QICO 2018 INTERNAL REVIEW

Washington Metropolitan Area Transit Authority
WMATA

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ASSURE · IMPROVE · OVERSEE
M metro

April 27, 2018

Internal Safety & Security Review

6. *Shops and Material Support (SAMS)*

7. *Communications (COMMS)*

8. *Automatic Fare Collection (AFC)*

9. *Elevators and Escalators (ELES)*

ENGINEERING & MAINTENANCE

SERVICE DELIVERY

CAPITAL PROGRAM - MANAGEMENT & EXECUTION

INTERNAL SAFETY & SECURITY REVIEW

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

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WHAT WE DO

What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. Authorized by the General Manager as outlined in the Quality Management System Plan (QMSP).

Why QICO Performed This Review:

- This internal safety and security review (ISSR) is intended to provide Metro senior management with an assessment of the safety and security of SAMS, COMM, AFC, ELES and promote the actions needed to address any concerns.

QICO's Methodology:

- Developed a checklist and relevant review activities in accordance with System Safety Program Plan (SSPP), System Security and Emergency Preparedness Plan (SEPP) by identifying and assessing risks to safety & security of the agency.
- Review documentation, observe processes and interview 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 internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measureable resolution of identified concerns. To check the status of iCAPA implementation go to: www.wmata.com/initiatives/transparency/.

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6. Systems Maintenance (SMNT) Shops & Material Support (SAMS)

Wins:
- ✓ Maximo calibration records indicate that all equipment is available to be used and will provide accurate measurement and performance.

Items Resolved During Review:
- ✪ SAMS corrected general housekeeping issues related to material storage.

7. Systems Maintenance (SMNT) Communications Branch (COMM)

Wins:
- ✓ The Maintenance Control Policy (MCP) is comprehensive and up to date supporting consistent work practices across the branch.
- ✓ Personal protective equipment (PPE) at all work sites visited was readily available and properly used promoting safe work practices.

8. Systems Maintenance (SMNT) Automatic Fare Collection Branch (AFC)

Wins:
- ✓ AFC has an efficient revenue key control process to monitor and track revenue key ownership during maintenance activities.

9. Office of Elevators & Escalators (ELES)

Wins:
- ✓ Correct usage of escalator barricades to prevent unauthorized entrance into work areas was observed at visited sites.
- ✓ Personal protective equipment (PPE) at all work sites visited was readily available and properly used promoting safe work practices.

Items Resolved During Review:
- ✪ An improperly stored battery pack for cleaning equipment was removed from a spill pallet.

WHAT WE WILL DO MOVING FORWARD

Key Takeaway

Continuing to enhance management controls and training will assure compliance with the System Safety Program Plan (SSPP) and the Security and Emergency Preparedness Plan (SEPP), contributing towards increased safety and security of WMATA operations.

Through the implementation of 9 iCAPAs we are committed to driving safety and security improvement initiatives with the objective of safeguarding the mission success of the agency while increasing customer and employee safety. These strategic plans to address issues of concern, required actions and recommendations are intended to drive real progress that is measureable and verifiable.

6. SAMS, 7. COMM and 8. AFC

- Update and implement procedures to improve supervisory controls, safety management, configuration management, and safety training.
- For details on committed action plans see the following iCAPAs: QICO-SS-SMNT-18-01, SMNT-18-02, SMNT-18-03, SAM-18-01, COM-18-01, & AFC-18-01.

9. ELES

- Identify opportunities to revise and implement sustainable safety requirements for training and maintenance activities, ensuring procedures to identify, mitigate, and report safety concerns are included.
- For details on committed action plans see the following iCAPAs: QICO-SS-ELES-18-01, ELES-18-02, & ELES-18-03.

Washington Metropolitan Area Transit Authority

INTERNAL REVIEW 2018

Internal Review: Internal Safety & Security

(6) Office of Systems Maintenance Shops And Material Support (SAMS)

April 27, 2018

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

**ENGINEERING &
MAINTENANCE**

**SERVICE
DELIVERY**

**CAPITAL PROGRAM –
MANAGEMENT
& EXECUTION**

**INTERNAL SAFETY
& SECURITY REVIEW**

INTERNAL REVIEW SUMMARY

April 2018

(6) Systems Maintenance (SMNT) Shops And Material Support (SAMS) Internal Safety and Security Review

What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. Authorized by the General Manager as outlined in the Quality Management System Plan (QMSP).

Why QICO Performed This Review:

- This internal safety and security review (ISSR) is intended to provide Metro senior management with an assessment of the safety and security of Shops And Material Support (SAMS) and promote the actions needed to address any concerns.

QICO's Methodology:

- Developed a checklist and relevant review activities in accordance with System Safety Program Plan (SSPP), System Security and Emergency Preparedness Plan (SEPP) by identifying and assessing risks to safety and security of the agency.
- Review maintenance documentation, observe maintenance and inspection work in-progress, and interview key personnel and visit back-shops.
- Review and rate findings and required actions based on severity of risk, which ranges on a scale from "Insignificant" to "High".

Wins:

✓ Precision measuring devices are maintained with current calibration status fostering positive quality control.

Items Resolved During Review:

✪ SAMS corrected general housekeeping issues related to material storage.

Areas for Improvement

- Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
- Safety data collection and anaylsis is necessary to plan and implement safety related activities.
- The implementation of quality control program related to rulebook compliance is essential to maintaining a safe working environment.
- Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees.
- The presence of a department specific procedure governing configuration changes is critical to safe and reliable change management.

Required Actions:

- **QICO-SS-SMNT-18-01:** Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified. *(Risk Rating: Elevated)*
- **QICO-SS-SMNT-18-02:** Implement a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks. *(Risk Rating: High)*
- **QICO-SS-SMNT-18-03:** Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records. *(Risk Rating: Moderate)*
- **QICO-SS-SAM-18-01:** Establish and implement a departmental procedure that governs configuration changes, with an emphasis on safety. *(Risk Rating: Moderate)*

Actions Underway:

Federal Transit Administration Special Directive 18-2:

o **FTA-TSR-18-004:** WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System according to the required timeframes. *(Risk Rating: 4C)*

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

6.1. FUNCTIONAL OVERVIEW AND STRUCTURE

Office of Systems Maintenance (SMNT) Shops And Material Support (SAMS)

SAMS provides component level repair for the SMNT branches and supports procurement actions for all of SMNT. They also provide a number of services that impact most of the Authority such as handheld radio repair/certification and test equipment calibration.

They provide technical support for the following diverse functions and equipment:

- Acceptance testing, primarily for ATC Engineering.
- Equipment calibration, for example portable radios and third rail warning audio strobe devices (WASD).
- Procurement assistance.
- Locksmith services.
- Bench level component repair, for example impedance bonds.
- Radio equipment maintenance.
- Automatic Train Control (ATC) component maintenance.
- Automatic Fare Collection (AFC) component maintenance.
- Communication equipment component maintenance, for example public address, CCTV, fire/intrusion, DVR.

Organizational Structure and Background

SAMS is under the office of SMNT, within the department of Support Services (SSRV), reporting to the Chief Operating Officer (COO).

Shops And Material Support is led by a superintendent and one assistant superintendent. The superintendents manage supervisors and technicians covering several functional areas such as calibration, locksmithing, and component repair.

Shops And Material Support consists of one (1) superintendent, one (1) assistant superintendent, three (3) shop supervisors, and one (1) material control supervisor.
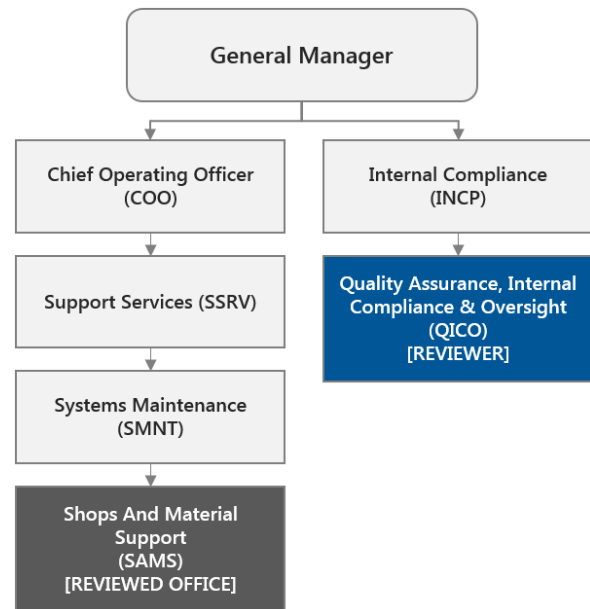
6.2. REVIEW SCOPE

The intention of this internal safety and security review is to provide an independent evaluation of SAMS policies, procedures, and safety/security related operations, promote compliance with internal and external regulatory requirements, and drive improvements that strengthen overall safety and security management programs and performance.

QICO performed the internal review between January 1 and March 31, 2018.

