



Memorandum from the Office of the Inspector General

May 22, 2019

Joshua W. Shultz, MR 1A-C

**REQUEST FOR MANAGEMENT DECISION – EVALUATION 2018-15609 –
ORGANIZATIONAL EFFECTIVENESS – TRANSMISSION OPERATIONS, RELIABILITY,
AND SUPERVISORY CONTROL AND DATA ACQUISITION**

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. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding audits that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our findings, please contact Noel K. Kawado, Senior Auditor, at (865) 633-7348 or Lisa H. Hammer, Director, Evaluations – Organizational Effectiveness, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during the evaluation.

David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)
WT 2C-K

NKK:KDS
Attachment
cc (Attachment):

TVA Board of Directors
Clifford L. Beach Jr., WT 7B-K
Janet J. Brewer, WT 7C-K
Susan E. Collins, LP 6A-C
James R. Dalrymple, MR 3H-C
Robertson D. Dickens, WT 9C-K
Megan T. Flynn, LP 3A-C
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Jeffrey J. Lyash, WT 7B-K

Justin C. Maierhofer, WT 7B-K
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Wilson Taylor III, WT 7D-K
Rebecca C. Tolene, WT 7B-K
OIG File No. 2018-15609



Office of the Inspector General

Evaluation Report

To the General Manager,
Transmission Operations,
Reliability, and Supervisory
Control and Data Acquisition

ORGANIZATIONAL EFFECTIVENESS – TRANSMISSION OPERATIONS, RELIABILITY, AND SUPERVISORY CONTROL AND DATA ACQUISITION

Evaluation Team
Noel K. Kawado
Justin B. Franklin

Evaluation 2018-15609
May 22, 2019

ABBREVIATIONS

EP&R	Emergency Preparedness and Response
FY	Fiscal Year
GM	General Manager
MTOP	Manager, Transmission Operations
NERC	North American Electric Reliability Corporation
SCADA	Supervisory Control and Data Acquisition
TFO	Transmission Field Operations
TOPS	Transmission Operations and Power Supply
TORS	Transmission Operations, Reliability, and Supervisory Control and Data Acquisition
TPS	Transmission and Power Supply
Training	North American Electric Reliability Corporation, Regulatory, and Operations Training
TVA	Tennessee Valley Authority

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Evaluation 2018-15609 – Organizational Effectiveness – Transmission Operations, Reliability, and Supervisory Control and Data Acquisition

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its mission and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, team engagement, and operational performance. Specifically, values and behaviors that drive good performance should be embedded throughout the organization’s business processes and exemplified by the individuals that manage and work in the organization. The Tennessee Valley Authority’s (TVA) 2018 Risk Assessment Summary recognized that (1) workforce strategy and management risksⁱ and (2) workplace environment risksⁱⁱ could negatively affect the performance environment. Therefore, employee engagement is critical.

Due to the importance of alignment between strategy, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across TVA. This evaluation focuses on TVA’s Transmission Operations, Reliability, and SCADAⁱⁱⁱ (TORS) business unit under Transmission Operations and Power Supply (TOPS). TOPS falls under the Transmission and Power Supply strategic business unit.

At the time we started our review, the TORS business unit was comprised of (1) Transmission Operations, (2) a North American Electric Reliability Corporation (NERC), Regulatory and Operations Training (Training) department, and (3) a SCADA and Reliability Systems department. According to information provided by TORS’ personnel, TORS’ mission is to “[e]nsure reliable and compliant transmission system operations through maintaining configuration control over TVA transmission grid, real-time operations of transmission assets, and response to emergency transmission outages.”

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- ⁱ Workforce strategy and management risks include failure to maintain key leadership positions, ineffective talent management, and performance management shortfalls.
 - ⁱⁱ Workplace environment risks include lack of organizational adaptability, lack of inclusion and employee engagement, and inappropriate workplace incidents.
 - ⁱⁱⁱ The acronym, SCADA, is defined as Supervisory Control and Data Acquisition.



