



Memorandum from the Office of the Inspector General

July 27, 2017

Joseph V. Buckley, WT 3A-K
Laura A. Green, BR 4A-C

**REQUEST FOR FINAL ACTION – EVALUATION 2016-15386 – MATERIALS AND
TRANSPORTATION MANAGEMENT’S ORGANIZATIONAL EFFECTIVENESS**

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 Jessica L. Monroe, Senior Auditor, at (865) 633-7338 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)
ET 3C-K

JLM:BSC
Attachment

cc (Attachment):

TVA Board of Directors
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OIG File No. 2016-15386



Office of the Inspector General

Evaluation Report

To the Director, Materials and
Transportation Management,
and to the Vice President,
Supply Chain

MATERIALS AND TRANSPORTATION MANAGEMENT'S ORGANIZATIONAL EFFECTIVENESS

Evaluation Team
Jessica L. Monroe
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Evaluation 2016-15386
July 27, 2017

ABBREVIATIONS

FY	Fiscal Year
ISS	Inventory Strategy Specialist
M&TM	Materials and Transportation Management
MM	Materials Management
OAS	Oniqua Analytics Solution
PO	Purchase Order
PR	Purchase Requisition
SIRC	Site Inventory Review Committee
TVA	Tennessee Valley Authority

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Evaluation 2016-15386 – Material and Transportation Management’s Organizational Effectiveness

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) 2017 3-year Enterprise Risk Profile recognized that ongoing workforce refinementⁱ might 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 Materials and Transportation Management (M&TM), which is a department under the Supply Chain organization.

The objective of M&TM is “to effectively manage TVA's warehousing and investment recovery operations to provide customer support, optimize inventory, conserve working capital, and add value to TVA.” As of November 2016, M&TM contained 170 employees, including management. As of that date, the management structure included 1 director, 2 senior managers, and 12 manager positions. This evaluation assesses strengths and risks that could affect M&TM’s organizational effectiveness.

What the OIG Found

We identified strengths related to (1) employee teamwork, (2) customer service, and (3) management’s support of employees. However, we identified issues that, if left unresolved, could increase the risk that M&TM will be unable to effectively meet its objective in the future. These issues include (1) 3 managers’ behaviors and teamwork at 1 location, (2) process inefficiencies in completing purchase requisitions and inventory review processes, (3) the warehouse layout at 1 nuclear site, (4) communication concerns, (5) incomplete performance management documentation, and (6) cross-functional risks between M&TM, Sourcing,ⁱⁱ and the plants.

ⁱ Refinement of the workforce includes activities such as reduction in force.

ⁱⁱ Sourcing is a department in Supply Chain that works with M&TM to provide inventory to TVA sites.



Evaluation 2016-15386 – Material and Transportation Management’s Organizational Effectiveness

EXECUTIVE SUMMARY

Based on our findings and using TVA’s Business Operating Model, we assessed M&TM’s level of risk in the areas of alignment, engagement, and execution. As shown in Table 1, we determined alignment risk to be low based on alignment of individual performance goals with M&TM’s mission and the alignment of M&TM’s mission with Supply Chain’s mission. We rated engagement as medium risk based on concerns raised during interviews about some managers’ behaviors and teamwork at 1 site that were impacting employee morale and could negatively impact execution. Finally, we assessed execution to be a medium risk based on the risks related to the Sourcing and plant processes, process inefficiencies resulting in delays and duplication, and a nuclear site’s warehouse layout that could adversely impact execution.

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

Table 1

What the OIG Recommends

We made recommendations to management related to (1) management behaviors and teamwork, (2) process inefficiencies in completing purchase requisitions and inventory review processes, (3) the warehouse layout at 1 nuclear site, (4) communication concerns, (5) incomplete performance management documentation, and (6) cross-functional risks between M&TM, Sourcing, and the plants. Our detailed recommendations are listed in the body of this report.

