



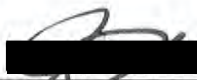
INTERNAL REVIEW

Capital Program Management and Execution

In response to the internal review of Metrorail Engineering and Maintenance, including review of Metrorail vertical Transportation: Escalator Maintenance and Inspections, Metrorail Fire & Life Safety: Fire Suppression Inspection and Testing, Parts and Materials Inventory Management, and Post-SafeTrack Assessment of Next-Level Maintenance Requirements, the office of Quality Assurance, Internal Compliance & Oversight (QICO) has coordinated the development of fourteen (14) CAPs. Each CAP outlines the findings, recommendations and requirements to be addressed, and a detailed action plan outlining responsible parties and specific actionable items.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Corrective Action Plan Commitment



Joseph Leader
Chief Operating Officer (COO)

11/17/17
Date

WMATA INTERNAL OVERSIGHT

Corrective Action Plan Acknowledgement



Angel Peña
Managing Director, Quality Assurance, Internal Compliance & Oversight (QICO)

11/15/17
Date



Eric Christensen
Chief, Internal Compliance (INCP)

11/15/17
Date



Paul J. Wiedefeld
General Manager & Chief Executive Officer (GM/CEO)

11/15
Date

**METRORAIL VERTICAL TRANSPORTATION:
ESCALATOR MAINTENANCE AND INSPECTIONS CAPS**



CORRECTIVE ACTION PLAN

Purpose and Scope



On September 8, 2017 QICO issued a comprehensive Report from an internal review into the assessment of the Metrorail Vertical Transportation Review: Escalator Maintenance and Inspections. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-MVT-17-01.

QICO Finding	QICO Recommendation
F-MVT-17-01: Maintaining the correct asset identification within station monitoring systems is essential to maintenance response and analysis.	- Establish clear policies and procedures for verifying equipment that enhances the remote monitoring system and ensures historical data is reliable.
F-MVT-17-04: Analysis of work order data is necessary to determine accurate failure trends during peak passenger service periods and proactively manage maintenance activities.	- Establish procedures and policies to research and develop solutions addressing reliability trends of vertical transportation units during peak passenger periods.
F-MVT-17-09: Consistent capture of maintenance data is required to ensure data integrity for future analysis and maintenance planning.	- Establish and implement clear practices and procedures that ensure elevator and escalator out-of-service data is usable and reliable for engineering and maintenance analysis.

Required Action

QICO-MVT-17-01: Conduct an analysis of the current practices used to gather and store vertical transportation information. Create or modify methods to enhance the value and reliability of data collected and stored.

(Risk Rating: High) ■

 11/14/17
 11/14/17



ACTION PLAN

Description

Until ELES can acquire additional resources we will create and analyze weekly high failure reports of escalators and elevators to optimize reliability.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) ELES Operations Analysis	Evaluate the current workload and responsibilities of ELES Engineering and Maintenance teams to assess current capabilities and project future needs.	Mitchell Nici (ELES)	01/01/18	02/28/18
2) ELES Data Analysis Process	Develop a process to perform analysis of maintenance and service data for vertical transportation. This process will guide designated team members in the performance of analysis and reporting activities.	Mitchell Nici (ELES)	01/01/18	02/28/18
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	02/28/18	03/28/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION


Performance Measures

- 90 days sample of data analysis produced in accordance with process developed under actionable item #2.

RESPONSIBLE PARTIES

ELES	Mitchell Nici		11/08/17
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SECOND LEVEL RESPONSIBILITY

Managing Director, SSRV	Randall Grooman		11/8/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On September 8, 2017 QICO issued a comprehensive Report from an internal review into the assessment of the Metrorail Vertical Transportation Review: Escalator Maintenance and Inspections. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-MVT-17-02.

QICO Finding	QICO Recommendation
F-MVT-17-02: Use of approved communications devices is necessary to ensure reliable communication is available to support maintenance activities.	- Establish and provide a method for reliable communication between maintenance personnel during routine maintenance and troubleshooting activities.
F-MVT-17-03: Effective maintenance planning and scheduling is required to maximize time available outside of passenger service hours.	- Establish and implement achievable and clear expectations for the duration of preventative maintenance tasks, ensuring maintenance work does not overlap with revenue service.
F-MVT-17-05: Effective inventory and control of calibrated equipment is required to ensure items are scheduled and calibrated on-time.	- Revise and enforce a consistent method for calibrating tools and test equipment that will facilitate the upkeep and maintenance of all ELES tools and test equipment.