QICO reviewed documents, shadowed field visits, and interviewed personnel, noting both wins and findings. QICO's findings are categorized into four (4) groups: **Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)**, **Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)**, **Hazard Management (SSPP Elements 6, 10, 11 & 19)**, and **Safety & Security (SSPP Elements 7, 8, 9, 14 & SEPP)**. For each finding there is an associated **Recommendation** (a suggestion for improving a process based upon QICO's review). Findings are combined into **Required Actions**, which summarize the steps action owners must take to address discrepancies.

Documentation Review

- Internal Safety and Security Review Program and Procedures Manual.
- Security Emergency Preparedness Plan (SEPP).
- FTA Security and Emergency Preparedness Action Items for Transit Agencies.
- WMATA System Safety Program Plan (SSPP).
- Emergency Operations Plan (EOP).
- Policy/Instruction 10.4/0: Incident and Accident Investigation.
- Policy/Instruction 4.10/3: Configuration Control Management.
- Policy/Instruction 1.15/0, 5.08: Rule Book Management.
- WMATA Continuity of Operations Plan (COOP).
- FTA Implementation Guidelines for 49 CFR Part 659.
- FTA Implementation Guidelines for 29 CFR Part 1904
- FTA Implementation Guidelines for 29 CFR Part 1910.1200.
- Shops And Material Support Maintenance Control Policy (MCP).
- Safety Measurement System (SMS) records.
- Local Safety Committee (LSC) and Department Safety Committee (DSC) meeting agendas and minutes.
- SAMS training matrix and records.
- SMNT Continuity of Operations Plan (COOP).
- SAMS equipment calibration records located within Maximo.

Personnel Interviews

- General Superintendent,
- Acting Superintendent,
- Assistant Superintendent,

Field Assessments

- SAMS, 195 Telegraph Road was used for this review.

6.3. WHAT WORKED WELL (WINS)

Wins are categorized by Measures and rated according to Risk Assessment

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W-SS-SAM-18-01 Policies, Procedures & Standards   Reduces Safety Risk   Owner – SAMS

✔ **Precision measuring devices are maintained with current calibration status fostering positive quality control.**

Discussion

- Maximo asset calibration records indicated all devices bear a current calibration status.

6.4. ITEMS RESOLVED DURING REVIEW

Items are categorized by Measures and rated according to Risk Assessment

The following are issues that were identified by QICO during the Internal Review process, where appropriate actions were taken to eliminate the discrepancy or nonconformance prior to the close of this review.

SS-SAM-18-01   Occupational Safety & Health   *Reduces Safety Risk* ▉   Owner –SAMS

✪ **SAMS corrected general housekeeping issues related to material storage.**

Actions Taken

- QICO verified the following observations were promptly addressed by SAMS:
   o Pallets improperly placed in loading bin in violation of OSHA CFR 29 1910.176.
   o Flat board stored leaning against wall in violation of OSHA CFR 29 1910.176.
   o Housekeeping concerns with regard to the locksmith room (formerly a paint room) in violation of OSHA 29 CFR 1910.22 (a)(1).

6.5. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

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F-SS-SAM-18-01 **Hazard Management**   **Safety – Elevated (4,4)** ▮ **Owner – SMNT**

- **Finding: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.**

Discussion

- The MCP does not provide a form for reporting and managing hazards as required in 49 CFR 659.31.
- Department safety committee meeting does not indicate any evidence of performing hazard analysis for severity, frequency, and cost feasibility of remedial actions as per the requirement in SSPP 6.2.1.
- The Local Safety Committee meetings records provided do not indicate the participation of union staff as required in WMATA SSPP 5.4.2.
- The MCP does not contain a detailed procedure for managing hazards as required by 49 CFR 659.31.

Recommendation

Implement a documented hazard management procedure, including the required forms containing identification, analysis, and mitigation of the hazards identified.

F-SS-SAM-18-02 **Occupational Safety & Health**   **Safety – Moderate (3,3)** ▮ **Owner – SAFE**

- **Finding: Safety data collection and anaylsis is necessary to plan and implement safety related activities.**

Discussion

- As per the LSC and DSC meeting records, SAFE representation is not evident. This indicates that SMS data is not shared with the department for use in planning safety related activities as required in WMATA SSPP 9.2.

Recommendation

Establish and implement a procedure governing SMS data communication to the respective departments and the expectations of utilizing the data.

F-SS-SAM-18-03 **Safety Management**   **Safety – High (4,5)** ▮ **Owner – SMNT**

- **Finding: The implementation of quality control program related to rulebook compliance is essential to maintain a safe working environment.**

Discussion

- No records were made available that indicate rulebook compliance quality control checks are performed as per WMATA SSPP element no. 13.5.
- No quality control program for safety requirements were evident as required by Policy/Instruction 1.15/0 5.08.

Recommendation

Implementation of a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks.

6.5. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

F-SS-SAM-18-04   Safety Training & Certification   Safety – Moderate (3,4)   Owner – SMNT

- **Finding: Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees.**

Discussion

- The departmental training matrix lacks revision controls, which jeopardizes identifying the required training and timely delivery, particularly with regard to updated training requirements.
- There is no procedure in place to provide for periodic review of training records to ensure all required training and certifications are complete and up to date.
- The training records provided do not include Hazardous Waste Management as required in WMATA SSPP 19.0.
- SMS incident/accident investigation ELM training records for designated employees do not show the required training as completed, as required in P/I 10.4/0 5.10.
- The department does not have an established required training matrix for each assigned job classification.

Recommendation

Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

F-SS-SAM-18-05   Managing Safety in System Modification   Safety – Moderate (3,3)   Owner – SMNT

- **Finding: The presence of a department specific procedure governing configuration changes is critical to safe and reliable change management.**

Discussion

- Lack of specific departmental procedure governing configuration changes that ensures safety is not adversely affected by modifications to systems or components, as required in WMATA SSPP 7.1.1.

Recommendation

Establish and implement a departmental procedure that governs configuration changes, with an emphasis on safety.

6.6. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

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QICO-SS-SMNT-18-01   Action Owner – SMNT   Overall Risk – Elevated ▮

Required Action: Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified.

Applicable Findings

- **F-SS-SAM-18-01:** Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
    - *Measure: Hazard Management. Risk: Safety – Elevated (4,4)*

QICO-SS-SMNT-18-02   Action Owner – SMNT   Overall Risk – High ▮

Required Action: Implement a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks.

Applicable Findings

- **F-SS-SAM-18-03:** The implementation of quality control program related to rulebook compliance is essential to maintain a safe working environment.
    - *Measure: Safety Management Risk: Safety – High (4,5)*

QICO-SS-SMNT-18-03   Action Owner – SMNT   Overall Risk –Moderate ▮

Required Action: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Findings

- **F-SS-SAM-18-04:** Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees.
    - *Measure: Safety Training & Certification Risk: Safety – Moderate (3,4)*

QICO-SS-SAM-18-01   Action Owner – SAMS   Overall Risk –Moderate ▮

Required Action: Establish and implement a departmental procedure that governs configuration changes, with an emphasis on safety.

Applicable Findings

- **F-SS-SAM-18-05:** The presence of a department specific procedure governing configuration changes is critical to safe and reliable change management.
    - *Measure: Managing Safety in System Modification Risk: Safety – Moderate (3,3)*

Internal Corrective and Preventive Actions (iCAPAs) are designated to address each Required Action listed above.

6.6. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

ACTIONS UNDERWAY

| FTA-TSR-18-004 | Action Owners – SAFE, OIT | Acceptable without Executive Safety Committee Review | 4C |

Required Action: WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System according to the required timeframes.

Applicable Findings

- **F-SS-SAM-18-02:** Safety data collection and anaylsis is necessary to plan and implement safety related activities..
  - o *Measure: Occupational Safety & Health Risk: Safety – Moderate (3,3)*

Washington Metropolitan Area Transit Authority

INTERNAL REVIEW 2018

Internal Review: Internal Safety & Security

(7) Office of Systems Maintenance (SMNT) Communications Branch (COMM)

April 27, 2018

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

ENGINEERING & MAINTENANCE

SERVICE DELIVERY

CAPITAL PROGRAM – MANAGEMENT & EXECUTION

INTERNAL SAFETY & SECURITY REVIEW

INTERNAL REVIEW SUMMARY April 2018

(7) Systems Maintenance (SMNT) Communications Branch (COMM) Internal Safety and Security Review

What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. Authorized by the General Manager as outlined in the Quality Management System Plan (QMSP).

Why QICO Performed This Review:

- This internal safety and security review (ISSR) is intended to provide Metro senior management with an assessment of the safety and security of the Communications Branch (COMM) and promote the actions needed to address any concerns.

QICO's Methodology:

- Developed a checklist and relevant review activities in accordance with System Safety Program Plan (SSPP), System Security and Emergency Preparedness Plan (SEPP) by identifying and assessing risks to safety and security of the agency.
- Review maintenance documentation, observe maintenance and inspection work in-progress, and interview key personnel and visit back-shops.
- Review and rate findings and required actions based on severity of risk, which ranges on a scale from "Insignificant" to "High".

