



Memorandum from the Office of the Inspector General

September 11, 2023

Dean L. Vinson

**REQUEST FOR MANAGEMENT DECISION – EVALUATION 2023-17421 –
ORGANIZATIONAL EFFECTIVENESS – MAGNOLIA COMBINED CYCLE PLANT**

Attached is the subject final report for your review and management decision. Your written comments, which addressed your management decision and action for one of the two recommendations, have been incorporated into the report. 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 Andi R. 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
Megan Andersen
David L. Bowling Jr.
Susan E. Collins
Mary C. Corbitt
Samuel P. Delk
Buddy Eller
Megan T. Flynn
David B. Fountain
Eric R. Grau

T. Daniel Lunsford
Jeffrey J. Lyash
Jill M. Matthews
Donald A. Moul
Jason C. Mullins
Ronald R. Sanders II
Ben R. Wagner
Kay W. Whittenburg
Jacinda B. Woodward
OIG File No. 2023-17421



Office of the Inspector General

Evaluation Report

To the Manager, Magnolia
Combined Cycle Plant

ORGANIZATIONAL EFFECTIVENESS – MAGNOLIA COMBINED CYCLE PLANT

Evaluation Team
Andi R. McCarter

Evaluation 2023-17421
September 11, 2023

ABBREVIATIONS

CC	Combined Cycle
FY	Fiscal Year
MCC	Magnolia Combined Cycle
PO	Power Operations
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority

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Evaluation 2023-17421 – Organizational Effectiveness – Magnolia 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 (TVA). This evaluation focuses on Magnolia Combined Cycle (MCC), an organization within TVA's Power Operations.

MCC was commissioned in August 2003 and purchased by TVA in August 2011. MCC is one of eight combined cycle sites included in TVA's generation portfolio. MCC consists of three units with a plant capacity of 968 megawatts. The objective of this evaluation was to identify factors that could impact MCC's organizational effectiveness.

What the OIG Found

During interviews, MCC personnel revealed positive interactions with team members and most management. However, we identified issues that could negatively impact MCC's effectiveness, if not addressed. These issues include (1) improvements needed with work packages and (2) staffing concerns.

What the OIG Recommends

We recommend Gas Operations' management take action to address work packages and staffing concerns.

TVA Management's Comments

Gas Operations' management agreed with one of the recommendations and are taking actions to evaluate the other recommendation. See Appendix B for TVA management's complete response.

Auditor's Response

We agree with TVA management's planned action regarding the over-hiring of additional staff. However, management did not provide planned actions to address the completeness of work packages.

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 Magnolia Combined Cycle (MCC), an organization within TVA's Power Operations (PO).

Natural gas generation has taken on a larger role in the TVA generation mix in an effort to move TVA towards a more diverse and adaptable generation portfolio. TVA's gas portfolio includes eight combined cycle (CC) sites, including MCC, and nine combustion turbine gas sites, which make up 28% of TVA's energy portfolio. MCC was commissioned in August 2003 and purchased by TVA in August 2011. MCC consists of three units with a plant capacity of 968 megawatts.

MCC's strategic priorities as of February 2023 included, but were not limited to, (1) developing an action plan to address key areas of concern, including employee well-being, psychological safety, and resources; (2) developing site personnel leadership skills through goals and the Individual Development Plan process; and (3) evaluating a Generating Availability Data System to identify and prioritize projects. MCC's metrics for fiscal year (FY) 2023 included, but were not limited to, total spend,¹ unit trip events, CC equivalent availability factor,² and environmental noncompliance events. As of March 2023, MCC was under budget for capital spend but over budget for operations and maintenance (O&M) spend.

In the last year, MCC has undergone significant site management changes, including the selection of a new Operations Manager in August 2022 and a new Plant Manager in November 2022.³ MCC's responsibilities are carried out by two departments: Operations and Maintenance. Employee staffing at MCC remained relatively steady from FY 2020 to March 2023. As of March 2023, staffing included the plant manager, operations manager, maintenance manager, and twenty-three employees.

¹ Total spend includes capital, operations and maintenance.

² The CC equivalent availability factor reflects the percentage of time over a given period that a generating unit was available to generate power for TVA.

³ The plant manager transferred to another position effective July 3, 2023.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify factors that could impact MCC's organizational effectiveness. We assessed operations as of March 2023 and culture at the time of our initial interviews and fieldwork, which also occurred during March 2023. To complete the evaluation, we:

- Reviewed (1) Gas Operations' FY 2021 through FY 2023 business plan and (2) documentation to gain an understanding of strategic priorities, metrics, and risks within MCC.
- Reviewed select TVA and PO standard programs and processes (SPP), PO-SPP-06.000, *Conduct of Maintenance*; PO-SPP-10.003, *Conduct of Operations*; PO-SPP-06.008, *Work Package Development*; and TVA-SPP-07.000, *Work Management*.
- Reviewed TVA values and competencies (see Appendix A) for an understanding of cultural factors deemed important to TVA.
- Examined FY 2020 through March 31, 2023, (1) staffing data to gain an understanding of MCC headcount changes for employees and contractors and (2) overtime hours worked.
- Conducted individual interviews with twenty-three employees and three managers, and analyzed the results to identify themes that could affect organizational effectiveness.
- Conducted individual interviews with six contractors, who were selected based on feedback from the plant manager, and analyzed the results to identify themes that could affect organizational effectiveness.
- Conducted individual interviews with seven individuals from other TVA organizations and analyzed results to identify factors affecting organizational effectiveness from a support personnel perspective.