Required Action

QICO-MVT-17-02: Establish methods for maintenance personnel to perform their work more properly, efficiently, and effectively.
(Risk Rating: High) ■

**ACTION PLAN****Description**

ELES will coordinate with the Communications department to facilitate two-way communication for mechanics that is in compliance and in accordance with WMATA standards. ELES will develop Internal Maintenance Bulletin outlining maintenance expectations with regards to durations and impact to the public. Reinforce the policy requiring the calibration of equipment.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) ELES Communications Solution	Collaborate with Communications (COMM) to determine the most appropriate methods of communication based on operational needs.	Mitchell Nici (ELES)	12/01/17	05/30/18
2) ELES Preventative Maintenance Standards	Enforce current Preventative Maintenance and develop new performance standards to determine appropriate manpower, time requirements, and appropriate periodicity for each item to improve work planning and execution- Internal Maintenance Bulletin.	Mitchell Nici (ELES)	11/01/17	07/05/18
3) Acknowledgement of New Standards	Present and discuss with ELES personnel new expectations described in #2, including employee signature acknowledgement of new standards in the meeting roster.	Daniel White (ELES)	07/05/18	08/06/18
4) ELES Equipment Calibration Process	ELES will enforce existing written instructions for ELES Supervision to periodically inventory and inspect calibrated equipment, in accordance with existing calibration policies. ELES will add checklist to ensure return of tools.	Madhavan Kozhipurath (ELES)	11/01/17	07/05/18
5) Acknowledgement of Calibration Process/Checklist	Present and discuss with ELES personnel new Calibration Process/Checklist, including employee signature acknowledgement of new SOP in the meeting roster.	Madhavan Kozhipurath (ELES)	07/05/18	08/06/18
6) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	08/06/18	09/05/18

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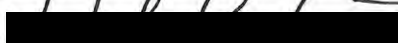


COMPLETION DOCUMENTATION


Performance Measures

- 80% of active ELES personnel responsible for preventative maintenance activities provide signature acknowledgement of updated standards.
- 80% of active ELES supervisors responsible for calibrated equipment provide signature acknowledgement of calibration process and updated checklist.

RESPONSIBLE PARTIES

ELES	Daniel White		11/8/2017
ELES	Madhavan Kozhipurath		11/8/2017
ELES	Gedion Gebremariam		11/8/2017
ELES	Mitchell Nici		11/8/2017

SECOND LEVEL RESPONSIBILITY

Managing Director, SSRV	Randall Grooman		11/8/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On September 8, 2017 QICO issued a comprehensive Report from an internal review into the assessment of the Metrorail Vertical Transportation Review: Escalator Maintenance and Inspections. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-MVT-17-03.

QICO Finding	QICO Recommendation
F-MVT-17-06: A formal maintenance control program is required to ensure compliance with code requirements and effective application of maintenance practices.	- Establish and implement a maintenance control program that meets code requirements stated in ASME A17.1 Section 8.6.
F-MVT-17-07: Accurate documentation of maintenance activities is essential to ensure information is available for troubleshooting and that all equipment is within specified tolerances.	- Establish and distribute a policy requiring preventative maintenance sheets to have all required readings recorded and that ensures maintenance personnel properly indicate and repair out-of-tolerance issues. The policy should require supervisory spot checks to ensure proper maintenance record keeping.
F-MVT-17-08: An escalator control cabinet was missing a fire extinguisher.	- Specify the location of fire extinguishers that are expected to be checked according to preventative maintenance tasks and implement a process that ensures all maintenance tasks are completed.

Required Action
QICO-MVT-17-03: Establish a maintenance control program that follows ASME code A17.1 Section 8.6; including methods for capture and storage of relevant maintenance data. (Risk Rating: High) ■



ACTION PLAN

Description

Currently, Maintenance Control Policies (MCPs) for Traction and Hydraulic Elevators are in place. An MCP for Escalators is in the developmental stage with the help of a contractor. Once completed it must be vetted through engineering, maintenance, and training for execution. ELES will develop an SOP for maintenance records: completion, review, and filing of form. ELES will develop a comprehensive list of ELES related spaces/areas equipped with a fire extinguishers.

Business Impact – Budget/Cost Estimate

Process Execution – A current process/procedure exists that meets the QICO Required Action, but needs to be executed. This type of initiative does not need additional resources.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Escalator Maintenance Control Plan- Draft	Coordinate with ELES Engineering and Maintenance to develop a draft comprehensive Maintenance Control Policy (MCP), establishing consistent methods for maintenance planning, execution, documentation and data capture activities.	Daniel White Madhavan Kozhipurath (ELES)	09/25/17	03/29/18
2) Escalator Maintenance Control Plan- Pilot Program	Pilot Program of Maintenance Control Plan	Daniel White (ELES)	07/02/18	10/01/18
3) Escalator Maintenance Control Plan- Final	Final Maintenance Control Policy (MCP), establishing consistent methods for maintenance planning, execution, documentation and data capture activities.	Daniel White (ELES)	03/29/18	12/31/18
4) ELES Maintenance Records Management	Develop a written process for the completion, review, data entry, and filing of ELES maintenance documentation to ensure clear and consistent capture of maintenance activities.	Daniel White (ELES)	11/01/17	03/29/18
5) ELES Fire Extinguisher Inventory	Identify all ELES locations requiring fire extinguisher placement, ensure all locations identified possess the required equipment, and develop methods to ensure all extinguishers are periodically inspected.	Madhavan Kozhipurath (ELES)	10/03/17	01/31/18
6) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	12/13/18	01/31/19

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.