Wins:

✓ The Maintenance Control Policy (MCP) is comprehensive and up to date supporting consistent work practices across the branch.

✓ Personal protective equipment (PPE) at all work sites visited was readily available and properly used promoting safe work practices.

Areas for Improvement

- Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
- Safety data collection and anaylsis is necessary to plan and implement safety related activities.
- The implementation of quality control program related to rulebook compliance is essential to maintain a safe working environment.
- Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees.
- Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.

Required Actions:

- **QICO-SS-SMNT-18-01:** Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified. *(Risk Rating: Elevated)*
- **QICO-SS-SMNT-18-02:** Implementation of a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks. *(Risk Rating: High)*
- **QICO-SS-SMNT-18-03:** Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records. *(Risk Rating: Moderate)*
- **QICO-SS-COM-18-01:** Establish a quality control program to promote compliance to the inspection and calibration requirements. The program should include specific check points, frequency of checks, and the responsible parties. *(Risk Rating: Elevated)*

Actions Underway:

Federal Transit Administration Special Directive 18-2:

- o **FTA-TSR-18-004:** WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System according to the required timeframes. *(Risk Rating: 4C)*

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

7.1. FUNCTIONAL OVERVIEW AND STRUCTURE

Office of Systems Maintenance (SMNT) Communications Branch (COMM)

The Communications Branch is responsible for the maintenance and availability of the authority's communications systems in support of BUS, MTPD, and RAIL operations.

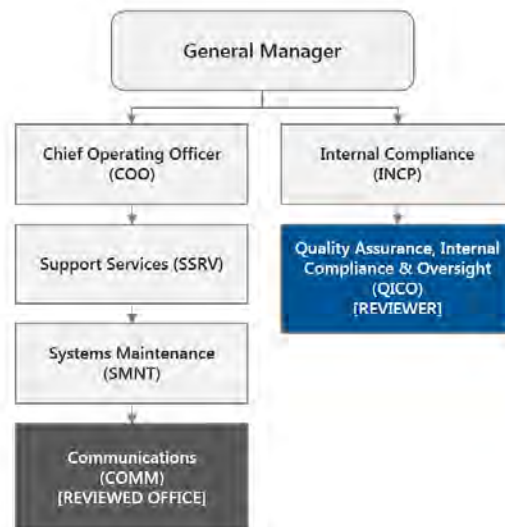Maintenance coverage is provided 24 hours per day for:

- Metro Closed Circuit Television (CCTV) System.
- Comprehensive Radio Communications System (CRCS).
- MTPD Mobile Data Terminals (MDT).
- Public Safety Radio System (PSRS) interfaces.
- Public safety system distributed antenna system.
- Fire, Intrusion, and Access Control (FIA) Systems.
- Yard security system.
- Public Address (PA) systems.
- Integrated intercommunications system.
- Passenger Emergency Response System (PERS).
- Passenger Information Display System (PIDS).
- Environmental monitoring systems.
- Methane gas detection systems.

Organizational Structure and Background

The Communications Branch is under the office of Systems Maintenance (SMNT), within the department of Support Services (SSRV), reporting to the Chief Operating Officer (COO).

The Communications Branch is led by a superintendent, with four reportees, three superintendents and a special projects' manager. The superintendents manage supervisors and technicians covering several functional areas such as radio, Fire-Intrusion-Access Control (FIA), and communication system infrastructure.

As per the latest Systems Maintenance organizational chart, dated 14 September 2017, the Communications Branch consists of one (1) superintendent, three (3) assistant superintendents, one (1) special projects manager, five (5) area supervisors, 17 supervisors, and five (5) administrators.

7.2. REVIEW SCOPE

The intention of this internal safety and security review is to provide an independent evaluation of COMM policies, procedures, and safety/security related operations, promote compliance with internal and external regulatory requirements, and drive improvements that strengthen overall safety and security management programs and performance.

QICO performed the internal review between January 1 and March 31, 2018.

QICO reviewed documents, shadowed field visits, and interviewed personnel, noting both wins and findings. QICO's findings are categorized into four (4) groups: **Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)**, **Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)**, **Hazard Management (SSPP Elements 6, 10, 11 & 19)**, and **Safety & Security (SSPP Elements 7, 8, 9, 14 & SEPP)**. For each finding there is an associated **Recommendation** (a suggestion for improving a process based upon QICO's review). Findings are combined into **Required Actions**, which summarize the steps action owners must take to address discrepancies.

Documentation Review

- Internal Safety and Security Review Program and Procedures Manual.
- Security Emergency Preparedness Plan (SEPP).
- FTA Security and Emergency Preparedness Action Items for Transit Agencies.
- WMATA System Safety Program Plan (SSPP).
- Emergency Operations Plan (EOP).
- Policy/Instruction 10.4/0: Incident and Accident Investigation.
- Policy/Instruction 4.10/3: Configuration Control Management.
- Policy/Instruction 1.15/0, 5.08: Rule Book Management.
- WMATA Continuity of Operations Plan (COOP).
- FTA Implementation Guidelines for 49 CFR Part 659.
- FTA Implementation Guidelines for 29 CFR Part 1904
- FTA Implementation Guidelines for 29 CFR Part 1910.1200.
- Metrorail Communications Branch Maintenance Control Policy (MCP).
- Preventive maintenance checklists for CCTV, PIDS, and Ramex equipment.
- Preventive maintenance checklists for communications room site visits.
- Work orders for COMM preventative maintenance (PM) and corrective maintenance (CM) activities.
- Safety Measurement System (SMS) records.
- Local Safety Committee (LSC) and Department Safety Committee (DSC) meeting agendas and minutes.
- COMM training matrix and records.
- SMNT Continuity of Operations Plan (COOP).
- COMM equipment calibration records located within Maximo.

Personnel Interviews

- General Superintendent - ████████████
- Superintendent - ████████████
- Assistant Superintendent, ████████████
- Assistant Superintendent, ████████████
- Area Manager, ████████████
- Area Manager, ████████████
- Area Manager, ████████████
- Supervisor, ████████
- Supervisor, ████████
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Field Assessments

- Radio testing: Blue Line right-of-way and stations between Largo Town Center (G05) to Metro Center (A01).
- CRCS uplink signal strength testing: Blue Line right-of-way and stations between Largo Town Center (G05) to Metro Center (A01).
- Daily safety briefings, assignments, and preparation for PMIs/CM: Carmen Turner Facility (CTF).
- Passenger Information Display System (PIDS) PMI: Cheverly Station (D11).
- CCTV PMI: Shady Grove (A15).

7.3. WHAT WORKED WELL (WINS)

Wins are categorized by Measures and rated according to Risk Assessment

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W-SS-COM-18-01   Policies, Procedures & Standards   Reduces Safety Risk   Owner – COMM

✓ **The Maintenance Control Policy (MCP) is comprehensive and up to date supporting consistent work practices across the branch.**

Discussion

- The MCP provided was comprehensive in addressing the requirements established in the SSPP.

W-SS-COM-18-02   Job Safety   Reduces Safety Risk   Owner – COMM

✓ **Personal protective equipment (PPE) at all work sites visited was readily available and properly used promoting safe work practices.**

Discussion

- During field assessments at Carmen Turner Facility, Cheverly, Shady Grove, and along the right-of-way, QICO observed consistent usage and availability of the required PPE.

7.4. AREAS FOR IMPROVEMENT

Findings are categorized by Measures *and rated according to* Risk Assessment

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F-SS-COM-18-01   Hazard Management   Safety – Elevated (4,4) 🟧   Owner – SMNT

- **Finding: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.**

Discussion

- The MCP does not provide a form for reporting and managing hazards as required in 49 CFR 659.31.
- Department safety committee meeting does not indicate any evidence of performing hazard analysis for severity, frequency, and cost feasibility of remedial actions per the requirement in SSPP 6.2.1.
- The Local Safety Committee meetings records provided do not indicate the participation of union staff as required in WMATA SSPP 5.4.2.

Recommendation

Implement a documented hazard management procedure, including the required forms containing identification, analysis, and mitigation of the hazards identified.

F-SS-COM-18-02   Occupational Safety & Health   Safety – Moderate (3,3) 🟨   Owner – SAFE

- **Finding: Safety data collection and anaylsis is necessary to plan and implement safety related activities.**

Discussion

- As per the LSC and DSC meeting records, There is no evidence of SAFE representation. This indicates that SMS data is not shared with the department for use in planning safety related activities as required in WMATA SSPP 9.2.

Recommendation

Establish and implement a procedure governing SMS data communication to the respective departments and the expectations of utilizing the data.

F-SS-COM-18-03   Safety Management   Safety – High (4,5) 🟥   Owner – SMNT

- **Finding: The implementation of quality control program related to rulebook compliance is essential to maintain a safe working environment.**

Discussion

- No records were made available that indicate level 2 rulebook compliance quality control checks are performed per WMATA SSPP element no. 13.5.

Recommendation

Implementation of a documented rulebook compliance quality control program that addresses specific check criteria and the frequency of the checks.