Evaluation 2018-15609 – Organizational Effectiveness – Transmission Operations, Reliability, and Supervisory Control and Data Acquisition

EXECUTIVE SUMMARY

What the OIG Found

During the course of our evaluation, we identified strengths that positively affected the day-to-day activities of TORS' personnel and performance. These strengths included (1) organizational alignment for the majority of TORS' personnel, (2) teamwork within departments in TORS, and (3) leadership of first-line supervisors (management level directly above nonmanagerial workers). However, we identified risks that could impact TORS' effectiveness and its continued ability to meet its responsibilities in support of Transmission and Power Supply's (TPS) mission. These included:

- Alignment risks due to organizational reporting issues with two functions in TORS.
- Engagement risks related to (1) career development opportunities in the Transmission Operations and Training departments and (2) a perceived lack of accountability of certain System Operations Specialists in the Transmission Operations department.
- Execution risks related to (1) perceptions of inadequate staffing in the Transmission Operations and Training departments and (2) outage scheduling challenges expressed by Transmission Operations' personnel.

Based on our findings and using TVA's Business Operating Model, we assessed TORS' level of risk in the areas of alignment, engagement, and execution. As shown in the table on the following page, we determined:

- Alignment risk is rated low. We found employees' goals generally aligned to management goals, which supported TORS' mission. We also confirmed TORS' mission, action plans, and initiatives aligned with both TPS' and TVA's mission. However, two functions in TORS may be better suited to report to a position above the General Manager (GM), TORS, to more effectively support TPS and TOPS. This issue, in our opinion, did not significantly impact alignment risk within TORS.
- Engagement risk is rated medium based on concerns related to career development opportunities in the Transmission Operations and Training departments and perceptions of lack of accountability with certain System Operations Specialists.



Evaluation 2018-15609 – Organizational Effectiveness – Transmission Operations, Reliability, and Supervisory Control and Data Acquisition

EXECUTIVE SUMMARY

- Execution risk is rated medium based on concerns of inadequate staffing in the Transmission Operations and Training departments and outage scheduling challenges expressed by personnel in Transmission Operations.

	Low Risk	Medium Risk	High Risk
Alignment	X		
Engagement		X	
Execution		X	

What the OIG Recommends

During our evaluation, management took action that addressed certain risks related to career development opportunities (including lack of communication with job rotations, lack of a progression plan, and lack of accountability in Transmission Operations) and inadequate staffing and outage scheduling concerns in Transmission Operations. Based on the remaining risks, we recommend the GM, TORS, address (1) alignment concerns related to organizational reporting of two functions, (2) engagement issues related to career development opportunities in the Transmission Operations and Training departments, and (3) execution risks concerning lack of staffing in the Training department.

TVA Management’s Comments

In response to our draft report, TVA management provided informal comments that we incorporated, as appropriate. In addition, TVA Management stated that they agreed with our findings and recommendations and will communicate planned actions.

See Appendix B for TVA management’s complete response.

BACKGROUND

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its mission and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, team engagement, and operational performance. Specifically, values and behaviors that drive good performance should be embedded throughout the organization's business processes and exemplified by the individuals that manage and work in the organization.

In recent years, the Tennessee Valley Authority (TVA), has faced internal and external economic pressures and implemented cost-cutting measures in an attempt to keep rates low and reliability high while continuing to fulfill its broader mission of environmental stewardship and economic development. TVA's 2018 Risk Assessment Summary recognized that (1) workforce strategy and management risks¹ and (2) workplace environment risks² could negatively affect the performance environment. Therefore, employee engagement is critical.

Due to the importance of alignment between strategy, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across TVA. This evaluation focuses on TVA's Transmission Operations, Reliability, and SCADA³ (TORS) business unit under Transmission Operations and Power Supply (TOPS). TOPS falls under the Transmission and Power Supply (TPS) strategic business unit. TPS' mission is to safely operate TVA's power grid so customers receive reliable, low-cost power and to do their part to sustain the reliability of the Eastern Interconnect. As part of its responsibilities, TPS plans, designs, builds, operates, and maintains TVA's transmission system, and participates in the market to purchase and sell power for economic and reliability purposes.

Based on its fiscal year (FY) 2018 Annual Report, TVA's transmission system has interconnections with 13 neighboring electric systems and delivered nearly 163 billion kilowatt-hours of electricity to Tennessee Valley customers in 2018. TVA is subject to federal reliability standards set forth by the North American Electric Reliability Corporation (NERC) and approved by the Federal Energy Regulatory Commission. These standards are designed to maintain the reliability of the bulk electric system. According to TVA, it has responsibility for grid reliability in the TVA service area and has operated with 99.999 percent reliability over the last 18 years (as of September 30, 2018) in delivering electricity to customers.