COMPLETION DOCUMENTATION

Performance Measures

- Evidence of Maintenance Control Plan implementation, including signature acknowledgement of updated requirements by 80% of active ELES personnel.
- 90-day sample of work order data demonstrating compliance with records management practices developed under actionable item #4.
- Evidence of fire extinguisher placement at 100% of locations identified under actionable item #5.

RESPONSIBLE PARTIES

ELES	Daniel White		11/8/2017
ELES	Madhavan Kozhipurath		11/8/2017
ELES	Mitchell Nici		11/08/2017

SECOND LEVEL RESPONSIBILITY

Managing Director, SSRV	Randall Grooman		11/8/17
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**METRORAIL FIRE & LIFE SAFETY: FIRE SUPPRESSION
INSPECTION AND TESTING CAPS**



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an internal review report on Fire and Life Safety: Fire Suppression System Inspection, Testing and Maintenance. This CAP has been developed to address the findings and required actions per QICO-FLS-17-01.

QICO Finding	QICO Recommendation
F-FLS-17-01: Clear definition of roles, responsibilities, and processes are required to ensure all fire protection systems (FPS's) have defined ownership across the organization.	- Establish and implement department internal control documents (i.e. role, mission statement, goals, responsibilities, procedures, schedules, standards of inspection, etc.) to ensure consistent and reliable department performance.
F-FLS-17-02: Effective oversight of inspection, testing, and maintenance (ITM) programs for FPS's is required to ensure ITM functions are carried out consistently and documented appropriately.	- Establish ITM and recordkeeping standards to ensure that reporting consistently provides a detailed condition assessment of FPS's, and evaluation of additional FPS assets.

Required Action

QICO-FLS-17-01:
Establish governing documentation to define the roles, responsibilities, and processes to ensure clear departmental ownership and obligations for ITM of all WMATA FPS's.
(Risk Rating: High) ■



ACTION PLAN

Description

The WMATA Fire Marshal’s Office (FMO) is currently developing a comprehensive organization-wide program for fire protection system (FPS) inspection, testing, and maintenance (ITM) that will outline the roles and responsibilities of all departments involved in the process. This program is expected to be completed in ten (10) months. Additionally, the FMO will establish a communication plan that informs WMATA staff, stakeholders, and end users.

Business Impact – Budget/Cost Estimate

Process Improvement – The current processes/procedures need to be optimized to address the Quality Assurance, Internal Compliance & Oversight (QICO) Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the processes.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Inspection, Testing, & Maintenance Program	Development of a comprehensive, organization-wide FPS ITM program that ensures compliance with regulatory requirements.	SAFE	11/20/17	09/20/18
2) Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders, and end users.	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach to necessary maintenance, inspection, and testing personnel in adoption of new policy. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	SAFE	12/20/17	10/22/18
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and required actions have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	11/21/19	12/20/19

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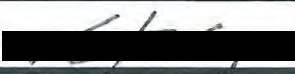


COMPLETION DOCUMENTATION

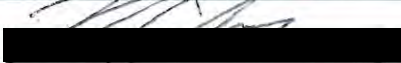
Performance Measures

- Signature acknowledging receipt and understanding from department heads of the Inspection, Testing, and Maintenance Program under action item 1.

RESPONSIBLE PARTIES

SAFE	Vincent Caponi		11/7/17
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SECOND LEVEL RESPONSIBILITY

Fire Marshal	Richard Arvin		11/7/17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an internal review report on Fire and Life Safety: Fire Suppression Inspection and Testing. This Corrective Action Plan (CAP) has been developed to address the findings and required action per QICO-FLS-17-02.

QICO Finding	QICO Recommendation
F-FLS-17-03: Consistent documentation of maintenance records is essential to ensure accurate accounting of asset status.	- Evaluate FLS maintenance records against SOP 209-07 sections 6.2.3 and 6.3.2 to ensure records consistently capture data.
F-FLS-17-04: Consistent application of maintenance practices is necessary to ensure FLS equipment is readily available.	- Evaluate fire equipment cabinet maintenance procedures to ensure unauthorized equipment or debris is not stored in fire equipment cabinets.

Required Action

QICO-FLS-17-02:
Conduct an evaluation of current maintenance practices, including maintenance records and material storage, and establish methods to ensure requirements are clearly defined and adhered to.
(Risk Rating: Elevated)



ACTION PLAN

Description

PLNT will update existing checklists to ensure fire suppression systems and fire equipment cabinets are tested, inspected, and maintained appropriately. Additionally, PLNT will create system specific checklists that will ensure all FLS system assets are properly tested, inspected, and maintained in accordance with fire suppression codes and standards.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Updated Work Instruction	PLNT will modify the existing fire extinguisher checklist to require inspection of the fire cabinet to ensure proper housekeeping.	PLNT	11/01/17	11/30/17
2) System Specific Checklists	PLNT will revise existing multi-system checklists and create system specific checklists based on the appropriate codes and standards.	PLNT	01/01/18	03/30/18
3) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	04/30/18	06/04/18

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COMPLETION DOCUMENTATION

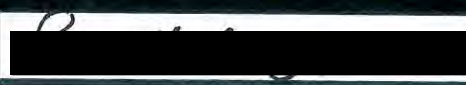
Performance Measures

- 95% signed acknowledgement of new checklists and work instructions of maintenance personnel performing tasks.