7.4. AREAS FOR IMPROVEMENT

F-SS-COM-18-04   Safety Training & Certification   Safety – Moderate (3,4) 🟨 Owner – SMNT

- **Finding: Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees.**

Discussion

- The departmental training matrix lacks revision controls, which jeopardizes identifying the required training and timely delivery, particularly with regard to updated training requirements.
- There is no procedure in place to provide for periodic review of training records to ensure all required training and certifications are complete and up to date.
- The training records provided do not include Hazardous Waste Management as required in WMATA SSPP 19.0.
- SMS incident/accident investigation ELM training records for designated employees do not show the required training as completed, as required in P/I 10.4/0 5.10.

Recommendation

Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

F-SS-COM-18-05   Occupational Safety & Health   Safety – Elevated (4,4) 🟧 Owner – COMM

- **Finding: Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.**

Discussion

- The records provided indicating facility and equipment inspections are carried out were inadedquate as follows:
  - o Preventive maintenance inspection records reviewed in Maximo are not completed and closed consistently. Example work orders: 13596063, 13538307, and 13420648.
- Calibration records examined through Maximo indicate calibration status of 175 pieces of equipment are not maintained as required in WMATA SSPP 14.3. Examples of assets that are overdue: 69385, 624589, and 581477.

Recommendation

Establish a quality control program to promote compliance with the inspection and calibration requirements. The program should include specific check points, frequency of checks, and the responsible parties.

7.5. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

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QICO-SS-SMNT-18-01   Action Owner – SMNT   Overall Risk – Elevated ◼

Required Action: Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified.

Applicable Findings

- **F-SS-COM-18-01:** Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment as per the requirement in SSPP element no. 6.
  - *Measure: Hazard Management. Risk: Safety – Elevated (4,4)*

QICO-SS-SMNT-18-02   Action Owner – SMNT   Overall Risk – High ◼

Required Action: Implementation of a documented rule book compliance quality control program, that addresses specific check criteria and the frequency of the checks.

Applicable Findings

- **F-SS-COM-18-03:** The implementation of quality control program related to rulebook compliance is essential to maintain a safe working environment.
  - *Measure: Safety Management Risk: Safety – High (4,5)*

QICO-SS-SMNT-18-03   Action Owner – SMNT   Overall Risk – Moderate ◼

Required Action: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Findings

- **F-SS-COM-18-04:** Maintaining a training and certification program for employees and contractors is necessary to maintain the competency level of employees as.
  - *Measure: Safety Training & Certification Risk: Safety – Moderate (3,4)*

QICO-SS-COM-18-01   Action Owner – COMM   Overall Risk – Elevated ◼

Required Action: Establish a quality control program to promote compliance to the inspection and calibration requirements. The program should include specific check points, frequency of checks, and the responsible parties.

Applicable Findings

- **F-SS-COM-18-05:** Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.
  - *Measure: Occupational Safety & Health Risk: Safety – Elevated (4,4)*

Internal Corrective and Preventive Actions (iCAPAs) are designated to address each Required Action listed above.

7.5. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

ACTIONS UNDERWAY

| FTA-TSR-18-004 | Action Owners – SAFE, OIT | Acceptable without Executive Safety Committee Review | 4C |

Required Action: WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System according to the required timeframes.

Applicable Findings

- **F-SS-COM-18-02:** Safety data collection and anaylsis is necessary to plan and implement safety related activities.
  - *Measure: Occupational Safety & Health Risk: Safety – Moderate (3,3)*

Washington Metropolitan Area Transit Authority

INTERNAL REVIEW 2018

Internal Review: Internal Safety & Security

(8) Office of Systems Maintenance Automatic Fare Collection Branch (AFC)

April 27, 2018

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

ENGINEERING &
MAINTENANCE

SERVICE
DELIVERY

CAPITAL PROGRAM –
MANAGEMENT
& EXECUTION

INTERNAL SAFETY
& SECURITY REVIEW

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What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. Authorized by the General Manager as outlined in the Quality Management System Plan (QMSP).

Why QICO Performed This Review:

- This internal safety and security review (ISSR) is intended to provide Metro senior management with an assessment of the safety and security of the Office of Automatic Fare Collection Branch (AFC) and promote the actions needed to address any concerns.

QICO's Methodology:

- Develop a checklist and relevant review activities in accordance with System Safety Program Plan (SSPP), System Security and Emergency Preparedness Plan (SEPP) by identifying and assessing risks to safety and security of the agency.
- Review maintenance documentation, observe maintenance and inspection work in-progress, interview key personnel and visit back-shops.
- Review and rate findings and required actions based on severity of risk, which ranges on a scale from "Insignificant" to "High".

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INTERNAL REVIEW SUMMARY   April 2018

(8) Systems Maintenance (SMNT) Automatic Fare Collection Branch (AFC) Internal Safety and Security Review

Wins:
- ✓ AFC has an efficient revenue key control process to monitor and track revenue key ownership during maintenance activities.

Areas for Improvement
- Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
- Safety data collection and analysis is necessary to plan and implement safety-related activities.
- The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.
- Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.
- Maintaining a controlled training and certification program for employees and contractors is necessary to maintain the competency level.
- Proper storage of hazmat materials in department facilities is essential to maintaining a safe and secure work environment.

Required Actions:
- **QICO-SS-SMNT-18-01:** Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified. *(Risk Rating: Elevated)*
- **QICO-SS-SMNT-18-02**: Implement a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks. *(Risk Rating: High)*
- **QICO-SS-SMNT-18-03**: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records. *(Risk Rating: Moderate)*
- **QICO-SS-AFC-18-01**: Establish a quality control program to promote compliance with the inspection, calibration, and storage requirements. The program should include specific check points, frequency of checks, and the responsible parties. *(Risk Rating: Elevated)*

Actions Underway:
    Federal Transit Administration Special Directive 18-2:
- o **FTA-TSR-18-004:** WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System (SMS) according to the required timeframes. *(Risk Rating: 4C)*

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

8.1. FUNCTIONAL OVERVIEW AND STRUCTURE

Metrorail Automatic Fare Collection (AFC)

AFC is the authority's system for collection of Metrorail revenue. This system includes assets such as 1000+ passenger faregates, 670+ farecard vendors, 200+ exitfare machines within Metrorail stations, and over 3500 meters and 50 counters at station parking lots.

The AFC system is maintained by the maintenance section of WMATA's Office of Systems Maintenance (SMNT). Engineering services are provided by AFC Systems Engineering within the Office of Engineering and Architecture (ENGA). Both maintenance and engineering report to the Chief Operating Officer (COO). QICO is independent from operations and reports to the General Manager through Internal Compliance (INCP). Bus Fare Collection is addressed by a separate maintenance group within Bus Maintenance (BMNT).

AFC Engineering (ENGA-AFC Systems)	AFC Maintenance (SMNT-AFC Section)
- Development of specifications for the procurement of bus, rail and parking AFC equipment - Ensuring the integrity of design and configuration for AFC equipment - Reviewing design proposals and submittals - Management of fare changes and fare instrument changes for bus, rail, parking and regional partners (e.g. Virginia DASH) - Production of Engineering Modification Instructions (EMI) for implementation by AFC Maintenance - Maintaining the AFC Listener (monitoring) application and servers for AFC equipment - Support of AFC Maintenance, Treasury and other WMATA offices with AFC problems and issues	- Responsible for corrective maintenance for rail and parking AFC equipment - Performing periodic preventative maintenance on rail and parking fare collection equipment - Execution of EMIs approved by AFC Engineering - Support the equipment relocation and installation initiatives - Monitoring day-to-day health and operation of AFC equipment

Organizational Structure and Background

AFC Maintenance has a Superintendent and an Assistant Superintendent. There are four (4) area managers and 15 shift supervisors. Technicians work day, evening and midnight shifts.

AFC Maintenance has three (3) major groups:

1. AFC Equipment group, which is responsible for inspecting and maintaining AFC equipment located on station mezzanines (e.g. faregate, smartrip sales reload machine, Station Operator Console (SOC), exitfare machine).
2. Parking Lot Equipment group, which is responsible for inspecting and maintaining parking lot equipment (e.g. meters, access gates).
3. Data collection group, which is responsible for Maximo, Part Action Form (PAF), Windchill, and Parking Lot Equipment (PLE) parts inventory management and coordinating maintenance activities.
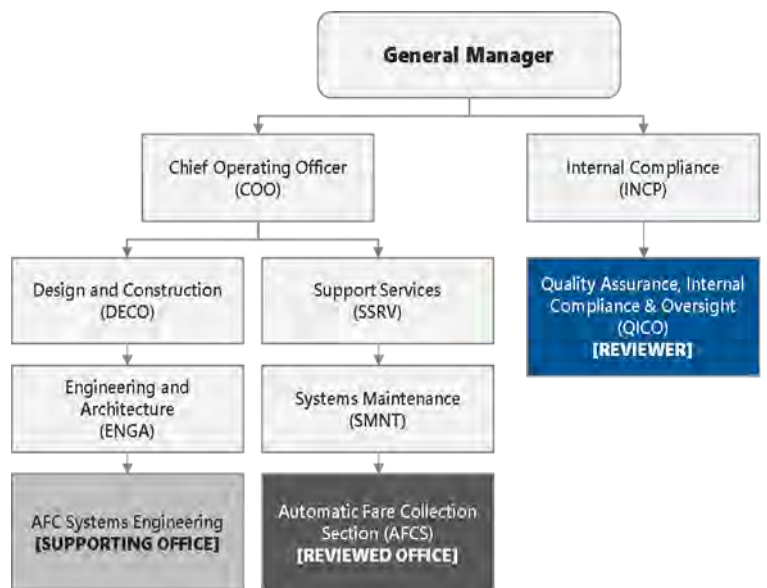
8.2. REVIEW SCOPE

The intention of this internal safety and security review is to provide an independent evaluation of AFC policies, procedures, and safety/security related operations, promote compliance with internal and external regulatory requirements, and drive improvements that strengthen overall safety and security management programs and performance.