TVA Management’s Comments

In response to our draft report, Management provided a summary of planned, ongoing and completed actions for each of our recommendations. 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. The Tennessee Valley Authority's (TVA) 2017 3-year Enterprise Risk Profile recognized that ongoing workforce refinement¹ might 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. The responsibility of TVA's Supply Chain is to "provide materials and services to strategic business units at lowest total cost of ownership and manage and optimize sourcing, procurement, freight, inventory, material distribution, and TVA fleet to ensure reliable operation."

TVA's Supply Chain is organized into four departments: (1) Sourcing,² (2) Materials and Transportation Management (M&TM), (3) Supplier Diversity and Development, and (4) Strategies and Support. This evaluation focuses on Supply Chain's M&TM department³ which performs the freight, inventory, material distribution, and fleet components of Supply Chain's mission. The objective of M&TM is "to effectively manage TVA's warehousing and investment recovery operations to provide customer support, optimize inventory, conserve working capital, and add value to TVA."

M&TM is comprised of Materials Management (MM), Nuclear MM, and Investment Recovery and Distribution.

- MM employees are located at individual sites to manage and distribute inventory. MM employees handle purchase requisitions (PR)⁴ and process inventory at the individual sites they serve.
- Nuclear MM employees are located at TVA's three nuclear sites and Chickamauga Power Service Center and perform the same role as other MM personnel. Within Nuclear MM, the Equipment Reliability staff partners with and supports the TVA Equipment Reliability Engineering team.

¹ Refinement of the workforce includes activities such as reduction in force.

² Sourcing is a department in Supply Chain that works with M&TM to provide inventory to TVA sites.

³ We plan to conduct an evaluation of the remaining Supply Chain departments at a later date.

⁴ A PR is a document used to describe and request the procurement of equipment, labor, and services when not available through TVA inventory or by TVA personnel. MM does not handle PRs for labor and services; those are handled directly by Sourcing.

- Investment Recovery and Distribution includes (1) personnel located in Chattanooga and Hartsville, Tennessee, and Muscle Shoals, Alabama, who assist with removing stranded inventory;⁵ (2) Fleet Services who provide oversight of activities, processes and systems related to the management of TVA's light duty fleet, Rental and Rideshare Programs, and Transportation Planning (freight) services; and (3) distribution centers at Muscle Shoals, Alabama, and Hartsville, Tennessee, for inventory storage and distribution.

Plant personnel identify needed materials through the electronic work order process known as the PR backlog in Maximo⁶ or through a manual PR process (used under certain conditions such as long lead time materials and emergency purchases). Inventory strategy specialists (ISS)⁷ within MM receive and review in-progress PRs to identify and build catalog identification numbers for new items and determine which inventory to stock, reorder, or transfer from existing inventory at other TVA sites. The decision is then made on how much of the item to stock; this decision is based on criticality of the item, estimated usage and frequency of use, vendor lead times, and availability from other locations. The ISS approves the PR in Maximo, which begins the purchase order (PO)⁸ process. In addition, ISSs review inventory data for reorder items and stranded items using Oniqua Analytics Solution (OAS), an inventory and analytics software that provides data analysis and tools.

When materials arrive on-site, the MM material handlers are responsible for receipt of those materials, which includes verification of the shipment documentation and examination of the item(s) for damage prior to unloading. Material handlers use the final procurement document to verify the (1) material is packaged as required, (2) quantity received matches the quantity ordered, and (3) accuracy of identifying information such as description and part number.

M&TM had the following key metrics in fiscal year (FY) 2016:

- Materials and Supplies Inventory Value – Measures Supply Chain managed storeroom inventory value. In FY2016, the target was \$669 million, and M&TM met the target. According to the Director, M&TM, the amount is estimated based on inventory needs at TVA sites due to upcoming and ongoing project work and outage schedules.
- T-5 Fill Rate – Measures the availability of material to support planned maintenance at nuclear facilities. The metric was first used in FY2016, and M&TM exceeded the target of 97.5 percent with 99.5 percent availability of materials.