RESPONSIBLE PARTIES

PLNT	Paul Kram		11/6/17
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SECOND LEVEL RESPONSIBILITY

Managing Director	Randall Grooman		11/6/17
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**PARTS AND MATERIALS INVENTORY MANAGEMENT
CAPS**



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA’s Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-01.

QICO Finding	QICO Recommendation
F-PMIM-17-01: Effective management of supply chain systems is essential to ensure availability of parts/materials and reduce the number of stockouts.	- Determine a method to implement a Material Requirement Planning (MRP) system while incorporating the fundamental industry standards which will enhance the efficiency and effectiveness of the supply chain process.
Required Action	
QICO-PMIM-17-01: Determine a method to implement a Material Requirement Planning (MRP) system while incorporating the fundamental industry standards which will enhance the efficiency and effectiveness of the supply chain process. (Risk Rating: Elevated) 	



ACTION PLAN

Description

Establish the Governance necessary to implement an ERP system.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Supply Chain Analysis	Conduct an end-to-end analysis of supply chain activities in accordance with industry standards. Identify gaps and areas for an improvement plan.	SCES	11/27/17	5/26/18
2) Centralized Supply Chain	Develop a framework of policies and controls that ensure consistent application of supply chain and storeroom practices throughout WMATA's Operations Department.	SCES	12/1/17	11/30/18
3) Standardize Supply Chain	Develop and implement standard requirements for supply chain activities, to include order processing, receiving, inventory management, reverse logistics, and distribution throughout WMATA's Operations Department	SCES	5/27/17	11/30/18
4) Maintenance Requirements Planning Process	Establish baseline methods for resource planning, including requirements for data entry, forecasting, and ordering processes, clearly-defining the roles and responsibilities of stakeholder departments.	SCES	12/17/17	12/1/18
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	09/30/18	11/07/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- 90% of active SCES employee acknowledgement of new standard requirements for supply chain activities in actionable item #3.



RESPONSIBLE PARTIES

SCES	Rodolfo Bitar	[REDACTED]
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SECOND LEVEL RESPONSIBILITY

Managing Director, SSRV	Randall Grooman	[REDACTED]
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-02.

QICO Finding	QICO Recommendation
F-PMIM-17-02: Accounting for shelf-life limitations of parts and materials is necessary to ensure availability for use.	- Evaluate current material receiving practices and develop methods to ensure items with shelf-life limitations are identified and tracked through the supply chain system. A shelf life policy needs to be developed to ensure incoming products have adequate shelf life prior to entering into stock across the authority.

Required Action

QICO-PMIM-17-02: Evaluate current material receiving practices and develop methods to ensure items with shelf-life limitations are identified and tracked through the supply chain system. A shelf life policy needs to be developed to ensure incoming products have adequate shelf life prior to entering into stock across the authority.
(Risk Rating: Moderate)

**ACTION PLAN****Description**

Perform an overview of processes related to shelf life/expiration date to assess needs to develop and implement a method to track shelf life/expired items. Identify parts and materials which have shelf life and expiration dates. Develop a method of tracking shelf life/expired material to ensure expired items do not remain in WMATA's inventory and a proper quarantine area is established for these items. Receive acknowledgement from stakeholders receiving parts/materials ensuring WMATA will track shelf life/expired material across the organization. Implement the developed tracking of shelf life/expired material measures.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Evaluation of current shelf life/expiration processes	Perform an overview of processes related to shelf life/expiration date to assess needs to develop and implement a method to track shelf life/expired items. Identify parts and materials which have shelf life and expiration dates.	SCES	10/16/17	12/08/17
2) Develop tracking measures for shelf life/expired material	Develop a method of tracking shelf life/expired material to ensure expired items do not remain in WMATA's inventory and a proper quarantine area is established for these items.	SCES	11/01/17	02/16/18
3) Acknowledgement from stakeholders	Receive acknowledgement from stakeholders receiving parts/materials ensuring WMATA will track shelf life/expired material across the organization.	SCES	11/17/17	03/16/18
4) Implement the tracking of shelf life/expired material	Implement the developed tracking of shelf life/expired material measures.	SCES	03/26/18	07/01/18
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	07/01/18	08/29/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.




COMPLETION DOCUMENTATION


Performance Measures

- Signature acknowledgements provided by all required stakeholders, as identified under actionable item #3.
- Evidence of material tracking in accordance with requirements established under actionable item #4.

RESPONSIBLE PARTIES

SCES	Rodolfo Bitar	
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SECOND LEVEL RESPONSIBILITY

Managing Director, SSRV	Randall Grooman	
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-03.