¹ Workforce strategy and management risks include failure to maintain key leadership positions, ineffective talent management, and performance management shortfalls.

² Workforce environment risks include lack of organizational adaptability, lack of inclusion and employee engagement, and inappropriate workplace incidents.

³ The acronym, SCADA, is defined as Supervisory Control and Data Acquisition.

Consistent with and supportive of TPS' mission and responsibilities, TORS' mission, according to information provided by TORS' personnel, is to "[e]nsure reliable and compliant transmission system operations through maintaining configuration control over TVA transmission grid, real-time operations of transmission assets, and response to emergency transmission outages."

At the time we started our review, TORS was comprised of (1) Transmission Operations; (2) a NERC, Regulatory and Operations Training (Training) department; and (3) a SCADA and Reliability Systems department.

- Transmission Operations is primarily responsible for directing the safe and reliable real-time operation of the TVA transmission system, ensuring connectivity of the bulk electric system, and maintaining compliance with applicable NERC reliability standards. This includes writing, reviewing, and/or directing all switching activities and outages to minimize negative impacts on the generation needs of the TVA transmission system.

According to TORS' personnel, as of October 2018 Transmission Operations had seven crews consisting of a Manager and System Operations Specialists as well as two other Managers who study outages and plan out the work week. Transmission Operations' responsibilities include working with Transmission Field Operations (TFO) personnel to coordinate outages to upgrade or maintain equipment affecting transmission. In addition, Transmission Operations included a Senior Program Manager, Transmission Emergency Preparedness and Response (EP&R). This Senior Program Manager is responsible for the oversight, management, and support of the EP&R Program for the Transmission SBU.⁴

- The Training department is accountable for the governance, execution, and administration of the TOPS System Operator Initial and Continuing Education training programs and for ensuring all training records are properly documented and stored. Specifically, this department provides training to System Operations Specialists in TORS, as well as System Operators in other TPS business units, including TFO and Transmission Engineering and Construction. Individuals in this department are also tasked with supporting and making recommendations to TOPS management related to NERC training program requirements.
- The SCADA and Reliability Systems department is responsible for managing and ensuring the functionality, operability and reliability of real-time SCADA⁵ and Energy Management Systems to facilitate the reliable and economic operation of the TVA power system. According to personnel in this department, part of their job responsibilities include supporting transmission

⁴ The Senior Program Manager, Transmission EP&R, currently reports to the GM, TORS.

⁵ TVA's SCADA system is a central computing system that monitors and controls the TVA transmission system and balances load and supply in real time. Site control is performed automatically through hundreds of dispersed Remote Terminal Units.

capital projects and using information (data points) to monitor TVA's transmission system through the SCADA system.

According to TORS' personnel, TVA's System Operators (which include System Operations Specialists in TORS) annually perform over 25,000 maintenance and emergency switching orders and operate a transmission system with:

- Approximately 2,500 miles of 500 kilovolt transmission lines, 11,700 miles of 161 kilovolt transmission lines, and 2,000 miles of other voltage transmission lines.
- 508 transmission substations and switching stations.
- 1,321 customer connection points (customer, generation, and interconnection).

TORS tracks metrics primarily related to system reliability. According to the General Manager (GM), TORS, the majority of TORS' operations take place at TVA's System Operations Center, currently located at TVA's Chattanooga Office Complex.⁶ As of October 9, 2018, TORS had 56 employees, including a GM,⁷ a SCADA and Reliability Systems manager, a Training manager, and nine Transmission Operations managers.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify strengths and risks that could impact TORS' organizational effectiveness. We assessed operations from October 1, 2017, through December 2018, and culture at the time of our interviews and fieldwork, which occurred from October 2018 through January 2019. To complete the evaluation, we:

- Reviewed TVA's and TPS' FY2019 through FY2021 Business Plans to determine whether TORS' mission, action plans, and initiatives aligned with TPS' and TVA's mission.
- Reviewed TVA values and competencies (see the Appendix) for an understanding of cultural factors deemed important to TVA.
- Conducted individual interviews with 55 employees,⁸ including management, and analyzed the results to identify themes related to strengths and risks that could affect organizational effectiveness.

