



Memorandum from the Office of the Inspector General

September 21, 2021

Jerry R. Ake

REQUEST FOR FINAL ACTION – EVALUATION 2021-15801 – ORGANIZATIONAL EFFECTIVENESS – TRANSMISSION FIELD OPERATIONS, NORTH MAINTENANCE

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete. 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 evaluations 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.

(for) David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)

NKK:KDS

Attachment

cc (Attachment):

TVA Board of Directors
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OIG File No. 2021-15801



Office of the Inspector General

Evaluation Report

To the General Manager,
North Maintenance

ORGANIZATIONAL EFFECTIVENESS – TRANSMISSION FIELD OPERATIONS, NORTH MAINTENANCE

Auditor
Noel K. Kawado

Evaluation 2021-15801
September 21, 2021

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Evaluation 2021-15801 – Organizational Effectiveness – Transmission Field Operations, North Maintenance

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. Due to the importance of alignment, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across the Tennessee Valley Authority (TVA). This evaluation focuses on Transmission Field Operations, North Maintenance, an organization within TVA’s Transmission and Power Supply Business Unit.

As part of Transmission Field Operations, North Maintenance is responsible for performing preventive and corrective maintenance on system equipment to meet safety, reliability, and regulatory requirements; replacing transmission equipment; providing routine and emergency transmission operations/switching services; and providing 24 hours a day, 7 days a week, emergency response as the first responder for system events. North Maintenance is comprised of the Columbia, Tennessee; Murfreesboro, Tennessee; Mayfield, Kentucky; and Bowling Green, Kentucky, Transmission Service Centers. The objective of this evaluation was to identify factors that could impact North Maintenance’s organizational effectiveness.

What the OIG Found

During the course of our evaluation, we identified behaviors that had a positive impact on North Maintenance; however, we also identified needed improvements related to coworker interactions with a few employees. We also identified minimal risks to operations that, if unaddressed, could hinder North Maintenance’s effectiveness. These were related to resource concerns, including inadequate staffing and equipment and/or tool needs. Based on our observations, we assessed North Maintenance’s level of risk related to behaviors and operations and determined risk was low. Ratings are reflected in the table below:

	Low Risk	Medium Risk	High Risk
Behaviors	X		
Operations	X		



Evaluation 2021-15801 – Organizational Effectiveness – Transmission Field Operations, North Maintenance

EXECUTIVE SUMMARY

What the OIG Recommends

We recommend the General Manager, North Maintenance, address concerns related to employee interactions and staffing, equipment and tool needs.

TVA Management's Comments

TVA management described actions taken and planned to address our recommendations. In addition, TVA management informally provided minor wording changes, which were incorporated in the report as appropriate. See Appendix B for TVA management's complete response.

Auditor's Response

We agree with management's planned actions and actions taken.

BACKGROUND

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its mission and goals. Due to the importance of alignment, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across the Tennessee Valley Authority (TVA). This evaluation focuses on Transmission Field Operations, North Maintenance, an organization within TVA's Transmission and Power Supply.

As part of Transmission Field Operations, North Maintenance is responsible for performing preventive and corrective maintenance on system equipment to meet safety, reliability, and regulatory requirements; replacing transmission equipment; providing routine and emergency transmission operations/switching services; and providing 24 hours a day, 7 days a week, emergency response as the first responder for system events. North Maintenance is comprised of the Columbia, Tennessee; Murfreesboro, Tennessee; Mayfield, Kentucky; and Bowling Green, Kentucky, Transmission Service Centers (TSC).

Each TSC includes electrical and/or system engineers, substation maintenance electricians, and maintenance specialists and technicians. Electrical engineers are responsible for telecommunications and control systems equipment, including maintaining and reviewing asset configuration of such equipment while ensuring compliance with TVA and regulatory standards. System Engineers' duties include performance of engineering assignments related to transmission and/or communication system equipment and issues. In addition, System Engineers are responsible for other duties such as performing root cause analyses of transmission equipment failures and monitoring transmission system component conditions for potential problems.

