



Memorandum from the Office of the Inspector General

October 6, 2021

Jason B. Garrison

**REQUEST FOR MANAGEMENT DECISION – EVALUATION 2021-17250 –
ORGANIZATIONAL EFFECTIVENESS – LAGOON CREEK COMBINED CYCLE PLANT**

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 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 A. Rebecca McCarter, Senior Auditor, at (423) 785-4831 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)

ARM:KDS

Attachment

cc (Attachment):

TVA Board of Directors
David L. Bowling Jr.
Susan E. Collins
Randle K. DeHart
Megan T. Flynn
David B. Fountain
Amanda D. Johns
T. Daniel Lunsford
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Kay W. Whittenburg
Jacinda B. Woodward
OIG File No. 2021-17250



Office of the Inspector General

Evaluation Report

To the Manager-Integrated Combined
Cycle and Combustion Turbine Site,
Lagoon Creek Combined Cycle Plant

ORGANIZATIONAL EFFECTIVENESS – LAGOON CREEK COMBINED CYCLE PLANT

Auditor
A. Rebecca McCarter

Evaluation 2021-17250
October 6, 2021

ABBREVIATIONS

CC	Combined Cycle
CT	Combustion Turbine
FY	Fiscal Year
I&C	Instrumentation and Controls
LCCC	Lagoon Creek Combined Cycle
SHRM	Society for Human Resource Management
TVA	Tennessee Valley Authority

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Evaluation 2021-17250 – Organizational Effectiveness – Lagoon Creek Combined Cycle Plant

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 between strategy, team engagement and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across the Tennessee Valley Authority. This evaluation focuses on Lagoon Creek Combined Cycle (LCCC) plant, a combined cycle (CC) plant in TVA's western region under the Gas Operations business unit within TVA's Power Operations organization.

LCCC, one of TVA's eight CC gas sites, sits adjacent to the Lagoon Creek Combustion Turbine (CT) plant near the community of Brownsville, Tennessee. The site uses CT and a steam turbine and has a summer net generating capability of 525 megawatts. The objective of this evaluation was to identify factors that could impact LCCC's organizational effectiveness. Specifically, we identified behavioral and operational factors that affect organizational effectiveness.

What the OIG Found

During the course of our evaluation, we identified behaviors that had a positive impact on LCCC. These included positive relationships between team members and most management; however, we also identified a behavioral risk related to communication with first-line management. In addition, we identified an operational risk related to training that could hinder LCCC's effectiveness. According to the LCCC manager-integrated CC and CT site, actions are being taken to address these training concerns. Based on our observations, we assessed LCCC's level of risk related to behaviors and operations and determined both risks were low. Ratings are reflected in the table below:

	Low Risk	Medium Risk	High Risk
Behaviors	X		
Operations	X		



Evaluation 2021-17250 – Organizational Effectiveness – Lagoon Creek Combined Cycle Plant

EXECUTIVE SUMMARY

What the OIG Recommends

We recommend the Manager-Integrated CC and CT Site, LCCC, address the concern related to communication issues with first-line management.

TVA Management's Comments

Gas Operations' management agreed with the recommendation. 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. 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 the Tennessee Valley Authority (TVA). This evaluation focuses on Lagoon Creek Combined Cycle (LCCC) plant, a combined cycle (CC) plant in TVA's western region under the Gas Operations business unit within TVA's Power Operations organization.

We previously conducted an organizational effectiveness evaluation of LCCC¹ in which we identified strengths related to teamwork, plant management support, and organizational alignment; however, we also identified issues related to training and communication across groups. Gas Operations' management addressed our recommendations related to these concerns.