⁵ Stranded inventory is items that are in inventory for which there is no longer a use for the item by the operating site or that are no longer usable for their intended purpose.

⁶ Maximo is TVA's Enterprise Asset Management system.

⁷ The role of the ISS is filled by a material inventory coordinator at nuclear sites.

⁸ A PO is a contractual document that defines the work scope for the product or services provided. It defines price, delivery, and any other terms and conditions specific to the PO.

- Critical Components Review – Measures the number of components reviewed by the Equipment Reliability team with a goal of identifying critical spare parts. The metric was first used in FY2016, and M&TM exceeded the target of 100 percent at 121 percent.⁹

As of November 2016, M&TM had 170 employees, including management. As of that date, the management structure included 1 director, 2 senior managers, and 12 manager positions.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify strengths and risks that could impact M&TM's organizational effectiveness. We assessed operations of M&TM as of January 2017 and culture as of the date of our interviews occurring from October 2016 through January 2017. To complete the evaluation, we:

- Reviewed M&TM's FY2017 through FY2019 business plan to gain an understanding of goals.
- Reviewed TVA values and competencies (see Appendix A) for understanding of cultural factors deemed important to TVA.
- Interviewed M&TM's Director as well as 14 other designated supervisory/management-level employees to obtain their perceptions related to strengths and risks that could affect organizational effectiveness.
- Conducted interviews with 148 of 155 employees¹⁰ and analyzed the results to identify themes related to strengths and risks that could affect organizational effectiveness.
- Surveyed and/or conducted interviews with a nonstatistical sample of approximately 55 individuals from other TVA organizations that work closely with M&TM and analyzed results to identify strengths and risks from a customer service standpoint.
- Reviewed results of a June 2016 ScottMadden¹¹ assessment of Supply Chain's performance and recommended improvement opportunities.
- Nonstatistically selected performance management documentation from FY2016 for 65 managers and employees in M&TM organizations and analyzed the documentation for alignment with department and organizational goals, where applicable.
- Reviewed select TVA Standard Programs and Processes (SPP) and guidelines to gain an understanding of processes and controls.

⁹ M&TM sets goals for threshold, target, and stretch. Anything above 100 percent is considered stretch.

¹⁰ Two employees were unavailable at scheduled interview times, and 5 declined to participate in interviews.

¹¹ ScottMadden is a consulting company that offers services from strategic planning through implementation and improving operations in the areas of energy, clean tech and sustainability, corporate and shared services, and grid transformation.

- Reviewed results of TVA's 2015 Employee Engagement Survey and 2016 Pulse Survey to gain additional understanding of the M&TM work environment.
- Assessed the overall effectiveness of M&TM 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

Within M&TM, we identified strengths related to (1) employee teamwork, (2) customer service, and (3) management's support of employees. However, we identified issues that, if left unresolved, could increase the risk of M&TM not meeting its mission in the future. These issues included (1) 3 managers' behaviors and teamwork at 1 location, (2) process inefficiencies in completing PRs and inventory review processes, (3) warehouse layout at 1 nuclear site, (4) communication concerns, (5) incomplete performance management documentation, and (6) cross-functional risks between M&TM, Sourcing, and the plant.

STRENGTHS

According to TVA, its values and competencies are the foundation from which the organization can successfully meet goals and strategic imperatives to achieve the mission of service. We identified strengths related to (1) employee teamwork, (2) customer service, and (3) management's support of employees.

Employee Teamwork

The majority of employees interviewed provided positive comments pertaining to teamwork within their departments, which is a component of TVA's collaboration value. Specifically, several employees described their groups as working well together to accomplish the goals of M&TM. In addition, employees reported good communication in their groups and being supportive of each other. This is supported by TVA's 2015 Employee Engagement Survey where employees responded favorably when asked about receiving support from other employees to be successful in their jobs.