QICO Finding	QICO Recommendation
F-PMIM-17-03: Clearly-defined key product characteristics/specifications are required to ensure accurate procurement of parts/materials while enhancing the quality control inspection process.	- Identify parts and materials that require an incoming/receiving inspection for quality control purposes (according to specification and contract requirements) and define specific methods to verify key characteristics of these items.

Required Action

QICO-PMIM-17-03: Identify parts and materials that require an incoming/receiving inspection for quality control purposes and define specific methods to verify key product characteristics of these items.

(Risk Rating: Elevated)



ACTION PLAN

Description

Engineering (herein referred to as the Offices of Engineering and Architecture (ENGA) and Chief Mechanical Officer (CMO)) will identify critical parts/materials which require quality control inspection and the associated key product characteristics (salient) which will be measured for acceptance or rejection upon delivery.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Identify Items Requiring QC Inspection	Engineering departments will identify critical components which require QC inspection upon delivery to the Authority.	ENGA CMO	01/1/2018	8/1/2018
2) Identify Key Product Characteristics	Engineering departments will identify the key product characteristics (salient) associated with critical components which must be measured for acceptance into the Authority upon delivery.	ENGA CMO	03/1/2018	12/15/2018
3) Collaboration of Engineering and MIPN	Engineering will collaborate with the Office of Materials and Inventory Planning (MIPN) to ensure the information of the parts/materials identified and their respective key product characteristics (salient) will be quality control inspected accordingly.	ENGA CMO	5/1/2018	12/15/2018
4) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	1/01/2019	02/28/2019

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- Evidence of a comprehensive critical components and salient characteristics are identified in WMATA’s Enterprise Data services in accordance to actionable items 1 and 2.



RESPONSIBLE PARTIES

ENGA	Nicholas Gardner	[Redacted]
CMO	John Doherty	[Redacted]

SECOND LEVEL RESPONSIBILITY

Chief Engineer (DECO)	John D. Thomas	[Redacted] 11-7-18
AGM (RAIL)	Andrew Off	[Redacted] 8 NOV 17



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-04.

QICO Finding	QICO Recommendation
F-PMIM-17-04: Clear definition of roles, responsibilities, and functions within MIPN is required to ensure activities are carried out consistently and in coordination with other departments.	- Establish governing documentation to define roles and responsibilities for the office of MIPN to ensure clear departmental duties across the supply chain.

Required Action

QICO-PMIM-17-04: Establish governing documentation to define roles and responsibilities for the office of MIPN to ensure clear departmental duties across the supply chain.

(Risk Rating: High) ■





ACTION PLAN

Description

The Office of Material and Inventory Planning (MIPN) will establish governing documentation with emphasis on planning, Pre/Post-Solicitation Management, Material Inspection, Data Management and Maintenance Logistics support.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Approval of Organizational Structure	Approval of MIPN's organizational structure and functions from the RAIL AGM and Chief Operating Officer.	MIPN	12/01/2017	01/31/2018
2) Roles and Responsibilities	MIPN will establish governing documentation defining roles and responsibilities, align job positions to the new org structure, create new Job Descriptions, decision rights, and the collaborated efforts required with RAIL offices, SCES, and PRMT. (Dependency on #1)	MIPN	2/01/2018	7/31/2018
3) Policies and Procedures	MIPN will establish business governing and operating policies, Standard Operating Procedures and Service Level Agreements with and the collaborated efforts required with RAIL offices, SCES, and PRMT	MIPN	8/1/2018	9/30/2018
4) Establish an organizational communication plan to announce newly established policy and inform WMATA staff, stakeholders and end users	The communication plan will ensure effective information sharing of newly established organizational policies to include outreach engineering, maintenance, procurement and supply chain personnel in adoption of new policies. The plan will also include methods, upon adoption, to communicate and inform the wider WMATA community and end users.	MIPN	9/30/2018	11/1/2018
5) Key Performance Indicators	Develop internal key performance indicators (KPI's), based on MIPN's business plan and the Office of RAIL, to measure future performance.	MIPN	10/1/2018	12/31/2018
6) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	1/1/2019	2/28/2019

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.



COMPLETION DOCUMENTATION

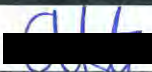
Performance Measures

- Signature approval of MIPN's organization structure and functions as outlined in actionable item 1.
- Signature acknowledgement from 95% of active MIPN personnel of roles, responsibilities, policies and procedures as developed under actionable items 2 and 3.

RESPONSIBLE PARTIES

MIPN	Prasant Bai Reddy	 11/6/2017
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SECOND LEVEL RESPONSIBILITY

AGM RAIL	Andrew Off	 8 NOV 17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-05.