QICO performed this internal review between January 1 and March 31, 2018.

QICO reviewed documents, shadowed field visits, and interviewed personnel, noting both wins and findings. QICO's findings are categorized into four (4) groups: **Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)**, **Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)**, **Hazard Management (SSPP Elements 6, 10, 11 & 19)**, and **Safety & Security (SSPP Elements 7, 8, 9, 14 & SEPP)**. For each finding there is an associated **Recommendation** (a suggestion for improving a process based upon QICO's review). Findings are combined into **Required Actions**, which summarize the steps action owners must take to address discrepancies.

Documentation Review

- Internal Safety and Security Review Program and Procedures Manual, *December 2014.*
- Security Emergency Preparedness Plan (SEPP).
- FTA Security and Emergency Preparedness Action Items for Transit Agencies, *September 2014.*
- WMATA System Safety Program Plan, *January 2017.*
- Emergency Operations Plan, *January 2017.*
- Policy/Instruction 10.4/0: Incident and Accident Investigation, *November 2011.*
- Policy/Instruction 4.10/3: Configuration Control Management, *June 2012.*
- Policy/Instruction 1.15/0 5.08: Rule Book Management, *July 2009.*
- WMATA Continuity of Operations Plan, (2014-2016).
- FTA Implementation Guidelines for 49 CFR Part 659, *March 2008.*
- FTA Implementation Guidelines for 29 CFR Part 1904, *May 2017.*
- FTA Implementation Guidelines for 29 CFR Part 1910.1200, *March 2012.*
- Metrorail Automatic Fare Collection Maintenance Control Policy (MCP), *2014.*
- Preventative maintenance checklists for AFC mezzanine and parking lot equipment
- Work orders for AFC Preventative Maintenance (PM), Corrective Maintenance (CM), and Limited Maintenance (LM).
- Safety Management System (SMS) Records.
- Local Safety Committee (LSC) and Departmental Safety Committee (DSC) meeting agendas and minutes.
- AFC Training Matrix and Records.
- SMNT Continuity of Operations Plan (COOP), *October 2011.*
- AFC Equipment Calibration Matrix.
- AFC Equipment Maintenance Manuals and Preventive Maintenance Checklists.
- AFC Safety Data Sheets (SDS).

Personnel Interviews

- AFC Superintendent:
  - ██████████████████████
- AFC Technicians:

  ████████████████
  ██████████████
  ███████████████████

Field Assessments

QICO shadowed AFC maintenance personnel performing Preventative Maintenance Inspections (PMI) at four (4) metro station locations:

- Station Operators Console (SOC) and exitfare machine at Clarendon Metro Station (K02)
- SmarTrip Sales and Reload Machine (SSRM) and faregate Machine at Van Dorn Metro Station (J02)
- Parking lot equipment (PLE) at Branch Ave Metro Station (F11)
- Faregate machine at Galley Place/Chinatown Metro Station (F01)

In addition, QICO performed site visits at two (2) departmental facilities:

- AFC Headquarters at L'Enfant Plaza Metro Station (F03)
- AFC Branch Ave Meter Shop at Branch Ave Metro Station (F11)

8.3. WHAT WORKED WELL (WINS)

Wins are categorized by Measures and rated according to Risk Assessment

W-SS-AFC-18-01	Security Management	Reduces Financial Risk	Owner – AFC

✓ **AFC has an efficient revenue key control process to monitor and track revenue key ownership during maintenance activities.**

Discussion

- During the AFC field office visit at L'Enfant Plaza, QICO observed effective revenue key control procedure using "Keywatcher Electronic Key Manager Cabinet" and associated software as follows:
  - o Personnel will acquire the revenue key from the key manager cabinet at start of the assigned shift and will return to the cabinet at the end of their shift. This process is tracked on Maximo simultaneously during the entire process.
  - o Supervisors inspect the key manager cabinet at the end of their shift for accuracy.

8.4. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

---

F-SS-AFC-18-01   **Hazard Management**   **Safety – Elevated (4,4)** 🟧   **Owner – SMNT**

- **Finding: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.**

Discussion

- The AFC Maintenance Control Policy (MCP) does not provide a form for reporting and managing hazards as required in 49 CFR 659.31.
- Departmental safety committee meeting documentation does not indicate any evidence of performing hazards analysis for severity, frequency and cost feasibility of remedial actions as per the requirement in SSPP 6.2.1.

Recommendation

Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified.

F-SS-AFC-18-02   **Occupational Safety & Health**   **Safety– Moderate (3,3)** 🟨   **Owner – SAFE**

- **Finding: Safety data collection and analysis is necessary to plan and implement safety-related activities.**

Discussion

- As per records from local and departmental safety committee (LSC, DSC) meetings, SAFE representation is not evident. This indicates that SMS data is not shared with the department for use in planning safety-related activities as required in WMATA SSPP 9.2.

Recommendation

Establish and implement a procedure governing SMS data communication to the respective departments and the expectations of utilizing the data.

F-SS-AFC-18-03   **Safety Management**   **Safety – High (4,5)** 🟥   **Owner – SMNT**

- **Finding: The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.**

Discussion

- No records were made available that indicates that rulebook compliance quality control checks are performed as per WMATA SSPP element no. 13.5.

Recommendation

Implement a documented rulebook compliance quality control program that addresses specific checks, criteria and frequency of checks.

8.4. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

---

F-SS-AFC-18-04   **Occupational Safety & Health**   **Safety – Elevated (4,4)** ◻   **Owner – AFC**

- **Finding: Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.**

Discussion

- Calibration records examined through Maximo indicates that calibration status of 28 items were not maintained as required in WMATA SSPP 14.3. Examples of assets that are overdue: 513388, 69150, 70390, 69306.

Recommendation

Establish a quality control program to promote compliance to inspection and calibration requirements. The program should include specific check points, frequency of checks, and the responsible parties.

F-SS-AFC-18-05   **Safety Training & Certification**   **Safety – Moderate (3,4)** ◻   **Owner – SMNT**

- **Finding: Maintaining a controlled training and certification program for employees and contractors is necessary to maintain the competency level.**

Discussion

- The departmental training matrix lacks revision control, which compromises the identification of required training and the on-time class completion. The matrix does not have updated training requirements.
- There is no procedure in place for the periodic review of training records to ensure all required training and certifications are complete and up to date, as required in WMATA SSPP 16.1.

Recommendation

Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

F-SS-AFC-18-06   **Job Safety**   **Safety – Moderate (3,3)** ◻   **Owner – SMNT**

- **Finding: Proper storage of hazard materials in department facilities is essential to maintaining a safe and secure work environment.**

Discussion

- During AFC headquarters and meter shop site visits on 2/8/18 and 2/9/18, no designated hazmat waste disposal area was present. Improper storage of hazardous material waste (e.g. batteries, mini fluorescent bulbs, and aerosol cans) was evident.
- During the AFC meter shop site visit on 2/9/18, the sprinkler system and two fire extinguisher bottles located inside the shop were noted as not inspected since December 2017. The fire extinguisher bottles were not mounted, located and identified so they could be readily accessible by employees as required in SSPP 18.1 and 29 CFR 1910.22.

Recommendation

Establish a procedure for the identification, storage and disposal of hazmat materials.

8.5. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

---

QICO-SS-SMNT-18-01   Action Owner – SMNT   Overall Risk – Elevated ▮

Required Action: Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified.

Applicable Findings

- **F-SS-AFC-18-01:** Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
  - *Measure: Hazard Management. Risk: Safety – Elevated (4,4).*

QICO-SS-SMNT-18-02   Action Owner – SMNT   Overall Risk – High ▮

Required Action: Implement a documented rule book compliance quality control program that addresses specific check criteria and the frequency of the checks.

Applicable Findings

- **F-SS-AFC-18-03:** The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.
  - *Measure: Safety Management. Risk: Safety – High (4,5).*

QICO-SS-SMNT-18-03   Action Owner – SMNT   Overall Risk – Moderate ▮

Required Action: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Findings

- **F-SS-AFC-18-05:** Maintaining a controlled training and certification program for employees and contractors is necessary to maintain the competency level.
  - *Measure: Safety Training & Certification. Risk: Safety – Moderate (3,4).*

QICO-SS-AFC-18-01   Action Owner – AFC   Overall Risk – Elevated ▮

Required Action: Establish a quality control program to promote compliance with the inspection, calibration, and storage requirements. The program should include specific check points, frequency of checks, and the responsible parties.