Substation electrician responsibilities include servicing and maintaining substation, communications, and control circuits and, in emergencies or as required, maintenance and restoration activities on transmission lines. Transmission system maintenance specialists' duties include developing, evaluating, and implementing maintenance programs for specified equipment in TVA's power delivery grid on transmission systems and facilities, including power and auxiliary equipment such as protective relaying and control systems used in substations, generating plants, or other TVA facilities. Telecom maintenance specialists' responsibilities include developing and evaluating maintenance programs for certain equipment in TVA's power delivery grid on the transmission communication system.

Power maintenance technicians perform test and maintenance functions, including drawing reviews and selecting, specifying, trouble shooting, repairing, programming, and testing equipment. Telecommunications technicians are assigned to support telecommunication work, including designing, maintaining, and operating telecommunication systems and facilities for the protection, control, operation, and maintenance of the TVA power system.

In addition, each of the four TSCs includes a TSC Manager and a Program Manager, Transmission Maintenance. The TSC Manager's overall responsibilities include managing the operations and maintenance of all substation and transmission facilities within their assigned area. The Program Manager, Transmission Maintenance's responsibilities include coordinating and scheduling preventive and corrective maintenance work and outages.

Metrics tracked by North Maintenance include those related to safety, budget, timeliness of preventive maintenance work, and schedule adherence. In recent years, North Maintenance's staffing has remained relatively consistent, ranging from 104 employees, as of September 30, 2018, to 109 employees, as of February 8, 2021. These 109 individuals include the general manager, 4 TSC managers, 1 area work coordinator supervisor, 1 management assistant, and 1 individual on rotational management development. The remaining employees were comprised of the following:

TSC	Number of Employees
Columbia, Tennessee	28
Mayfield, Kentucky	22
Bowling Green, Kentucky	20
Murfreesboro, Tennessee	31

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify factors that could impact North Maintenance's organizational effectiveness. We assessed operations as of March 2021 and culture at the time of our interviews, which occurred from March 8, 2021, through June 8, 2021. To complete the evaluation, we:

- Reviewed (1) Transmission and Power Supply Fiscal Year (FY) 2020 through FY 2022 business plan, (2) TVA FY 2021 through FY 2025 business plan, and (3) documentation provided by North Maintenance to gain an understanding of initiatives, metrics, and/or risks within North Maintenance.
- Reviewed TVA values and competencies (see the Appendix for an understanding of cultural factors deemed important to TVA).
- Reviewed select TVA Standard Programs and Processes and other documentation to gain an understanding of processes.
- Examined FY 2019 through December 31, 2020, financial information to gain an understanding of expenditures used in support of the work environment.

- Conducted individual interviews with 103 individuals,¹ including management, and analyzed the results to identify themes that could affect organizational effectiveness.
- Identified 336 potential individuals with whom North Maintenance interacts to get their perception of the organization through surveys. We did not include the results of the survey due to a low response.

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 behaviors that had a positive impact on North Maintenance. These included leadership conduct and relationships with team members, although one area of concern was identified related to coworker interactions in one group. In addition, while concerns were identified related to resources, which included staffing and equipment/tool needs, operational factors impacting North Maintenance's effectiveness were primarily positive.

Behaviors Having a Positive Impact on North Maintenance

According to the Society for Human Resource Management (SHRM),² employee engagement relates to the level of an employee's connection and commitment to the organization. SHRM also specifies drivers of employee engagement, including commitment of leaders, trust in leadership, and positive relationships with supervisors. TVA has developed competencies intended to define common characteristics that set the tone for how work is to be performed in the organization. Defined behaviors are associated with the competencies to provide guidance as to how employees can demonstrate their commitment to TVA values. Based on interviews with individuals within North Maintenance, we determined behavior-related risk was low due to interactions with leadership.

Leadership is a Positive Driver of Engagement

TVA expects leaders to inspire trust and engagement by building a positive environment that motivates others to achieve and exceed organizational goals and team aspirations. We asked individuals within North Maintenance about relationships with their first-line supervisors, middle management, and upper management. Responses from individuals indicated that first-line supervisors are a positive driver of engagement within North Maintenance.

Most individuals commented positively when asked about interactions with first-line management. Examples included first-line management being

¹ We did not interview two individuals due to unavailability and/or transfer to another group, one individual that could not be reached, and three individuals who did not wish to be interviewed.