⁶ According to TVA's FY2018 annual report, the TVA Board approved \$245 million for the construction of a new System Operations Center, which is being built to accommodate a new energy management system and to adapt to new regulatory requirements. TVA expects the facility to be constructed by 2021 and fully operational by 2023.

⁷ On October 29, 2018, TORS named a new GM, replacing the prior GM who rotated to another position within TORS. We did not interview the prior GM.

⁸ One individual stated he was no longer in TORS when we scheduled interviews, and therefore, was not interviewed. We interviewed 2 interns, but did not include their results as part of this report because interns generally have a more limited exposure to the organization.

- Conducted individual interviews with a judgmentally selected sample of 19 TFO personnel, including Program Managers, Transmission Maintenance; Regional GMs; and Transmission Service Center Managers, to obtain their views about the products and services provided by TORS.
- Obtained and reviewed select TVA Standard Programs and Processes and guidelines to gain an understanding of certain processes.
- Obtained and reviewed TVA documents to gain an understanding of training requirements for System Operations Specialists in TORS.
- Reviewed and analyzed the FY2018 performance documentation for all management and employees of record as of October 18, 2018, for alignment within each department and to TORS' mission.
- Assessed the overall effectiveness of TORS in the following areas, as included in TVA's Business Operating Model:
 - Alignment – How well the organization coordinates the activities of its many components for the purpose of achieving its long-term objectives—this is grounded in an understanding of what the organization wants to achieve, and why.
 - Engagement – How the organization achieves the highest level of performance from its employees.
 - Execution – How well the organization achieves its objectives and mission.

This evaluation was performed in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation*.

OBSERVATIONS

During the course of our evaluation, we identified strengths that positively affected the day-to-day activities of TORS' personnel and performance. However, we also identified risks that could impact TORS' effectiveness and its continued ability to meet its responsibilities in support of TPS' mission.

STRENGTHS

During the course of our interviews and data analyses, we identified strengths that positively affected the day-to-day activities of TORS' personnel and performance. These strengths related to (1) organizational alignment for the majority of TORS' personnel, (2) teamwork within departments in TORS, and (3) leadership of first-line supervisors (management level directly above nonmanagerial workers).

Organizational Alignment

Our assessment of performance management documentation for TORS' employees revealed that generally performance goals aligned with TORS'

management, and those goals supported TORS' mission. In addition, TORS' mission, actions plans, and initiatives supported TPS' and TVA's missions.

Teamwork within TORS

The majority of employees interviewed provided positive comments related to teamwork within their departments. Some examples given were a willingness to help each other and good communication. The majority of individuals also indicated that they trusted their coworkers to do their job well. This strength is consistent with TVA's collaboration value, which includes, among other attributes, teamwork.

Leadership of First-Line Supervisors

Most employees indicated that their first-line supervisors (management level directly above nonmanagerial workers) displayed leadership qualities, which can support them in performing their work. These employees indicated that they trusted their supervisors and were comfortable raising a differing opinion. Most employees also indicated first-line supervisors communicated well.

RISKS

During the course of our evaluation, we identified risks that could impact TORS' effectiveness and its continued ability to meet its responsibilities in support of TPS' mission. These included (1) alignment risk due to organizational reporting issues with two functions in TORS, (2) engagement risks related to career development opportunities and a perceived lack of accountability, and (3) execution risks related to perceptions of inadequate staffing and outage scheduling challenges.

Alignment Risk Due to Organizational Reporting

Although TORS' management and employee performance goals aligned and supported TORS' mission, we noted that the Training and the EP&R functions currently fall under the GM, TORS, although both provide services to other TPS organizations.

- Training employees are tasked with supporting and making recommendations to TOPS management related to satisfying NERC training requirements. The majority of individuals in the Training department expressed concerns that the current reporting structure may present a conflict of interest. Currently, the Manager of the Training department reports to the GM, TORS, even though that department provides training to other individuals outside of TORS.
- The EP&R function for all of TPS resides in TORS, with one individual responsible for carrying out those responsibilities. According to the position's job description, this individual is responsible for establishing and maintaining all required emergency-related procedures, processes, equipment, and facilities to provide for the protection and reliable operations of TVA's transmission system and its critical assets during power system emergencies; for overseeing the preparation for (training and drills included) and recovery from emergency events ranging from natural disasters to acts of

terrorism/sabotage; and for ensuring full regulatory compliance is maintained for the avoidance of severe financial and/or operational consequences. We also noted that this individual's FY2018 performance goals, which centered primarily on EP&R goals within TPS and TOPS, did not align to that individual's manager's FY2018 performance goals, which were generally consistent with TORS' mission.