QICO Finding	QICO Recommendation
F-PMIM-17-05: Requiring the communication of expected delivery dates from suppliers is necessary to improve inventory planning for scheduled maintenance activities.	- Establish and clarify requirements vendors must follow to ensure WMATA has clear supplier promised date and ship date used to update WMATA's data enterprise services.
Required Action	
QICO-PMIM-17-05: Establish and clarify requirements vendors must follow to ensure WMATA has clear supplier promised date and ship date used to update WMATA's data enterprise services. (Risk Rating: Moderate) 	

**ACTION PLAN****Description**

Develop/revise procedures for maintaining/updating supplier promise dates on purchase orders within WMATA's data enterprise systems.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items		Description	Responsible Party	Estimated Start	Estimated Completion
1)	Hiring of Procurement Manager	Currently the position is vacant, new hire is expected to start on 11/13/2017.	Suzette Moore	11/13/2017	11/14/2017
2)	Evaluate and Analyze Current Procedures	Perform an overview of current procedures to identify how initial promise dates are determined	Fifi Magiosi	11/13/2017	11/24/2017
3)	Develop Procedure for Promise Date Adjustment	Develop/revise procedure that provides clear direction and communication between suppliers and WMATA procurement regarding adjustment of the promise dates.	Fifi Magiosi	11/27/2017	12/08/2017
4)	Training Procurement Staff	Train all staff on the new/revised procedures and communicate WMATA's expectation to Suppliers.	Fifi Magiosi	12/11/2017	12/15/2017
5)	Implementation of Procedures	Implement the procedures and track/measure compliance as identified in actionable item 3.	Fifi Magiosi	01/02/2018	01/31/2018
6)	QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	02/01/2018	03/31/2018

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION**Performance Measures**

- 90% of active PRMT employee acknowledgement of training/retraining in actionable item 4.



RESPONSIBLE PARTIES

Deputy Chief
Procurement Officer

Daniel Smith



4/13/17

SECOND LEVEL RESPONSIBILITY

Chief Procurement Officer

Suzette Moore



4/13/17



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 20, 2017 the office of Quality Assurance, Internal Compliance & Oversight (QICO) issued a comprehensive internal review report, regarding the current policies, procedures, and practices associated with WMATA's Parts & Materials Inventory Management. This Corrective Action Plan (CAP) has been developed to address the finding and required action per QICO-PMIM-17-06.

QICO Finding

QICO Recommendation

F-PMIM-17-06: Identifying the reason Purchase Requisitions are aging beyond 30-days is required to maximize efforts to diminish the Procurement PR backlog.

- Procurement must identify and evaluate PR's that have been aging greater than 30 days in order to maximize efficiency and eliminate the continuing growth of the PR backlog.

Required Action

QICO-PMIM-17-06: Procurement must identify and evaluate PR's that have been aging greater than 30 days in order to maximize efficiency and eliminate the continuing growth of the PR backlog.

(Risk Rating: High) ■



ACTION PLAN

Description

Map and Analyze the Purchasing Requisition Process from initial generation to Purchase Order Award in order to identify unnecessary impediments and opportunities to use technology to eliminate them.

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Identify Purchase Requisition Process	Identify steps, systems, positions, and timeframe each Purchasing Requisition touches before it is delivered to the Purchasing Agent for Sourcing Action.	PRMT	11/15/2017	12/01/2017
2) Identify Purchasing Process	Identify all steps and systems a purchasing agent must take to move a Purchase action from the Requisition Stage to the Award Stage.	PRMT	11/20/2017	12/08/2017
3) Analyze Purchase Requisition and Purchasing Process	Analyze the processes mapped in actionable item 1 and 2 to identify areas of improvement, create and develop an implementation plan.	PRMT	12/11/2017	12/15/2017
4) Train Procurement Purchasing Agents	Train or re-train Purchasing Agents on changed/improved processes as identified in actionable item 3.	PRMT	01/02/2018	01/23/2018
5) Technology Changes	Develop and implement a plan based upon the intelligence acquired in actionable items 1 through 3 to make technological changes which reduce or eliminate the need to manually modify Purchasing Requisitions before they are sourced.	PRMT	12/18/2017	03/01/2018
6) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	04/01/2018	05/31/2018

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- 90% of active PRMT employee acknowledgement of training/retraining in actionable item 4.



RESPONSIBLE PARTIES

Deputy Chief
Procurement Officer

Daniel Smith

[Redacted]

11/13/17

SECOND LEVEL RESPONSIBILITY

Chief Procurement Officer

Suzette Moore

[Redacted]

11/13/17

**POST-SAFETRACK: ASSESSMENT OF NEXT-LEVEL
MAINTENANCE REQUIREMENTS CAPS**



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 6, 2017 QICO issued a comprehensive Report from an internal review of Metrorail’s Post-SafeTrack: Assessment of Next-Level Maintenance Requirements. This Corrective Action Plan (CAP) has been developed to address the following findings and required action per QICO-STP-17-01.

