendix for TVA management's complete response.



June 23, 2015

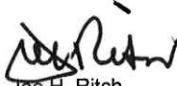
Richard W. Moore, ET 4C-K

RESPONSE TO REQUEST FOR COMMENTS – DRAFT AUDIT 2015-15292 – ELECTRONIC  
COMMUNICATIONS BY TVA'S BOARD OF DIRECTORS

This responds to your April 23, 2015, draft audit report on electronic communications by TVA's Board of Directors. We appreciate your review of this area.

As you note in the draft report, the Board's current email practices are consistent with the Presidential and Federal Records Act Amendment of 2014. Per your findings, periodic trainings will be provided to Directors on the security of TVA information including email. This action will be implemented by adding the training to the Board's annual agenda. In addition, Board Services will work with TVA's Chief Information Officer to ensure that Director's assistants with access to sensitive information also receive training or information on how to handle this information correctly.

You also recommended that Directors only utilize TVA emails for TVA affiliated business in order to reduce risk. We continue to explore options around this recommendation. We will continue to use the secure Board Portal for TVA sensitive information. We are also reviewing various technology/software options and possibly developing a Board Practice specific to Board email usage. A recent trial of TVA's current "bring your own device software" surfaced some practical issues. We will provide you updates as we continue to review the risk and options to mitigate.



Joe H. Ritch  
Chair, Board of Directors

JHR:MMP

cc: William D. Johnson, WT 7B-K  
Jeffrey T. McKenzie, WT 7B-K  
Mary Margaret Painter, WT 7B-K  
Ricardo G. Perez, MR 3A-C  
Sherry A. Quirk, WT 6A-K  
Rebecca C. Tolene, WT 7B-K  
Daniel A. Traynor, SP 3A-C  
TVA Board of Directors