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

OBSERVATIONS

During interviews, MCC personnel revealed positive interactions with team members and most management. However, we identified issues that could negatively impact MCC's effectiveness, if not addressed. These issues include (1) improvements needed with work packages and (2) staffing concerns.

POSITIVE INTERACTIONS WITH TEAM MEMBERS AND MOST MANAGEMENT

Most of the 29 employees and contractors we interviewed commented positively on interactions with others in their group, and 25 of the 29 indicated they trusted their coworkers to perform their jobs well. Examples of positive interactions included individuals working well together and/or as a team, being respectful and polite to each other, relaying information to each other, and taking ownership of the plant. When asked about interactions with other departments within their organization, 19 of the 25 employees and contractors who commented provided positive feedback, with several describing good interactions between operations and maintenance.

As previously mentioned, MCC has undergone significant site management changes. When asked about their interactions with management, all of the employees and contractors who commented provided positive feedback on interactions with the plant manager, while 83 percent of the employees and contractors' in operations commented positively on the operations manager. In addition, 20 of the 22 employees and contractors who commented provided positive comments on the recent management changes. Specifically, comments from employees indicated that the plant manager (1) is doing a great job in defining roles and responsibilities, (2) provides good input during morning plan of the day meetings, and (3) has created an environment in which people feel comfortable to discuss important topics such as safety.

IMPROVEMENTS NEEDED WITH WORK PACKAGES

During our interviews, 14 of the 23 employees described concerns with work packages. The concerns expressed described work packages as lacking necessary information or detail, such as step text,⁴ procedures, diagrams, or a listing of tools needed to perform the work. PO-SPP-06.008, *Work Package Development*, defines the requirements for developing and processing a standard work package and outlines responsibilities associated with work package development. These responsibilities include (1) ensuring work packages are complete and address job safety; (2) preparing and updating work packages to execute routine activities, corrective maintenance activities, reported deficiencies, or enhancements; and (3) identifying and specifying correct parts and sufficient materials to support work activities and ensuring availability of required materials to perform scheduled work. The procedure also outlines the minimum

⁴ Step text includes reference to applicable procedures and specifications.

requirements for a work package, including step text for work instructions and references such as vendor manuals, drawings, and procedures.

Perceived drivers affecting poor work package development included a lack of adequate resources to develop work packages and poorly written condition reports. We were provided examples of work packages that were described as sufficient as well as examples of work packages that were deemed insufficient for comparison. We noted the work packages deemed insufficient did not contain either complete instructions or step text or did not provide a listing of materials or planned labor. Having work packages that include sufficient information can ensure work is performed effectively, efficiently, and safely.

STAFFING CONCERNS

While many employees indicated they have what they need to do their job, 12 (about 50 percent) employees expressed concerns with resources, related to either staffing and/or overtime. As noted previously, we reviewed staffing information for FY 2020 through March 2023 and found MCC's employee headcount remained relatively steady. However, overtime increased by 43 percent from FY 2020 to FY 2022, and does not appear to be decreasing as of March 2023. This increase in overtime may be due to the fact that 6 of MCC's 19 operations staff are trainees.⁵ An OIG evaluation of gas plant overtime recommended that TVA management conduct a business case analysis to determine if hiring additional employees would be less costly than paying overtime.⁶ According to the Gas Operations regional manager, they are working to strategically over-hire to address the staffing risks.

RECOMMENDATIONS

We recommend the Manager, Magnolia Combined Cycle Plant:

1. Take steps to improve the completeness of work packages.
2. Complete the planned over-hiring of additional staff.

TVA Management's Comments – Gas Operations' management agreed with the recommendation to improve the completeness of work packages. In addition, management indicated they understand the recommendation related to the planned over-hiring of additional staff and will evaluate completing a strategic over-hire that supports the workforce strategy for MCC. See Appendix B for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned action regarding the over-hiring of additional staff. However, management did not provide planned actions to address the completeness of work packages.

⁵ Trainee time is split between the site and an off-site classroom; therefore, time spent working at the site is decreased by time spent in the classroom.

⁶ Evaluation 2019-15685, *Gas Plant Overtime*, issued September 24, 2020.

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

August 30, 2023

David P. Wheeler,

REQUEST FOR MANAGEMENT DECISION – DRAFT EVALUATION 2023-17421 --
ORGANIZATIONAL EFFECTIVENESS -- MAGNOLIA COMBINED CYCLE

This is in response to your memorandum dated August 7, 2023. After review of the draft evaluation, please see the following response for organizational effectiveness.

The Magnolia leadership team would like to thank the Office of the Inspector General (OIG), specifically Andi McCarter for her diligence and support in assessing the organizational effectiveness of the site. The results of the assessment are aligned with the actions Magnolia Combined Cycle (MCC) is already taking to capitalize on opportunities, learnings, and best practices.

Recommendations

We recommend the Plant Manager:

1. Take steps to improve the completeness of work packages.

Response:

Gas Operations agrees with this recommendation.

2. Complete the planned over-hiring of additional staff.

Response:

Gas Operations understands this recommendation and will evaluate completing a strategic over-hire that supports our workforce strategy for Magnolia Combined Cycle.

Thank you for the time to allow us to review and provide feedback on the draft evaluation. Please contact us if you have any questions.

Dean L. Vinson
Plant Manager
Magnolia Combined Cycle

DLV

cc:

Megan Andersen
David L. Bowling, Jr.
Sue Collins
Mary C. Corbitt
Sam Delk
Megan T. Flynn
David Fountain
Eric R. Grau

T. Daniel Lunsford
Don Moul
J. Clay Mullins
Ronald R Reeves, II
Kay W. Whittenburg
Jacinda B. Woodward
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