Customer Service

We interviewed several representatives from other TVA organizations that work with M&TM to obtain their views on the quality of service provided. Most individuals we interviewed held positive views of the organization, indicating that M&TM was responsive to their needs. Many M&TM employees also indicated their pride in providing customer service to the plants and cited it as a group strength.

Management's Support of Employees

Many employees we interviewed shared positive views of the M&TM management team. In particular, these employees stated that M&TM management understood their work and assisted in removing road blocks to accomplishing tasks. These employees stated their managers communicated well, were trustworthy, and that management actively empowered and encouraged employees.

RISKS

Risks that could impact the effectiveness of M&TM to contribute to Supply Chain's overall mission include (1) 3 managers' behaviors and teamwork at 1 location, (2) process inefficiencies in completing PRs and inventory review processes, (3) the warehouse layout at 1 nuclear site, (4) communication concerns, (5) incomplete performance management documentation, and (6) cross-functional risks between M&TM, Sourcing, and the plant.

Management Behaviors and Teamwork

While most employees indicated managers in M&TM were supportive and communicated well, behaviors displayed by 3 managers were not in alignment with TVA expectations, thus affecting teamwork and trust. In addition we identified 1 location where employees described divisions between work groups that were impacting employee morale and engagement. We discussed the specifics of these issues with the appropriate Supply Chain management.

Process Inefficiencies

M&TM employees expressed frustrations with two IT systems—Maximo and OAS. According to some employees, every hour, approved work orders in Maximo are sent to the ISS to create PRs. Employees expressed frustration with the amount of time Maximo takes to process the work orders. Some employees stated they may wait for Maximo to process the work orders for 30 to 45 minutes before they can begin entering PRs, leaving them a limited amount of time before the hourly window is closed. Any PR not completed, must wait until Maximo processes the work orders for the next hour to resume work. Some employees indicated the inefficiency is impacting their ability to provide needed materials to the plants.

In addition, some employees indicated they did not understand the purpose of OAS¹² and how it differs from inventory review processes already being performed, including:

- Inventory work order/replenishment rules.¹³
- Tracking monthly inventory target goals in Maximo.
- Discussions with the Site Inventory Review Committee (SIRC).¹⁴

In addition, some employees believe OAS is identifying the same items each month for reorder review which seems repetitive. These employees also stated OAS reorder rules require ordering items that are (1) seldom used such as noncritical items or (2) easily attainable such as consumable items.

In addition to the Maximo and OAS concerns, some employees indicated decisions regarding processes and systems were made with limited or no input from end users, which may have resulted in process inefficiencies.

Warehouse Layout

At Watts Bar Nuclear Plant, some MM employees expressed concern that the layout of the warehouses is impacting safety and workload. Specifically, this site's receiving area is separated from some of the storage warehouses by the main plant road. To move inventory to these warehouses from the receiving area requires crossing the heavily-travelled road using a forklift, which puts employee safety at risk. In addition, some employees stated the distance between warehouses and the frequent movement of items between the warehouses creates unnecessary workload. Several employees stated contractors have been used regularly to supplement the workforce due to a steady backlog of inventory at receiving caused by the warehouse layout being inefficient. According to the Director, M&TM, a request was made that Nuclear MM perform an analysis to determine the impacts the physical layout is causing.

Communication Concerns

While most employees stated their managers communicated well, some employees brought up concerns related to communication of procedures and sharing of information across groups in Supply Chain. Several employees stated procedure changes were not communicated throughout the organization. For example, when corporate changes are made to a procedure these changes/updates need to be communicated in a timely manner to the end user. Some employees provided an example that changes to the Nuclear Material

¹² OAS is an inventory and analytics software that provides data analysis and tools. ISSs use it to review inventory data for reorder items and stranded items.

¹³ These rules direct the ISS on how to determine stock levels for each item based on criticality of the item, estimated usage and frequency of use, vendor lead times, and availability from other locations.