Applicable Findings

- **F-SS-AFC-18-04:** Timely inspections and calibration of facilities and equipment is essential to maintaining a safe and reliable working environment.
  - *Measure: Occupational Safety & Health. Risk: Safety – Elevated (4,4).*
- **F-SS-AFC-18-06:** Proper storage of hazmat materials in department facilities is essential to maintaining a safe and secure work environment
  - *Measure: Job Safety. Risk: Safety – Moderate (3,3).*

Internal Corrective and Preventive Actions (iCAPAs) are designated to address each Required Action listed above.

8.5. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

ACTIONS UNDERWAY

| FTA-TSR-18-004 | Action Owners – SAFE, OIT | Acceptable without Executive Safety Committee Review | 4C |

Required Action: WMATA must ensure that all Metrorail incidents are entered into the Safety Measurement System according to the required timeframes.

Applicable Findings

- **F-SS-AFC-18-02:** Safety data collection and anaylsis is necessary to plan and implement safety related activities..
  - o *Measure: Occupational Safety & Health Risk: Safety – Moderate (3,3)*

Washington Metropolitan Area Transit Authority

INTERNAL REVIEW 2018

Internal Review: Internal Safety & Security

(9) Office of Elevators & Escalators (ELES)

April 27, 2018

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

ENGINEERING &
MAINTENANCE

SERVICE
DELIVERY

CAPITAL PROGRAM –
MANAGEMENT
& EXECUTION

INTERNAL SAFETY
& SECURITY REVIEW

INTERNAL REVIEW SUMMARY   April 2018

(9) Office of Elevators and Escalators (ELES) Internal Safety and Security Review

What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. Authorized by the General Manager as outlined in the Quality Management System Plan (QMSP).

Why QICO Performed This Review:

- This internal safety and security review (ISSR) is intended to provide Metro senior management with an assessment of the safety and security of the Office of Automatic Fare Collection (AFC) and promote the actions needed to address any concerns.

QICO's Methodology:

- Develop a checklist and relevant review activities in accordance with System Safety Program Plan (SSPP), System Security and Emergency Preparedness Plan (SEPP) by identifying and assessing risks to safety and security of the agency.
- Review maintenance documentation, observe maintenance and inspection work in-progress, interview key personnel and visit back-shops.
- Review and rate findings and required actions based on severity of risk, which ranges on a scale from "Insignificant" to "High".

Wins:

✓ The use of escalator barricades to prevent unauthorized entrance into work areas was observed at visited sites.
✓ ELES technicians used the proper PPE in the performance of their duties.

Items Resolved During Review:

✪ ELES removed non-compatible material placed on spill pallets.

Areas for Improvement

- Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
- Safety data collection and analysis is necessary to plan and implement safety-related activities.
- The implementation of a quality control plan related to rulebook compliance is essential to maintain a safe work environment.
- Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.
- Maintaining up-to-date procedures, policies and checklists will assure ELES technicians have the proper resources to perform work accurately.
- Maintaining a training and certification program for employees and contractors is necessary to retain the competency level.
- Complying with material handling and storage safety requirements is necessary for a safe and reliable working environment.

Required Actions:

- **QICO-SS-ELES-18-01:** Perform a review of all administrative and maintenance functions; Ensure each function has a documented procedure and is well configured for identification and traceability purposes to meet WMATA's System Safety Program Plan (SSPP) guidelines. (*Risk Rating: Moderate*)

- **QICO-SS-ELES-18-02:** Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records. (*Risk Rating: Elevated*)

- **QICO-SS-ELES-18-03:** Assess the safety compliance in all ELES materials' storage areas and take immediate corrective actions. Review the current inspection and quality control procedures, and update where applicable to achieve a robust process for safe working conditions. (*Risk Rating: Elevated*)

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

9.1. FUNCTIONAL OVERVIEW AND STRUCTURE

Vertical Transportation: Elevators

The Office of Elevator Escalator Services (ELES) provides vertical transportation services, an important feature of the Metrorail system, to over 427,000 riders daily[1]. The ELES department is responsible for maintenance and upkeep of the largest vertical transportation portfolio in transit across the United States with an inventory of 317 elevators and 618 escalators.

Unlike other engineering and maintenance functions, ELES consolidates all three functions - maintenance, engineering, and the capital improvement program – into one office:

Maintenance	Engineering	Capital Improvement Program
• Execution of preventative and corrective maintenance. • Documentation and tracking of maintenance records. • Ensuring safe, clean and reliable elevators be available for WMATA ridership.	• Design, review, and approval of new construction submittals. • Support of maintenance activities and complex troubleshooting. • Execution and management of annual inspections of elevators to maintain jurisdictional compliance.	• Facilitation of the rehabilitation and replacement of elevator systems. • Monitoring of day-to-day construction activities. • Coordination with other departments to perform system tests of equipment that affects elevators.

Organizational Structure and Background

The guiding principles of the ELES department are to:

(1) Manage and maintain all vertical transportation equipment throughout the Metrorail system.

(2) Provide the safest and most reliable quality service to their customers through the use of technology, training, and education.

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[1] Based on Transit Rail Ridership Portal data, between December 1, 2017 and February 28, 2018.

9.2. REVIEW SCOPE

The intention of this internal safety and security review is to provide an independent evaluation of COMM policies, procedures, and safety/security related operations, promote compliance with internal and external regulatory requirements, and drive improvements that strengthen overall safety and security management programs and performance.

QICO performed the internal review between January 1 and March 31, 2018.

QICO reviewed documents, shadowed field visits, and interviewed personnel, noting both wins and findings. QICO's findings are categorized into four (4) groups: **Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)**, **Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)**, **Hazard Management (SSPP Elements 6, 10, 11 & 19)**, and **Safety & Security (SSPP Elements 7, 8, 9, 14 & SEPP)**. For each finding there is an associated **Recommendation** (a suggestion for improving a process based upon QICO's review). Findings are combined into **Required Actions**, which summarize the steps actions owners must take to address discrepancies.

Documentation Review

- Internal Safety and Security Review Program and Procedures Manual (*Rev December, 31 2014*)
- Security Emergency Preparedness Plan (SEPP)
- FTA Security Emergency Preparedness Action Items for Transit Agencies (*September 2014*)
- WMATA System Safety Program Plan (*January 2017*)
- Emergency Operations Plan (*January 2017*)
- Policy/Instruction: 1.15/0 Rulebook Management (*July 1, 2009*)
- Policy/Instruction: 4.10/3 Configuration and Control Management (*June 22, 2012*)
- Policy/Instructions: 10.4/0 Incident and Accident Investigations (*November 4, 2011*)
- WMATA Continuity of Operations Plan (*2014-2016*)
- FTA Implementation Guidelines for 49 CFR 659.31 (*March 2008*)
- FTA Implementation Guidelines for 29 CFR 1904 (*May 3, 2017*)
- FTA Implementation Guidelines for 29 CFR 1910.1200 (*March 26, 2012*)
- 112-SOP-01 SOP Development, Preparation, and Revision (*October 26, 2012*)
- 112-SOP-02, Document Control Procedure (*April 14, 2016*)
- 112-SOP-05 Quality Assurance Corrective Action Procedure (*September 15, 2013*)
- 212-SOP-09 Control of General Access Keys and Elevator and Escalator Keys (*December 12, 2013*)
- 212-SOP-19 Maintenance Procedure (*April 23, 2012*)
- 212-SOP-21 Procedure for Oil Storage on Spill Pallet (*May 21, 2012*)
- 212-SOP-22 ELES Staff Work Alone Policy (*July 27, 2013*)
- 212-SOP-23 ELES Management of Electrical and Mechanical Lockout/Tagout (*June 8, 2012*)
- 212-SOP-24 Use of Portable/Non-construction Barricades (*March 21, 2013*)
- 212-SOP-30 Elevator and Escalator Inspection Procedure (*September 25, 2015*)
- 212-SOP-35 Maintenance and Operations Safety Manual (*June 14, 2015*)
- 212-SOP-36 EOC Desktop Procedure (*February 10, 2016*)
- 212-SOP-37 Hazardous Materials Handling & Storage (*March 16, 2016*)
- 212-SOP-39 Quality Control Preventative Maintenance and Station Audit (*May 9, 2016*)
- 612-SOP-01 ELES Parts Fulfillment Procedure (*October 23, 2013*)
- 612-SOP-11 ELES Engineering responsibilities (*September 20, 2017*)
- 712-SOP-02 CIP Supervision of Contract Inspections. (*September 20, 2017*)
- 712-SOP-05 ELES Configuration Management (*January 27, 2015*)
- 912-SOP-01 ELES Job Briefings (*November 28, 2014*)
- Traction/Hydraulic Elevator PM Manuals (*not dated*)
- Traction/Hydraulic PM Blank Sheet (*December 2016*)
- Escalator PM Blank Sheet (*December 2012*)
- Elevator/Escalator Service bulletin # 20172308 (*August 23, 2017*)
- Comb Impact Device Adjusting Procedure (*not dated*)
- Return Station/Carriage and Step Chain tension devices (*not dated*)