Reporting to an appropriate level of management could allow easier access to individuals to more effectively and efficiently address issues that come up. This could positively contribute to an organization's ability to achieve its mission.

Engagement Issues in Two Departments

Nearly half of the personnel we interviewed indicated concerns with issues affecting morale. Specific issues that could further erode morale included (1) career development opportunities in the Transmission Operations and Training departments and (2) lack of accountability in Transmission Operations.

Concerns Related to Career Development Opportunities

Many employees interviewed in the Transmission Operations and Training departments expressed concerns around career development opportunities. Specific concerns which were discussed related to the job selection process, career progression, and training opportunities.

- Several employees in the Transmission Operations and Training departments expressed their belief that there had been favoritism when individuals were selected to fill job rotations or permanent positions in Transmission Operations, which some attributed to prior TORS' management. Additionally, a couple of individuals from Transmission Operations indicated that rotations had not been communicated to the entire group.
- Several individuals from Transmission Operations expressed concerns related to career progression for System Operations Specialists. A few of these individuals elaborated that there is no defined path for transitioning to a level above a System Operations Specialist II.
- The majority of individuals in the Training department expressed their desire to obtain more courses to enhance their training skills. However, some of these individuals indicated a lack of staffing prevented them from doing so. According to the Society for Human Resource Management:

[E]mployees usually feel more engaged when they believe that their employer is concerned about their growth. . . A career development path provides employees with an ongoing mechanism to enhance their skills and knowledge that can lead to mastery of their current jobs, promotions and transfers to new or different positions. Implementing career paths may also have a direct impact on the entire organization by improving morale, career satisfaction, motivation, productivity, and responsiveness in meeting departmental and organizational objectives.

The GM, TORS, subsequently provided us documentation of recent actions to help address employees' expressed concerns related to communication of job opportunities and career progression. The documentation included:

- A March 2019 e-mail announcing two job opportunities in Transmission Operations. Information about the opportunities was included in this announcement, including desired skills and/or qualifications.
- A copy of a progression plan to transition from System Operations Specialist II to III, which was distributed to Transmission Operations' staff in April 2019. The progression plan included four phases, with each phase including requirements to advance to the succeeding phase. TORS' management acknowledged that because the progression plan is new, it will likely be modified as individuals go through the program and issues are identified and resolved.

Lack of Accountability

Several individuals in Transmission Operations and a couple of individuals in the Training department indicated their perception that management was not holding certain System Operations Specialists accountable to fulfill their job responsibilities. We also noted that a couple of managers in Transmission Operations indicated that it is difficult to hold employees accountable because of the large amount of effort that is involved in doing so.

We discussed these accountability concerns with the GM, TORS, who subsequently informed us, Transmission Operations' managers had been requested (in March 2019) to formally track the work of System Operations Specialists to help document employee gaps and help those employees improve, in an effort to keep TFO personnel safe and maintain system reliability. Different methods for tracking work were included in the communication.

Execution Risks

While most individuals indicated that they had the tools, training, and certifications (where applicable) necessary to do their job we identified risks related to execution of the mission in the Transmission Operations and Training departments. These included (1) perceptions of inadequate staffing in both departments and (2) outage scheduling challenges expressed by Transmission Operations' personnel with certain customers.