¹⁴ The SIRC is sponsored by the plant manager, and membership should include management representatives from site Maintenance, Engineering, Project Management, the Site Financial Controller, Planning and Scheduling (Outage), and site Supply Chain. The SIRC gives plant management an opportunity to review inventory management activities that impact the material inventory levels and site budgets for inventory.

Receipt and Inspection procedure were not shared with the sites. Some employees also expressed the desire to share more information across groups in Supply Chain (e.g., sharing lessons learned between material inventory coordinators at nuclear sites).

Incomplete Performance Management Documentation

Our review of performance management documentation for 65 individuals revealed that individuals' performance goals were in alignment with the goals of Supply Chain. However, we noted that approximately 20 percent of the FY2016 performance management documents reviewed contained a goal that had a description or measurement of "to be determined." According to TVA, performance goals should be SMART.¹⁵ An undefined description or measurement may not allow employees to reasonably gauge their performance and clearly know what is expected of them. According to the Director, M&TM, FY2017 performance goals will be reviewed to ensure the goals are specific and measurable.

Cross-Functional Risks

M&TM functions as a key intermediary between Sourcing and the plant. Additionally, M&TM supports the plant by providing the inventory needed to keep the plant operational. However, MM employees expressed concerns with several issues that negatively affect their ability to execute their work. Specifically:

- Some employees expressed concern with plants circumventing the PR process by purchasing directly from vendors. This creates an issue when the material handlers receive materials for which there is no matching receiving documentation such as a PO. According to the Director of M&TM, they do not track materials without matching receiving documentation. Tracking the occurrences of this issue would be useful for identifying plants where more oversight or training on the process could be useful.
- Plant personnel fail to identify needed materials in a timely manner, which requires MM to expedite the process at an increased cost to TVA. As previously described, plant personnel identify needed materials through the electronic work order process and request material from MM. MM relies on plant personnel to initiate the process and identify needed materials in a timely manner.
- For each nuclear planned outage, hours of support and financial compensation (regular and overtime) for MM employees and contractors are negotiated by M&TM management and site management. Some Nuclear MM employees indicated this can be a frustrating process that leads to repeated discussions and adjustments of expectations of support and funding between M&TM and the site. This could be alleviated by having a standardized service level agreement in place for all planned outages.
- Emergency access is necessary during unstaffed hours for safety or continued generation and is documented through card key access or

¹⁵ SMART stands for specific, measurable, achievable, relevant, and time-bound.

- cameras. Some employees expressed concerns that plants are not logging checked out inventory during unstaffed storeroom hours as required by Supply Chain SPP-4.022, Material Receipt, Inspection, Storage and Handling, Issue, Control and Return. This creates extra work in identifying missing inventory and ensuring that inventory is accurately accounted for.
- MM personnel are spending a significant amount of time addressing material availability concerns. Since procurement agents are no longer located at the plant sites, some MM employees indicated that plant personnel come to them instead of procurement agents to answer questions on material availability, especially during outages when a response is needed quickly. In addition, some MM employees expressed frustration with the responsiveness of procurement agents when issues with material ordering are identified. If procurement agents fail to respond in a timely manner, it can impact the availability of material.

Effective communication between M&TM and Sourcing as well as between M&TM and the plant is needed for all to function optimally. When impediments in process or communication breakdowns occur, it impacts not only the effectiveness and execution of work but also the engagement level of employees.

CONCLUSION

Supply Chain's mission of providing materials and services at the lowest total cost of ownership is dependent on a highly functioning M&TM department. Plants need a highly functioning M&TM team to meet their needs to initiate PRs, monitor inventory, and physically provide materials during daily plant activities and outages. While M&TM has strengths in employee teamwork, management support, and customer interaction, failure to address risks related to cross-functional activities, management behaviors, and others as described above could impact the accomplishment of the department's mission. Based on TVA's Business Operating Model, we evaluated the risk of three critical areas that could affect M&TM's effectiveness, including (1) alignment, (2) engagement, and (3) execution.