- Offices of Support Services OAP 100-01 (*June 11, 2017*)
- ELES COOP Plan 2016 – 2018
- Completed Elevator PM sheets of 21 elevator assets-Oct. to Dec. 2017 for five (5) metro rail stations visited.
- Supervisor's QA reports for Nov. 2017.
- Local Safety Committee Meeting (LSC) - Meeting notes – (*November 2017 thru January 2018*)
- Safety Measurement System (SMS) Incident records from SAFE (*calendar year 2017*)

Personnel Interviews

- General Superintendent ELES,
- Assistant General Superintendent & Head of Maintenance ELES,
- Engineering Manager ELES,
- Capital Improvement Project Manager ELES,
- Service & Repair Maintenance Superintendent ELES,
- Supervisors ELES,
- Supervisors ELES,
- Supervisors ELES,
- Supervisors ELES,
- Supervisors ELES,

Field Assessments

- Five different locations around the core of the Metrorail system were used to assess inspection, and preventative maintenance processes.
- Preventative Maintenance (PM) records at five (5) stations (Franconia Springfield, Eastern Market, College Park, Silver Spring Transit Center, and East Falls Church) were reviewed for completeness, consistency, accuracy, and validity. Stations visited were randomly selected within each of the five (5) ELES maintenance regions.

9.3. WHAT WORKED WELL (WINS)

Wins are categorized by Measures and rated according to Risk Assessment

W-SS-ELES-18-01 Job Safety   *Reduces Safety Risk*   **Owner – ELES**

✓ **The use of escalator barricades to prevent unauthorized entrance into work areas was observed at visited sites.**

Observation

- QICO performed five field assessments, observing inspections, and preventative maintenance of ELES assets. During each field assessment QICO found that maintenance personnel had barricaded each asset, preventing unauthorized access into work areas.

W-SS-ELES-18-02 Job Safety   *Reduces Safety Risk*   **Owner – ELES**

✓ **ELES technicians used the proper PPE in the performance of their duties.**

Observation

- QICO performed five field assessments, observing inspections, and preventative maintenance of ELES assets. During each field assessment QICO found that maintenance personnel had the required PPE for their assigned tasks.

9.4. ITEMS RESOLVED DURING REVIEW

Items are categorized by Measures and rated according to Risk Assessment

The following are issues that were identified by QICO during the Internal Review process, where appropriate actions were taken to eliminate the discrepancy or nonconformance prior to the close of this review.

R-SS-ELES-18-01 Job Safety   Safety – Elevated (4.3) 🟨   **Owner – ELES**

✪ **ELES removed non-compatible material placed on spill pallets.**

Actions Taken

- QICO observed at College Park that a battery pack used for cleaning equipment was placed on a spill pallet in close proximity with other hazardous materials used by ELES.
  - o ELES removed the battery pack placed on the spill pallet. (Digital photo email dated 3/1/2018).

See Daily Inspection Report ER-20180702-001 for additional details, provided in the separate Reference Materials document.

9.5. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

F-SS-ELES-18-01   Managing Safety in System Modification   Safety– Moderate (3,3) 🟨   Owner – ELES

- **Finding: The presence of a departmental specific procedure governing configuration changes in collaboration with SAFE approval is critical to safe and reliable change management as per the requirements in the SSPP.**

Discussion

- 212-SOP-12 does not outline communication or approval with SAFE for engineering modifications. (Element 7)
- Lack of established procedure for executing the safety and security certification requirements, in on-going capital improvement projects outlined in WMATA's System Safety Program Plan (Element 8)

Recommendation

Incorporate a departmental procedure that governs configuration changes, particularly from a safety perspective.

F-SS-ELES-18-02   Occupational Safety & Health   Safety– Moderate (3,3) 🟨   Owner – SAFE

- **Finding: Safety data collection and analysis is necessary to plan and implement safety-related activities.**

Discussion

- As per the LSC and DSC meeting records, SAFE representation is not evident. This indicates that SMS data is not shared with the department for use in planning safety related activities as required in WMATA SSPP 9.2, this is addressed by CAP: FTA-TSR-18-004

Recommendation

Establish and implement a procedure governing SMS data communication to the respective departments and the expectations of utilizing the data.

F-SS-ELES-18-03   Safety Management   Safety– Moderate (3,3) 🟨   Owner – ELES

- **Finding: The implementation of a safety quality control plan related to rulebook compliance is essential to maintain a safe work environment.**

Discussion

- QICO requested one month (November 2017) of safety audit reports: four (4) reports of station inspections and four (4) PM audits from five (5) ELES supervisors, 1/3 of ELES maintenance supervisors. Of the 40 records requested, the following was received:
    o 10 station audit reports, 50% of the total to be reviewed.
    o 3 PM audit reports, 15% of the total to be reviewed.

Recommendation

Conduct safety audits in compliance with established SOP ensures maintenance activities are in accordance with SSPP element 13.

9.5. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

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F-SS-ELES-18-04 Occupational Safety and Health   Safety– Elevated (4.4) 🟧   Owner – ELES

- **Finding: Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.**

Discussion

- ELES controlled rooms are not maintained at the level required in MCPs, addressed by Elevator Internal Review iCAPA: QICO-ELES-18-02
- Calibrated equipment out of date and missing certification was discovered in the field, addressed by Escalator Internal Review iCAPA: QICO-MVT-17-02.

Recommendation

Revise safety control programs to promote compliance of the inspection and calibration requirements.

F-SS-ELES-18-05 Configuration Management   Service Delivery– Moderate (3,3) 🟨   Owner – ELES

- **Finding: Maintaining up-to-date procedures, policies and checklists will assure ELES technicians have the proper resources to perform work accurately.**

Discussion

- QICO reviewed 12 maintenance SOPs, 42 PMI records and service bulletins provided by ELES, and found the following:
  - No identification such as origination or latest revision date on some documentations, as prescribed in ELES 112-SOP-02, clause 7.06 as follows:
    - Traction Elevator PM manual,
    - Hydraulic Elevator PM manual,
    - Return Station/Carriage and Step Chain procedure,
    - Comb Impact Device Adjusting Procedure.
  - No documented revisions on ELES Maintenance and Operation Safety Manual 212-SOP-35, as prescribed in ELES 112-SOP-02:
    - Section 3.1.04 "proper use of portable barricades", currently does not have provisions on employee safety requirements, as prescribed in a separate SOP 212-24 titled Proper Use of Portable Barricades, sections 4.0 Definition and 5.0 Polices.
    - Section 2.1.02 policy ELES Staff Work Alone, currently does not have provisions on employee safety requirements as prescribed in a separate SOP 212-22 titled Work Alone Policy, sections 4.0 Definition and 5.0 Polices.
    - Two (2) separate SOPs (SOP 212 & SOP-30 Elevator and Escalator Inspection Procedures) distributed to QICO for review have same title identification, but both documents differ on origination, latest revision dates and information.
    - Outdated SOP 212-21(rev 05/21/2012) for hazardous materials storage posted on ELES webpage. 212-SOP-37(rev 03/16/2016) was provided to QICO with updated hazardous materials handling instructions, but not accessible from the ELES webpage.
- ELES maintenance compliance for the first 2 quarters of FY2018 was 92.3% for elevators. ELES does not have a written policy or procedure to address deferred maintenance when compliance goals are not met.

Recommendation

Revise and update policies and procedures to verify current practices and ensure distribution to promote safe and effective maintenance activities.

9.5. AREAS FOR IMPROVEMENT

Findings are categorized by Measures and rated according to Risk Assessment

F-SS-ELES-18-06 Safety Training & Certification Safety– Elevated (4.4) ▮ Owner – ELES

- **Finding: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.**

Discussion

- The departmental training matrix lacks revision controls which jeopardizes identifying the required training and delivering it on time, particularly with regard to updates to training requirements (Element 16).
- No procedure is in place to provide guidance for periodic review of training records to ensure all training certifications are up to date and complete (Element 16).
- QICO requested training records for ELES management and three (3) random technicians, no records were provide for the following:
    - o SMS training for designated employees (Element 10.5).
    - o Technicians' completion of required training outlined in provided training matrix (Element 16.1).
    - o Employee training for Hazard Waste Management (Element 19.0).