² SHRM is a membership organization for Human Resource professionals.

helpful/supportive, engaged, and/or knowledgeable. In addition, most individuals felt communication with first-line supervisors was positive. Examples included management being receptive to feedback and communicating necessary information. Most also indicated they trusted their first-line management and felt comfortable reporting concerns or offering a differing opinion. Finally, the majority of individuals commented positively on accountability and recognition from first-line management. Several individuals indicated first-line management provides praise for work performed or recognition for identification of good catches.³ Several individuals shared positive comments about leadership when asked about drivers of positive morale in their area.

Most individuals did not provide an opinion on their interactions with middle or upper management, indicating that they had limited or no interactions with those levels of management. Of those that did provide an opinion, most or all commented positively on communication, trust, accountability, recognition, and comfort in reporting concerns and/or offering a differing opinion.

Relationships with Team Members

TVA expects employees to earn the trust of others through open, honest, and respectful words and actions and to conduct business in accordance with ethical standards. Most individuals commented positively on interactions with others in their group and indicated they trusted their coworkers to do their jobs well. Comments shared included having good teamwork, being supportive of each other, and/or having good communication. In addition, most individuals believed the ethical culture⁴ in the organization was positive. Many individuals indicated teamwork or positive coworker interactions as drivers of positive morale in their area.

We did identify coworker interaction and trust concerns with a few employees in one subgroup at a TSC. We discussed these concerns with North Maintenance management.

Minimal Risk to Operations

Based on our interviews, we identified minimal risks to operations that, if unaddressed, could hinder North Maintenance's effectiveness. Many individuals indicated having no concerns with completing their primary job responsibilities. Many individuals also commented positively on actions taken by management to enhance workplace flexibility, with several of these employees indicating these efforts were implemented because of the COVID-19 pandemic. Examples included allowing employees to telework or report to alternate work locations, which some employees indicated made work more efficient because it reduced travel time or allowed them to be more productive.

³ A good catch is a condition that has the potential to cause an event but does not due to a corrective action or timely intervention.

⁴ Ethical culture, as defined in this evaluation, refers to the shared concept of right and wrong behavior in the workplace.

However, while most individuals indicated having adequate resources to complete their work, several individuals expressed concerns related to staffing, equipment, and/or tools. Regarding staffing, several individuals across three of the four TSCs perceived that their area is understaffed, with some of those expressing that the low staffing can make it difficult to get the work done. In addition, several individuals in those same three TSCs indicated issues with tools/office equipment, aging, broken or inferior equipment, and/or the need/desire for more equipment. A few individuals indicated their perception that some of the equipment issues could present safety concerns or cause delays with accomplishing tasks. A few individuals also indicated that these equipment/tool issues could stem from budget constraints or a shift in priority in TVA's maintenance funding strategy.

CONCLUSION

North Maintenance, through its responsibilities, plays an important role in meeting safety, reliability, and regulatory requirements. To execute this role effectively, it is necessary for leaders and employees to have positive relationships with each other. Interviews revealed that individuals had generally positive perceptions of their first-line management in the areas of trust, communication, comfort in offering differing opinions, accountability, and recognition. In addition, comments from individuals were generally positive regarding interactions and trust with coworkers, although a few individuals in one group expressed concerns in one or both of these areas.

Most individuals also provided positive comments related to interactions with others within and outside of North Maintenance and many indicated having no concerns with completing their primary job. Several employees commented positively on management's efforts to provide a flexible workplace, including the ability to telework/report to an alternate location. However, while most individuals indicated having adequate resources to complete their work, several individuals across three TSCs expressed concerns related to staffing and/or equipment/tools.

Based on our observations, we assessed North Maintenance's level of risk related to behaviors and operations and determined risk was low. However, addressing the risks related to certain employee interactions and those related to resources could help North Maintenance to better achieve its responsibilities.

RECOMMENDATIONS

We recommend the General Manager, North Maintenance, address:

1. Concerns related to employee interactions within one group.

TVA Management's Comments – The General Manager, North Maintenance, and Transmission Service Manager discussed increased one-on-one meetings with TSC personnel around workplace interactions. In addition, management will ensure appropriate personnel complete training related to psychological safety by December 31, 2021. See Appendix B for TVA management's complete response.