- Alignment risk is low based on alignment of M&TM's mission to Supply Chain and TVA and the alignment of performance goals. Although there was a concern around undefined performance review goals, this affected only a limited portion of employees, and M&TM is addressing this issue for FY2017 and beyond.
- Engagement risk is medium based on concerns raised during interviews about some managers' behaviors and teamwork, which were impacting employee morale and could negatively impact execution.
- Execution risk is medium due to the risks related to Sourcing and plant processes, process inefficiencies, and the layout of a nuclear site's warehouse that could adversely impact execution.

RECOMMENDATIONS

We recommend the Director, M&TM:

1. Identify and implement ways to improve (a) the applicable managers' behaviors and leadership skills in demonstrating TVA's values and competencies and (b) teamwork issues.

TVA Management's Comments – Management stated information related to behavior and leadership skills has been reviewed with applicable leaders, who are working with senior leadership to address competency gaps and develop a plan to address teamwork and trust. Leadership competencies are being addressed across TVA's Supply Chain through ongoing leadership training. See Appendix B for management's complete response.

2. Review the Maximo cycle time issue for uploading work orders and implement improvements to minimize the effect on work processes.

TVA Management's Comments – Management stated they will work with Supply Chain Operations Support team to understand and improve the Maximo issue and will communicate any cycle time reviews or findings proactively. See Appendix B for management's complete response.

3. Evaluate inventory review processes for duplication and inefficiencies and make changes as needed.

TVA Management's Comments – Management stated they will work to improve the output of OAS and continue to focus on efficiencies to be gained by leveraging this system. See Appendix B for management's complete response.

4. Continue with plans to assess the impact the physical layout of the nuclear site warehouses is having on efficiency and implement corrective actions as necessary.

TVA Management's Comments – Management stated a thorough review of the warehouse needs of all nuclear sites had been done and significant changes and improvements have been made over the 3 years prior to our review. Further, a new or significantly different warehouse is not financially feasible in short-term plans and as additional suggestions are identified, they will review and implement them if feasible. See Appendix B for management's complete response.

5. Identify ways to effectively communicate information to employees related to procedure changes and opportunities for cross-functional collaboration.

TVA Management's Comments – Management stated cross-functional collaboration is a focus of Supply Chain and the FY2018 through FY2020 Business Plan. See Appendix B for management's complete response.

6. Review FY2018 goals to ensure they are SMART.

TVA Management's Comments – Management stated a review of FY2017 goals was conducted, and M&TM management commits to having complete and SMART goals for FY2018. See Appendix B for management's complete response.

7. Address cross-functional risks impacting material availability and inventory accuracy by (a) tracking incidents of materials received without matching receiving documentation to identify trends, (b) determining the impact of unlogged inventory and considering remediation steps as appropriate, and (c) working with the Director, Sourcing, to find process efficiencies and increase responsive time, support, and collaboration between departments.

TVA Management's Comments – Management stated (1) a mismatch report is tracked weekly, (2) inventory accuracy is not a major issue but is being tracked and remediated if necessary, and (3) there is an ongoing collaboration between all Supply Chain groups with specific emphasis on interpersonal and team building collaboration through FY2019. See Appendix B for management's complete response.

8. We recommend the Vice President, Supply Chain work with:

- The Senior Vice President, Power Operations, and the Chief Nuclear Officer to increase understanding of M&TM processes and the impacts of deviations from processes to material availability and inventory accuracy.
- The Chief Nuclear Officer to determine if a standardized service level agreement for nuclear outages would be beneficial for Supply Chain and TVA Nuclear.

TVA Management's Comments – Management stated ongoing education of senior leadership and increased collaboration with line leadership in all business units that utilize Supply Chain support. See Appendix B for management's complete response.

Auditor's Response – We agree with Management's planned and completed actions.

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

July 21, 2017

David P. Wheeler, Assistant Inspector General, ET 3C-K

MANAGEMENT RESPONSE - EVALUATION 2016-15386 - MATERIAL AND TRANSPORTATION MANAGEMENT'S ORGANIZATIONAL EFFECTIVENESS

Thank you for the opportunity to review and comment on the draft evaluation report.