QICO Finding	QICO Recommendation
<p>F-STP-17-01: There was no specific requirement to develop a complete scope or plan prior to the launch of the emergency SafeTrack program.</p>	<ul style="list-style-type: none"> - To improve the planning and execution of future maintenance initiatives, establish policy requiring the development of plans and scopes prior to execution of work. This policy should establish the minimum required elements for maintenance program plans to ensure consistency in implementation.
<p>F-STP-17-03: Formal processes are required to govern changes in scope and schedule for Metro’s future capital renewal activities.</p>	<ul style="list-style-type: none"> - To improve control of changes in scope, schedule and implementation of future maintenance initiatives, define clear requirements for change management processes that ensure all impacts to critical areas are reviewed, approved and shared with key project stakeholders.
<p>F-STP-17-05: Identification and classification of program risks (i.e. program delays, material deficiencies, weather, etc.) is essential to effective management and execution of future capital renewal activities.</p>	<ul style="list-style-type: none"> - To reduce the impact of future program risks, establish a risk management structure to ensure risks and opportunities are identified and analyzed, resulting in response development and continuous monitoring.

Required Action

QICO-STP-17-01: To promote the effective execution of future maintenance initiatives, establish or revise policy to indicate the minimum requirements for program documentation (plan, scope, schedule, etc.) and control mechanisms (change management), including development and approval timelines.

Risk Rating: Elevated ■

**ACTION PLAN****Description**

F-STP-17-01: MOWE will establish minimum planning requirements to govern future maintenance programs, leveraging asset information to guide planning activities.

F-STP-17-03: MOWE will develop a standard operating procedure regarding a change management process to govern changes during a program for internal stakeholder coordination.

F-STP-17-05: MOWE Work Planning group will establish a process for a closed loop solution at weekly meetings.

Business Impact – Budget/Cost Estimate

Process Execution – A current process/procedure exists that meets the QICO Required Action, but needs to be executed. This type of initiative does not need additional resources.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Maintenance Program Requirements	Define the plan and scope documentation required to initiate a new maintenance program or initiative.	Laura Mason (MOWE)	07/03/17	12/27/17
2) Issue Asset Condition Data SOP	Develop SOP to establish accurate and timely asset condition information & development of associated management reports for MOWE Assets.	Laura Mason (MOWE)	07/03/17	12/27/17
3) Issue Emergency Maintenance Thresholds	Develop SOP that establishes maintenance thresholds and process to communicate and coordinate between MOWE, TRST and TRPM.	Laura Mason (MOWE)	01/01/18	06/28/18
4) Establish Framework for Change Management SOP for Maintenance of Way	SOP for Change Management process for internal stakeholders when changes affect: Revenue Rail Operations; Changes in Program SOW; Track Time and Additional Support from Other Offices	Laura Mason (MOWE)	07/03/17	12/28/17
5) Issue Change Management SOP(s) for Maintenance of Way	<ul style="list-style-type: none"> - Work with ROCC to amend SOP for requesting RSA - Create SOP for program changes made with associated engineering department's acceptance - Create template which will be required when additional track time is needed to complete work that exceeds initial estimate by more than 25% with justification, (for future forecasting purposes) to be approved by Deputy Chief of MOWE Work Planning - Create SOP to manage a change in scope that will require additional support from other offices. SOP will include flow of communication. 	Laura Mason (MOWE)	01/01/18	06/28/18



PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
6) Issue SOP for Risk Management and continuous improvement for MOWE and SOGR Work	MOWE work planning group to establish procedure for closed loop solution at weekly meetings.	Tiffani Rhodes (MOWE Planning)	07/01/17	06/28/18
7) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	06/28/18	07/30/18



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COMPLETION DOCUMENTATION

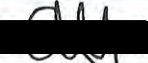
Performance Measures

- Clear definition of required documentation for future maintenance initiatives as detailed in actionable item #1.
- Evidence of change management implementation as specified in actionable item #5.
- Evidence of risk management implementation as described under actionable item #6.

RESPONSIBLE PARTIES

MOWE	Laura Mason	 11/15/17
MOWE Work Planning	Tiffani Rhodes	 11/15/17

SECOND LEVEL RESPONSIBILITY

AGM Rail Services	Andrew Off	 15 NOV 17
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CORRECTIVE ACTION PLAN

Purpose and Scope

On October 6, 2017 QICO issued a comprehensive Report from an internal review of Metrorail's Post-SafeTrack: Assessment of Next-Level Maintenance Requirements. This Corrective Action Plan (CAP) has been developed to address the following findings and required action per QICO-STP-17-02.

QICO Finding	QICO Recommendation
F-STP-17-02: Consistent practices for data capture are necessary to ensure traceability of work completed during future routine maintenance and capital renewal activities.	- To improve the integrity of maintenance records, establish uniform requirements for the use of Maximo in the documentation of work activities, including applicable nomenclature and data fields for traceability.

Required Action

QICO-STP-17-02: To improve the integrity of maintenance records, establish uniform requirements for the use of Maximo in the documentation of work activities, including applicable nomenclature and data fields for traceability.