LCCC, one of TVA's eight CC gas sites, sits adjacent to the Lagoon Creek Combustion Turbine (CT) plant near the community of Brownsville, Tennessee. The site uses CTs and a steam turbine and has a summer net generating capability of 525 megawatts. Gas Operations' vision is "blending our strengths every day to deliver event free, reliable, and flexible, power for the people of the Tennessee Valley." LCCC's fiscal year (FY) 2021 initiatives included, but were not limited to, (1) developing a fleet standard for shift turnover, (2) rewarding good catches and completing quarterly employee appreciation lunches, and (3) submitting projects for site instrumentation and electrical training simulator/lab and site upgrades. Metrics as of May 2021 included, but were not limited to, total spend, good catches, trip events, CC equivalent availability factor, and total continuous improvement savings.

As of May 2021, LCCC was slightly under budget in their spending. Staffing has remained relatively steady since FY 2018, at around 20 to 25 employees. As of May 21, 2021, LCCC had 24 employees, including the manager-integrated CT and CC, an operations manager, and a maintenance manager.

¹ Evaluation 2018-15523, *Lagoon Creek Combined Cycle Plant's Organizational Effectiveness*, May 3, 2018.

OBJECTIVE, SCOPE, AND METHODOLOGY

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

- Reviewed (1) Power Operations' FY 2021 through FY 2023 business plan, (2) Gas Operations' FY 2021 through FY 2023 business plan, and (3) documentation provided by LCCC to gain an understanding of initiatives, metrics, and/or risks within LCCC.
- Reviewed TVA values and competencies (see Appendix A), for an understanding of cultural factors deemed important to TVA.
- Reviewed select TVA and Power Operations' Standard Programs and Processes to gain an understanding of processes.
- Examined FY 2019 through May 2021 financial information to gain an understanding of expenditures used in support of the work environment.
- Conducted individual interviews with 20 employees² and three managers, and analyzed the results to identify themes that could affect organizational effectiveness.
- Conducted interviews with individuals from other TVA organizations that work with or support LCCC.

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

² One employee declined an interview.

OBSERVATIONS

During the course of our evaluation, we identified behaviors that had a positive impact on LCCC. These included positive relationships between team members and most management; however, we also identified a behavioral risk related to communication with first-line management. In addition, we identified an operational risk related to training that could hinder LCCC's effectiveness.

BEHAVIORAL FACTORS

According to the Society for Human Resource Management (SHRM),³ 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 LCCC, we determined behavior-related risk was low.

Positive 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. All LCCC employees commented positively on interactions with others in their group and most employees indicated they trusted their coworkers to perform their jobs well. Examples of interactions within the group included having good relationships, getting along, or working well together. When asked about the ethical culture⁴ within LCCC, all employees commented positively. In addition, most individuals commented positively on morale, with drivers being primarily engagement related. Examples included the existence of teamwork, people getting along well, or having a family atmosphere. Several employees either commented on or indicated having a positive working environment, with specific examples being that it is a good place to work or has a good team atmosphere.

Positive Relationships with Most Management

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 at LCCC about relationships or interactions with their first-line management, middle management, and upper management.

³ SHRM is a membership organization for Human Resource professionals.

⁴ Ethical culture is defined in this evaluation as the "shared concept of right and wrong behavior in the workplace that reflects the true values of the organization and shapes the ethical decision making of its members."

Most individuals indicated they trusted their first-line management and the majority felt comfortable reporting concerns or offering a differing opinion. Many individuals also commented positively on accountability and recognition from first-line management. Examples of recognition included verbal praise or praise through emails, meals, High 5's, or gifts.⁵ While many employees commented positively on relationships with first-line management, some concerns were expressed related to communication with one manager. We discussed the specifics of these issues with the manager-integrated CC and CT site.

Most individuals commented positively when asked about interactions or relationships and communication with middle management. Most individuals indicated they trusted their middle management and the majority felt comfortable reporting concerns or offering a differing opinion. Many individuals commented positively on accountability and most commented positively on recognition from middle management. Examples of recognition from middle management included verbal praise or praise through emails, meals, High 5's, or gifts.