Perceptions of Inadequate Staffing – Transmission Operations

Several employees in Transmission Operations and the majority of individuals in the Training department indicated that staffing levels could be improved to more effectively carry out their workloads. For example, a few individuals in Transmission Operations indicated their belief that they have more work than other Operators who work at other utilities. According to these individuals, unlike Operators at other utilities, their workload includes clearance and switching work, which detracts from being focused on the transmission system. In addition, a couple of individuals in Transmission Operations indicated that certain tasks

assigned to them took away from their primary goal of monitoring the transmission system. As previously stated, TORS' mission is to ensure reliable transmission operations. Some examples that Transmission Operations' employees indicated could have a negative impact on staffing included:

- Many individuals expressed that their job responsibilities involve a high level of stress, which a few individuals indicated has or could be contributing to high turnover in their department. A few individuals in TFO (which is a customer group of Transmission Operations) also raised turnover of System Operations Specialists as a concern.
- Some individuals indicated that hiring new individuals does not immediately address staffing and workload concerns because of the training time that is required before an individual can work as a System Operations Specialist.⁹
- Some individuals indicated management's use of the term "job rotation," as previously described, was misleading because those selected for such opportunities did not always rotate back to their original position. A few of these individuals indicated that these rotations have exacerbated the lack of staffing concern because it could result in staffing losses.

To address the staffing concerns, the GM, TORS, provided us with a March 2019 e-mail to be sent to all System Operations Specialists informing them that they had hired five System Operator Initial Trainees with a planned start date of April 1, 2019. Management also stated that it planned to hire four additional individuals as System Operations Specialist IIs, with a planned start date on or around June 1, 2019.

Perceptions of Inadequate Staffing – Training Department

The majority of Training employees indicated that staffing levels should be increased to help them better administer the training program. Several individuals in the Training department stated that previous external reviews had recommended increased staffing, but that no action had been taken to address this recommendation. We obtained the briefing slides, dated 2018, for one of reviews, which was conducted by the North American Transmission Forum. Among other things, the slides included recommendations to allocate additional full time personnel for training, and to invest time and resources towards understanding and responding to the needs of operator training.

Outage Scheduling Challenges

As part of their responsibilities, Transmission Operations' personnel work with TFO to schedule outages and write switching orders in order to isolate possible sources of energy that could pose a danger to TFO personnel performing the work associated with the outage. Many individuals in Transmission Operations

⁹ According to TRANS-TRA-SPP-30.043, *Transmission Operations & Power Supply (TOPS) System Operator Training Program*, the trainee is expected to complete all elements of the training program, including self study, computer based, simulator, instructor led, field visits, and on-the-job learning activities, in 6 to 12 months.

expressed concerns about their interactions with TFO personnel related to the outage process. Comments provided by individuals raised concerns about the timeliness and accuracy of outage requests submitted by TFO to Transmission Operations.

- Timeliness – TRANS-SPP-30.003, *Transmission Outage Scheduling and Coordination Process*, provides that short-term outage requests that require new detailed switching orders must be submitted to Transmission Operations a minimum of 7 days in advance of the scheduled start of the outage. Some Transmission Operations' employees indicated that TFO personnel may not submit their requests in accordance with the time lines established by this procedure. A few of these individuals indicated this could increase safety risks because it could shorten the time to prepare and review switching orders. In addition, a couple of Transmission Operations' employees indicated their managers do not appropriately push back when TFO requests are made outside of the prescribed time periods. In our opinion, this could set a precedent that requests do not need to be submitted in accordance with TPS procedures.

In an e-mail to us dated April 11, 2019, the GM, TORS, informed us of a communication to TFO personnel regarding the time requirements for submitting new switching orders of 7 days and acknowledged that not following this requirement could pose human performance risks to TFO personnel. The e-mail proposed a hard enforcement date beginning June 1, 2019, with the goal of increasing the time requirement to 10 or 14 days, approximately 6 months later.

- Accuracy – Some Transmission Operations' employees indicated that outage requests from TFO personnel may contain missing, unclear, or erroneous information. A few of these individuals indicated that this issue can further strain Transmission Operations resources because of the extra time needed to address those inaccuracies with TFO personnel.

An additional concern provided was the perception that TFO personnel expressed frustration when certain requests could not be accommodated. A couple of individuals indicated that TFO personnel may not understand Transmission Operations' responsibilities in managing the TVA transmission system. These responsibilities include prioritizing requests across all of TVA.

We interviewed a judgmental sample of individuals in TFO to obtain feedback on their interactions with Transmission Operations' personnel. The majority of TFO personnel provided positive comments and/or ratings related to the quality of services provided and timeliness in responding to requests. However, some areas for improvement were offered including (1) changes to the outage scheduling process related to prioritization, scheduling, and cancellations and (2) more focus on staff retention within Transmission Operations.