Risk Rating: Low ■

**ACTION PLAN****Description**

The Reliability Centered Maintenance Planning Group (RCMP) will work with Maintenance-of-Way groups (TRST, TRPM, ATCM) to develop consistent processes for Maximo incidents and work orders, with the goal of establishing consistent fields and improving maintenance planning efforts. *Note that Maintenance-of-Way Engineering (MOWE) is concurrently developing a Maximo Data Business Plan for its responsible unit (TRST) as part of Track Inspection Internal Review CAPS (QICO-TIP-01 through QICO-TIP-04).*

Approved corrective action plans in the QICO 2017 Track Inspection Internal Review (QICO-TIP-01 through QICO-TIP-04) will address deficiencies in the integrity of track defect data provided by daily track inspection groups. These CAPs will establish a track assessment business plan to direct collection, analysis, and storage of data.

Business Impact – Budget/Cost Estimate

This project will be funded with Capital Funds under CIP-139_S12, \$1.1M in funding to hire the additional consultant support necessary to support RCMP.

PLAN STRUCTURE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
1) Issue Task Order Contract	Issue a task order utilizing an existing IT contract and hire additional Business Analysts to support RCMP.	Francesco Palmeri (RCMP)	09/01/17	12/27/17
2) Develop a Maximo Work Order Usage policy for Track and Structures (TRST)	Develop a consistent process for Maximo incidents and work orders to establish consistent fields and assist MOWE in maintenance planning efforts.	Francesco Palmeri (RCMP)	12/15/17	04/05/18
3) Develop a Maximo Work Order Usage policy for Traction Power Maintenance (TRPM)	Develop a consistent process for Maximo incidents and work orders to establish consistent fields and assist MOWE in maintenance planning efforts.	Francesco Palmeri (RCMP)	12/15/17	02/05/18
4) Develop a Maximo Work Order Usage policy for Automatic Train Control Maintenance (ATCM)	Develop a consistent process for Maximo incidents and work orders to establish consistent fields and assist MOWE in maintenance planning efforts.	Francesco Palmeri (RCMP)	12/15/17	04/05/18
5) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	04/05/18	05/07/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.



COMPLETION DOCUMENTATION

Performance Measures

- 90% of active TRST, TRPM, ATCM, & MOC (Maintenance Operations Control) personnel responsible for entering Maximo incident and work order data provide signature acknowledgement of updated usage policies as developed under actionable items #2, 3, & 4.
- Evidence of implementation and compliance with Maximo usage policies as developed under actionable items #2, 3, & 4.

RESPONSIBLE PARTIES

RCMP

Francesco Palmeri

On behalf of RCMP

[Redacted Signature]

SECOND LEVEL RESPONSIBILITY

AGM Rail Services

Andrew Off

[Redacted Signature]

15 NOV 17



CORRECTIVE ACTION PLAN

Purpose and Scope

On October 6, 2017 QICO issued a comprehensive Report from an internal review of Metrorail’s Post-SafeTrack: Assessment of Next-Level Maintenance Requirements. This Corrective Action Plan (CAP) has been developed to address the following findings and required action per QICO-STP-17-02.

QICO Finding	QICO Recommendation
F-STP-17-04: Quality control measures are necessary to consistently identify and correct material deficiencies future routine maintenance and capital renewal activities.	- To improve the quality and execution of future maintenance initiatives, establish formal quality control measures for use in corrective maintenance and rehabilitation activities that ensure identification and remediation of deficiencies prior to returning assets to passenger service.

Required Action

QICO-STP-17-03: To improve the quality and execution of future maintenance initiatives, establish formal quality control measures for use in corrective maintenance and rehabilitation activities that ensure identification and remediation of deficiencies prior to returning assets to passenger service.

Risk Rating: Medium



ACTION PLAN

Description

Establish quality control measures for all maintenance groups within Rail Services to ensure that discrepancies in workmanship or material quality are identified and corrected prior to returning assets to revenue service

Business Impact – Budget/Cost Estimate

Process Improvement – A current process/procedure needs to be optimized to address the QICO Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.

PLAN STRUCTURE

Actionable Items	Description	Responsible Party	Estimated Start	Estimated Completion
1) ATCM Maintenance Control Policy	Update Maintenance Control Policy, making specific references to different methods used in preventative and corrective/remedial maintenance activities.	Michael Cooper (ATCM)	09/01/17	12/27/17
2) TRST Maintenance Control Policy Update	Update Maintenance Control Policy, making specific references to different methods used in preventative and corrective/remedial maintenance activities.	Mike Davis (TRST)	09/01/17	12/27/17
3) TRPM Maintenance Control Policy Update	Update Maintenance Control Policy making specific references to different methods used in preventative and corrective/remedial maintenance activities.	Mike Hass (TRPM)	09/01/17	12/27/17
4) QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	12/21/17	01/24/18

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- 100% of active supervisory personnel under TRST, TRPM, & ATCM provide signature acknowledgement of updated practices as prescribed in actionable items #1, 2, & 3.

RESPONSIBLE PARTIES

TRST	Mike Davis	11-15-17
TRPM	Mike Hass	11/15/17
ATCM	Michael Cooper	11/15/2017

SECOND LEVEL RESPONSIBILITY

AGM Rail Services	Andrew Off	15 NOV 17
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