



Internal Review Summary

Why QICO Performed This Review:

- This internal review is intended to provide Metro senior management with an assessment of the state of Traction Power Inspection and Maintenance (TRPM) and promote the actions needed to address any concerns.
- QICO is independent from the functions it oversees, authorized by the General Manager to conduct objective reviews with unrestricted access to all functions, records, assets and employees under its purview.

QICO's Methodology:

- Developed relevant review activities by identifying and assessing risks to quality of work, compliance with standards, records management, and safety.
- Reviewed maintenance documentation, observed maintenance and inspection work in-progress, and interviewed key personnel.
- Review findings and required actions are rated based on severity of risk, which ranges on a scale from "Insignificant" to "High."

Note: An itemized Corrective Action Plan (CAP) is developed for each required action to achieve effective and measureable resolution of identified concerns. To check the status of CAP implementation go to www.wmata.com/initiatives/transparency/.

June 2017

Metrorail Traction Power Inspection and Maintenance

QICO's Review Results:

Establishment of a new training curriculum, improved document control, and an effective staffing process can improve accountability.

QICO's internal review identified and noted several **Wins (What Worked Well)** and **Areas for Improvement** requiring corrective actions:

- ✓ Traction Power supervisors employ effective communication methods to relay information upon shift turnover.
- ✓ The Cable Inspection Team inspected 100% of mainline cable connections for 2016.
- The Traction Power Maintenance Control Policy does not outline technical training required for technicians or supervisors.
- Inconsistent logbook entries in traction power substations provides ineffective communication of work completed and ongoing.
- The Traction Power Maintenance Control Policy has not undergone annual review/revision, as required (Last revised May 2014).
- TRPM mechanics utilize O&M manuals in-place of PMI procedures to complete preventative maintenance on new equipment.
- Traction Power supervisors are not performing quality control checks.
- Completed Preventative Maintenance (PM) forms do not always reference the applicable work order number, which is the link between the actual work performed and the electronic record in WMATA's enterprise asset management system (Maximo).
- TRPM corrective maintenance records, as identified in the enterprise asset management database (Maximo), indicate a backlog of open work orders.
- Electronic records management practices lack oversight and control.
- Electrical facilities room inspection records are incomplete and inconsistent.
- Lockout/Tagout procedure currently used by TRPM personnel has not been approved.

Required Actions:

- **QICO-TRPM-17-01:** Clearly define specific training requirements and periodicities for each technician grade and develop methods of capturing on-the-job training in accordance with the Maintenance Control Policy. *(Risk Rating: Elevated)*
- **QICO-TRPM-17-02:** Review and perform necessary revision to maintenance documentation, including the Maintenance Control Policy (MCP), and establish supervisory control to ensure compliance with updated requirements. *(Risk Rating: Elevated)*
- **QICO-TRPM-17-03:** Ensure new Lockout/Tagout (LOTO) procedure is formally approved for proper use in TRPM maintenance activities. The new LOTO procedure must conform to OSHA requirements under section 1910.147. *(Risk Rating: High)*