Memorandum from the Office of the Inspector General

February 19, 2020

Jeremy P. Fisher

FINAL REPORT – AUDIT 2015-15275 – TVA'S IDENTITY AND ACCESS MANAGEMENT PROJECT

As part of our fiscal year (FY) 2015 annual audit plan,[1] we performed an audit of Tennessee Valley Authority's (TVA) program to implement an identity and access management (IAM) solution. We scheduled this implementation audit to determine the effectiveness of the actions TVA planned to take to address findings and recommendations in our audit of contractor physical and logical access.[2] Our objective was to determine if the IAM program and related projects were implemented effectively.

In summary, we found the TVA project team has effectively implemented the IAM program and related projects. TVA expanded the IAM program to include additional user access management tools and processes, which included privileged identity management (PIM). We identified documentation concerns regarding PIM that were (1) communicated to the project management team during the audit and (2) addressed by TVA management prior to completion of rollout.

BACKGROUND

IAM is a high-level process whereby users, user credentials, and their associated privileges are created, assigned, modified, and deleted (when privileges are no longer needed) to ensure data access is limited to appropriate individuals when needed for business purposes. TVA's original solution, which was implemented prior to 2011, automated the creation of credentials but required heavy manual processing for user modification and deletion with few self-service options.

The IAM program was initially launched as a project in 2010 with a study being conducted on TVA's behalf by a third party. The study's recommendations were under consideration until the IAM project was initiated in 2013 to improve TVA's process to meet current and future TVA requirements and security best practices. The 2013 project plan initially expected a 15 month implementation schedule for all project phases. During our audit, the project was extended to include phases for automated access reviews, role-based access control, and privileged identity management, collectively known as the IAM program. TVA implemented the previously mentioned projects over the course of FYs 2015 through 2020.

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[1] TVA's Identity and Access Management project was extended into a multiyear program.

[2] Audit Report 2010-13132, *Review of Physical and Logical Access for Contractors*, June 15, 2011.

We included this implementation audit as part of our FY 2015 annual audit plan to determine the effectiveness of the actions TVA planned to take in response to our audit of contractor physical and logical access.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objective was to determine if the IAM program and related projects were implemented effectively. The audit scope included the design and implementation phases of the IAM program. Fieldwork was performed between October 2014 and January 2020. To meet our objective, we:

- Attended project meetings for the program overall, the user access management solution, automated access reviews, role-based access control, and privileged identity management.

- Obtained and reviewed system and user design documentation for the user access management solution, automated access reviews, and role-based access control.

- Obtained and reviewed documentation to determine if business units were appropriately involved in the projects.

- Obtained and reviewed post-implementation documentation for the user access management solution, automated access reviews, and role-based access control.

- Obtained and reviewed implementation documentation for privileged identity management.

We did not identify internal controls significant to our audit objective; therefore, internal controls were not tested as part of this audit. 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

We found the TVA project team has effectively implemented the IAM program and related projects. Specifically, the project team:

- Replaced heavy manual access processes with an automated access solution in 2015.

- Successfully implemented automated access reviews in 2016.

- Implemented role-based access control in a limited manner in 2016 and updated and expanded role-based access control in 2017.

- Implemented PIM in a limited manner in 2019.

We identified documentation concerns regarding PIM that were (1) communicated to the project management team during the audit and (2) addressed by TVA management prior to completion of rollout. No further action is required.

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This report is for your review and information. No response to this report is necessary. Information contained in this report will be subject to public disclosure. If you have any questions or need additional information, please contact Megan Spitzer, Senior Auditor, at (865) 633-7394 or Sarah Huffman, Director, Information Technology Audits, at (865) 633-7345. We appreciate the courtesy and cooperation received from your staff during the audit.

David P. Wheeler
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   (Audits and Evaluations)

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