Many employees indicated they had limited or no interactions with upper management. Of those who commented, comments were mostly positive related to relationships, communication, trust, comfort reporting concerns and/or offering a differing opinion, accountability, and recognition. Examples of recognition from upper management included receiving thank you notes, recognizing employees during weekly updates, and verbal recognition or emails.

RISKS TO OPERATIONS

Based on our interviews, we identified a minimal risk to operations that could hinder LCCC's effectiveness. When asked what works well in completing their jobs, several individuals indicated management support or expectations or their relationships with their peers. In addition, many employees expressed no concerns in completing their primary job responsibilities. When asked to describe their interactions with groups both within and outside of their organization, many individuals who commented provided positive comments, indicating the interactions are good, positive, or they get along well.

However, several individuals had training concerns with a few indicating the need for additional training related to their job duties. According to a discussion with the LCCC manager-integrated CC and CT site, gas technician training is a 26-month program that provides classroom and on-the-job training; however, the training provided is general and not site-specific. In addition, the manager stated the training does not prepare gas plant technician trainees to fully meet the job requirements of a gas technician, requiring the site to provide them additional coaching and training.

⁵ High 5 is an employee recognition program where both employees and managers can recognize and show appreciation for Power Operations employees.

According to the LCCC manager-integrated CC and CT site, actions are being taken to address these training concerns and supplement the existing gas technician training. Specific actions include (1) hiring an external company to build a site-specific training plan and curriculum; (2) constructing a site-specific instrumentation and controls (I&C) simulator that will allow technicians to practice on site-specific equipment; and (3) pairing non-core-skilled I&C technicians with core-skilled I&C technicians for further on-the-job training.

As previously stated, the OIG conducted an evaluation of LCCC in 2018⁶ and noted employee concerns with their lack of in-depth knowledge regarding the operating systems at LCCC. A recommendation was made to the former LCCC Plant Manager to evaluate knowledge gaps in LCCC's digital control systems and bridge those identified gaps through training or other methods.⁷ In addition, concerns related to training are similar to those expressed during other OIG evaluations at TVA's gas plants. We recently completed evaluations at Johnsonville Combustion Turbine⁸ and John Sevier Combined Cycle⁹ and determined training was a risk at both sites. During discussions with Gas Operations management, we determined training is a fleet-wide concern.

RECOMMENDATIONS

We recommend the Manager-Integrated CC and CT site, LCCC, address concerns related to communication issues with first-line management.

TVA Management's Comments – Gas Operations' management agreed with the recommendation. See Appendix B for TVA management's complete response.

⁶ Evaluation 2018-15523, *Lagoon Creek Combined Cycle Plant's Organizational Effectiveness*, May 3, 2018.

⁷ As a result of our recommendation, LCCC hired an electrical engineer with a background in digital control systems and entered into a long-term service agreement with the system manufacturer to provide additional support.

⁸ Evaluation 2021-15790, *Organizational Effectiveness - Johnsonville Combustion Turbine*, April 20, 2021.

⁹ Evaluation 2021-15802, *Organizational Effectiveness - John Sevier Combined Cycle Plant*, July 7, 2021.

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 30, 2021

David P. Wheeler, WT 2C-K

**REQUEST FOR COMMENTS – DRAFT EVALUATION 2021-17250 – ORGANIZATIONAL
EFFECTIVENESS - LAGOON CREEK COMBINED CYCLE PLANT**

This is in response to your memorandum dated September 10, 2021. After review of the draft evaluation, please see the following response for organizational effectiveness.

We would like to thank Andi R. McCarter for her diligence and support to optimize the Gas Operations workforce by identifying opportunities for organizational effectiveness.

Recommendations

We recommend the Integrated CC/CT Site Manager address:

Concerns related to communication issues with first-line management.

Response

Gas Operations agrees with this recommendation.

Thank you for allowing us to provide these comments. Please contact us if you have any questions.



Jason B. Garrison
Integrated CC/CT Site Manager
Lagoon Creek Combined Cycle Plant

JBG

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OIG File No. 2021-17250