Auditor's Response – We agree with management's actions planned and taken.

2. Resource concerns related to staffing and equipment/tools.

TVA Management's Comments – In February 2021, Transmission Field Operations, Maintenance, started compiling a comprehensive list of equipment at each TSC to ensure appropriate prioritization is given to each TSC. This list of equipment is currently being developed with plans to utilize it for purchases during FY 2022, with an implementation date of March 31, 2022. An additional budget of \$691,000 was also approved and used to order more test equipment for Transmission Field Operations, Maintenance during FY 2021.

Regarding staffing, Transmission Field Operations management has recommended immediate advertising of maintenance electrician vacancies in the TSCs. In addition, the General Manager, North Maintenance, will evaluate staffing levels in the North area TSCs and modify as appropriate. Management indicated an implementation date of March 1, 2022. See Appendix B for TVA management's complete response.

Auditor's Response - We agree with management's actions planned and taken.

TVA Values	
Safety	We are uncompromising in our commitment to the safety and well-being of our teammates and the communities we serve.
Service	We are proud to be of service in the communities in which we live, work, and play.
Integrity	We are honest and straightforward— always doing the right thing with integrity.
Inclusion	We treat everyone with dignity and respect— emphasizing inclusion by welcoming each person's individuality so we can reach our full potential.

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

September 15, 2021

David P. Wheeler, WT 2C-K

MANAGEMENT RESPONSE: Completed Evaluation 2021-15801 - Organizational Effectiveness – Transmission Field Operations, North Maintenance

Thank you for the opportunity to address the recommendations from Evaluation 2021-15801 - Organizational Effectiveness – Transmission Field Operations, North Maintenance. We have taken the recommendations from the report and an action plan is in progress. We are confident that these measures will ensure that our organization will improve in team cohesiveness, team engagement and operational performance.

Below are the three recommendations and identified Corrective Actions.

Recommendation 1: Address concerns surrounding employee interactions.

Actions Items 1:

GM TFO-North and TSM discussion on increased one-on-one meetings with TSC personnel around workplace interactions. Completed 9/1/2021

Additional training for personnel – Due Date 12/31/2021

As a result of the last Glint survey, TFO has identified areas for improvement in Psychological Safety. Our Talent and Culture business partners have developed a 2-3 hour training session defining what Psychological Safety is and what we can do to improve it utilizing breakout sessions and open discussions. Ensure appropriate personnel are included in earliest available training after the pilot training class is completed on September 22, 2021.

Recommendation 2: Address employee concerns on equipment and tool needs.

Actions Items 2:

TFO Maintenance establishes a list of requested equipment from each TSC during the year to prioritize and purchase using the allocated budget. In previous years the prioritization has not been applied consistently across the board. In February of 2021, TFO Maintenance began to compile a comprehensive list of equipment at each TSC. The list will be used to ensure that the appropriate prioritization is given to each TSC uniformly. The list is still being developed with plans to utilize completely during FY22 purchases. Due Date 3/31/2022

Additional FY21 test equipment budget was requested and approved during the first part of August 2021. An addition \$691,000 was approved and used to order additional test equipment for TFO Maintenance. Completed 9/8/2021.

Recommendation 3: Evaluate staffing levels in TFO North

Actions Items 3:

TFO-North GM to evaluate staffing levels in North area TSCs and modify as appropriate. Due Date 3/1/2022.

TFO has taken steps the past few years to fill vacant positions. Most recently there have been strategic over hires in the Power Maintenance Tech and Telecom Tech positions at several TSCs. Transmission Service Managers are encouraged as well to bring in interns to assist in the Tech/Engineering space while preparing to the fill potential vacancies.

TFO management has recommended immediately advertising any maintenance electrician vacancies in the TSCs. TFO-North currently has no vacancies that are not advertised or in the process of filling the vacancy in the craft positions.

CONCLUSION

All the OIG's recommendations have been addressed with correction actions taken or are being addressed with ongoing process improvements. Accordingly, we submit this memorandum as our notice of final action. If you have further questions, please contact me at 256-777-0049.



Jerry Ake
General Manager, Transmission Field Operations, North Maintenance