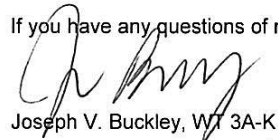
We agree with following recommendations provided in the report and their associated facts and conclusions. Below we have outlined our corrective actions and feel this approach will deliver an improvement in specific areas as well as Supply Chain's overall engagement.

Recommendation	Corrective Action	Completion Data
Identify and implement ways to improve		
1. The applicable managers' behaviors and leadership skills in demonstrating TVA's values and competencies		
2. Teamwork issues		
	Director, Materials Management has reviewed information with leaders specifically named in this report.	COMPLETE
	Each leader is working with senior leadership to address their competency gaps and develop a plan to address teamwork and trust. These plans are being developed in conjunction with HR and Learning Growth & Management.	July 31, 2017
	Leadership competencies are being addressed across Supply Chain leaders through ongoing leadership training. Programs such as Leader Network and Operations extended leadership team offsite are examples in this area.	Ongoing
Review the Maximo cycle time issue for uploading work orders and implement improvements to minimize the effect on the work processes.		
	Management commits to working with Supply Chain Operations Support team to better understand the issue and work to improve.	July 31, 2017
	Management will also commit to communicating any cycle time reviews or finding proactively	FY 2018
Identify ways to effectively communicate information to employees related to procedure changes and opportunities for cross-functional collaboration		
	Cross-Functional collaboration is a focus of Supply Chain and the FY18-20 Business Plan.	FY2018-2020
Review FY2018 goals to ensure they are SMART		
	Management did a review of FY17 goals and commits to ensuring we have complete and SMART goals for FY18.	Dec 2018

Management is aware of the following recommendations in the report and their associated facts and conclusions and are already addressing in monitoring.

Recommendation	Corrective Action	Completion Date
Evaluate Inventory Review processes for duplication and inefficiencies and make changes as needed.	Materials Management works to improve the output of ONIQUA. We will continue to focus on efficiencies to be gained by leveraging this system.	
Continue with plans to assess the impact of the physical layout of the nuclear site warehouses is having on efficiency and implement corrective actions as necessary	Management has done a thorough review of the warehouse needs of all nuclear sites. We have made significant changes and improvements over the three years including, portable loading dock, safety devices in mezzanine, speed bumps on roads near the warehouses, etc. A new or significantly different warehouse is not financially feasible in short term plans. As additional suggestions are identified, management commits to review and implement if feasible.	
Address cross-functional risks impacting material availability and inventory accuracy by	<ol style="list-style-type: none"> 1) Tracking incidents of material received with out matching receiving documentation to identify trends 2) Determine the impact of unlogged inventory and considering remediation steps as appropriate 3) Working with the Director, Sourcing to find process efficiencies and increase responsive time, support and collaboration between departments 	
	<ol style="list-style-type: none"> 1) We currently have a mismatch report that we track weekly. 2) Our inventory accuracy is not a major issue but is one we track (Items 98.2% accurate, financially 99.5% accurate). When we do identify a site that has an issue, Site Material Manager make the Site management aware and reinforces the process and expectations. 3) There is ongoing collaboration between all groups in Supply Chain with specific emphasis on interpersonal and teambuilding collaboration through FY19. 	
VP, Supply Chain work with:	<ul style="list-style-type: none"> • Sr. VP, Power Operations and CNO to increase Understanding of M&TM processes and the impact of deviation from processes to material availability and inventory accuracy. • CNO to determine if a standardized service level agreement for nuclear outages would be beneficial for Supply chain and TVA Nuclear 	
	Ongoing education of Senior leadership and increased collaboration with line leadership with all business units that utilize Supply Chain support.	

If you have any questions of need additional information, please do not hesitate to contact me.



Joseph V. Buckley, WT 3A-K

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