CONCLUSION

Our evaluation identified strengths related to organizational alignment for the majority of TORS' personnel, teamwork within departments in TORS, and leadership of first-line supervisors (management level directly above nonmanagerial workers). However, we also identified risks that could impact TORS' effectiveness and its continued ability to meet its responsibilities in support of TPS' mission. These included (1) alignment risk due to organizational reporting issues with two functions in TORS, (2) engagement risks related to career development opportunities in the Transmission Operations and Training departments and lack of accountability in Transmission Operations, and (3) execution risks related to perceptions of inadequate staffing in the Transmission Operations and Training departments and outage scheduling challenges expressed by Transmission Operations' personnel.

Based on our findings and using TVA's Business Operating Model, we assessed TORS' level of risk in the areas of alignment, execution, and engagement. We determined:

- Alignment risk is rated low. We found employees' goals generally aligned to management goals, which supported TORS' mission. We also confirmed TORS' mission, actions plans, and initiatives aligned with both TPS' and TVA's mission. However, we identified two functions in TORS that could be better suited to report to a position above the GM, TORS, to more effectively support TPS and TOPS. This issue, in our opinion, did not significantly impact alignment risk within TORS.
- Engagement risk is rated medium based on concerns related to career development opportunities in the Transmission Operations and Training departments and perceptions of lack of accountability with certain System Operations Specialists.
- Execution risk is rated medium based on concerns of inadequate staffing in the Transmission Operations and Training departments and outage scheduling challenges expressed by personnel in Transmission Operations.

RECOMMENDATIONS

During our evaluation, management took action that addressed certain risks related to engagement and execution. Based on the remaining risks, we recommend the GM, TORS:

1. Assess the organizational alignment of the Training and EP&R functions reporting to the GM, TORS, and modify, as appropriate.
2. Address concerns related to career development opportunities by:
 - (1) addressing favoritism concerns around job opportunities in Transmission

- Operations and (2) considering the provision of supplemental training for individuals in the Training department to enhance their skills.
3. Evaluate staffing levels in the Training department and modify as appropriate.

TVA MANAGEMENT'S COMMENTS

In response to our draft report, TVA management provided informal comments that we incorporated, as appropriate. In addition, TVA management stated that they agreed with our findings and recommendations and will communicate planned actions. .

See Appendix B for TVA management's complete response.

TVA Values	
Safety	We share a professional and personal commitment to protect the safety of our employees, our contractors, our customers, and those in the communities that we serve.
Service	We are privileged to be able to make life better for the people of the Valley by creating value for our customers, employees, and other stakeholders. We do this by being a good steward of the resources that have been entrusted to us and a good neighbor in the communities in which we operate.
Integrity	We conduct our business according to the highest ethical standards and seek to earn the trust of others through words and actions that are open, honest, and respectful.
Accountability	We take personal responsibility for our actions, our decisions, and the effectiveness of our results, which must be achieved in alignment with our company values.
Collaboration	We are committed to fostering teamwork, developing effective partnerships, and valuing diversity as we work together to achieve results.

TVA Leadership Competencies

- Accountability and Driving for Results
- Continuous Improvement
- Leveraging Diversity
- Adaptability
- Effective Communication
- Leadership Courage
- Vision, Innovation, and Strategic Execution
- Business Acumen
- Building Organizational Talent
- Inspiring Trust and Engagement

From: Shultz, Joshua W
Sent: Tuesday, May 14, 2019 10:06 AM
To: Wheeler, David P.
Subject: RE: Request for Comments – Draft Evaluation 2018-15609 – Organizational Effectiveness – Transmission Operations, Reliability, and Supervisory Control and Data Acquisition

David,

We appreciate your team's focus on the organization effectiveness of TORS, and the partnership your team has with us to make our organization and ultimately TVA better! I confirm agreement with the findings and recommendations in the draft report. My management team and I have already addressed and implemented changes to meet several of the concerns, as noted in the draft report. TPS has a Sr. MRC scheduled on May 28 to discuss these and other actions in response to your recommendations. I plan tracking with the CR process, and will share this CR # and actions with your team after this MRC.

Thank you,

Josh

Josh Shultz, PE
GM, Transmission Ops, Reliability and SCADA
TVA Transmission Operations and Power Supply