Recommendation

Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

F-SS-ELES-18-07 Application & Fulfillment Safety– Elevated (4.4) ▮ Owner – ELES

- **Finding: Complying with material handling and storage safety requirements is necessary for a safe and reliable working environment.**

Discussion

- During field assessment of ELES hazardous material storage areas, QICO had concerns with improper housekeeping, and hazardous waste material handling, which is described as follows:
    - o Intact fluorescent tubes were not kept in a box pending 75 day removal period from the Elevator Machine Rooms (EMR) at Franconia-Springfield and College Park.
    - o At East Fall Church broken fluorescent tubes were placed in an ELES dumpster cart, not sealed in a 55 gallon drum container with hazardous material waste label applied.
    - o At Silver Spring Transit Center, a five (5) gallon hazardous compound was kept on concrete floor, no spill pallet provided at the location (212-SOP-37, clause 5.2). Flammable materials were stored in a non-flame retardant cabinet in the EMR (212-SOP-37, clause 5.7.3)
- Fire Extinguishers in ELES controlled area did not have current inspection tags, addressed in Escalator Internal Review: QICO-MVT-17-03

Recommendation

Assess the safety compliance in all ELES materials storage areas and take immediate corrective actions. Review the current inspection and quality control procedures, and update where applicable to achieve a robust process for safe working conditions.

9.6. SUMMARY OF REQUIRED ACTIONS

Findings are categorized by Measures and rated according to Risk Assessment

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QICO-SS-ELES-18-01   *Overall Risk – Moderate (3.3)* ▇   **Action Owner – ELES**

Required Action: Perform a review of all administrative and maintenance functions; Ensure each function has a documented procedure and is well configured for identification and traceability purposes to meet WMATA's System Safety Program Plan (SSPP) guidelines.

Applicable Findings

- **F-SS-ELES-18-01:** The presence of a departmental specific procedure governing configuration changes in collaboration with SAFE approval is critical to safe and reliable change management as per the requirements in the SSPP.
    - *Measure: Managing Safety in System Modification. Risk: Safety – Moderate (3,3)*
- **F-SS-ELES-18-03:** The implementation of a safety control plan related to rulebook compliance is essential to maintain a safe work environment.
    - *Measure: Safety Management. Risk: Safety – Moderate (3,3)*
- **F-SS-ELES-18-04:** Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.
    - *Measure: Occupational Safety & Health. Risk: Safety – Elevated (4,4)*
- **F-SS-ELES-18-05:** Maintaining up-to-date procedures, policies and checklists will assure ELES technicians have the proper resources to perform work accurately.
    - *Measure: Configuration Management. Management. Risk: Service Delivery – Moderate (3,3)*

QICO-SS-ELES-18-02   *Overall Risk – Elevated (4,4)* ▇   **Action Owner – ELES**

Required Action: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Findings

- **F-SS-ELES-18-06:** Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.
    - *Measure: Application & Fulfillment. Risk: Safety – Elevated (4,4)*

QICO-SS-ELES-18-03   *Overall Risk – Elevated (4,4)* ▇   **Action Owner – ELES**

Required Action: Assess the safety compliance in all ELES materials storage areas and take immediate corrective actions. Review the current inspection and quality control procedures and update where applicable to achieve a robust process for safe working conditions.

Applicable Findings

- **F-SS-ELES-18-07:** Complying with material handling and storage safety requirements is necessary for a safe and reliable working environment.
    - *Measure: Safety Training & Certification. Risk: Safety – Elevated (4,4)*

Internal Corrective and Preventive Actions (iCAPAs) are designated to address each Required Action listed above.

SAFETY AND SECURITY INTERNAL CORRECTIVE AND PREVENTIVE ACTIONS (iCAPAs)

INTERNAL REVIEW

Safety and Security

In response to the internal review of Safety and Security, including review of Systems Maintenance (SMNT) Shops & Material Support (SAMS), SMNT Communications Branch (COMM), SMNT Automatic Fare Collection Branch (AFC), and the Office of Elevators and Escalators (ELES), the office of Quality Assurance, Internal Compliance & Oversight (QICO) has coordinated the development of twelve (12) iCAPAs. Each iCAPA outlines the findings, recommendation and requirements to be addressed, and a detailed action plan outlining responsible parties and specific actionable items.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

internal Corrective and Preventive Action (iCAPA) Commitment

_____   4/26/18
Joseph Leader   Date
Chief Operating Officer (COO)

_____   4/27/18
Patrick Lavin   Date
Chief Safety Officer (SAFE)

WMATA INTERNAL OVERSIGHT

internal Corrective and Preventive Action (iCAPA) Acknowledgement

_____   4/26/18
Angel Peña   Date
Managing Director, Quality Assurance, Internal Compliance & Oversight (QICO)

_____   4/27/18
Eric Christensen   Date
Chief of Internal Compliance (INCP)

_____   4/27/18
Paul J. Wiedefeld   Date
General Manager & Chief Executive Officer (GM/CEO)

SYSTEMS MAINTENANCE (SMNT) iCAPAs

Return to Summary of Required Actions

Purpose and Scope

On April 5, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC), Communications Section (COMM), and Shops and Material Support (SAMS). This Internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SS-SMNT-18-01 and the associated finding(s).

Required Action

QICO-SS-SMNT-18-01	*Systems Maintenance (SMNT)*	*Elevated*

Implement a documented hazard management procedure, including the required forms containing identification, analysis and mitigation of the hazards identified.

Applicable Finding(s)

- F-SS-AFC-18-01: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
    - o   Measure: *Hazard Management*. Risk: *Safety – Elevated (4,4)*
- F-SS-COM-18-01: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
    - o   Measure: *Hazard Management*. Risk: *Safety – Elevated (4,4)*
- F-SS-SAM-18-01: Implementation of the departmental hazard management procedure to identify, analyze, and resolve hazards will promote a safe working environment.
    - o   Measure: *Hazard Management*. Risk: *Safety – Elevated (4,4)*

Action Plan Overview

SMNT will incorporate a departmental hazard management procedure in to the revised Maintenance Control Policy (MCP) for each branch. SMNT may optionally move to consolidate each branch MCP into an office-wide MCP to cover all branches under SMNT.

Business Impact - Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the 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[1]	Est Start[2]	Est End[3]
1.	Revise and update the Maintenance Control Policy (MCP)	SMNT will create a standardized hazard reporting procedure to promote a safe working environment with AFC, COMM, and SAMS, and incorporate those procedures into each branch MCP. SMNT will provide the MCP.	Gairy Johnson SMNT	05/02/18	12/05/18
2.	Toolbox Meeting	SMNT will conduct toolbox meeting with all maintenance personnel (e.g. AFC, COMM, and SAMS) to communicate creation of standardized hazard reporting procedure. SMNT will submit toolbox meeting notes and sign-in sheets.	Gairy Johnson SMNT	12/05/18	01/02/19
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	01/02/19	02/01/19

Completion Documentation & Performance Measures

- Evidence of AFC, COMM & SAMS hazard management procedures incorporated in the MCP as prescribed under actionable item #1.
- Evidence that 100 percent of all active AFC, COMM, and SAMS employees received training as prescribed under actionable item # 2.

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

[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Party

SMNT　　　Gairy Johnson

(Signature/Date)　　　4/26/18

Second-Level Responsibility

SSRV　　　Randall Grooman

(Signature/Date)　　　4/26/18

Purpose and Scope

On April 05, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC), Communications Section (COMM), and Shops and Material Support (SAMS). This Internal Corrective And Preventive Action Plan (iCAPA) has been developed to address required action QICO-SS-SMNT-18-02 and the associated finding(s).

Required Action

QICO-SS-SMNT-18-02	*Systems Maintenance (SMNT)*	*High* ■

Implement a documented rulebook compliance quality control program that addresses specific check criteria and the frequency of the checks.

Applicable Finding(s)

- F-SS-AFC-18-03: The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.
  - o *Measure: Safety Management   Risk: Safety (4.5)*
- F-SS-COM-18-03: The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.
  - o *Measure: Safety Management   Risk: Safety (4.5)*
- F-SS-SAM-18-03: The implementation of the quality control program related to rulebook compliance is essential to maintain a safe working environment.
  - o *Measure: Safety Management   Risk: Safety (4.5)*

Action Plan Overview

Systems Maintenance (SMNT) will develop a checklist for second level quality control compliance inspections and update Maintenance Control Policy (MCP) accordingly. SMNT will perform safety rule compliance checks and quality control compliance checks as noted in MCP and maintain records of inspection in Maximo.

Business Impact - Budget/Cost Estimate

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

PLAN STRUCTURE

	Actionable Items	Description	Responsible Party[1]	Est Start[2]	Est End[3]
1.	Develop Checklist for Second Level Quality Control Compliance Inspections	SMNT will develop a checklist for Area Managers and Assistant Superintendents to perform their second level quality control compliance inspections. SMNT will submit developed checklist.	Gairy Johnson (SMNT)	05/01/18	08/01/18
2.	Revise Maintenance Control Policy (MCP)	Revise maintenance control policy to include new second level quality control compliance checklist. SMNT will submit revised MCP.	Gairy Johnson (SMNT)	05/01/18	08/01/18
3.	Perform Quality Control and Safety Compliance Checks	Shift Supervisors and Area Managers/Assistant Superintendent will perform quality and safety compliance checks as noted in the revised MCP. SMNT will submit three months of completed quality control inspection checklists after implementation.	Gairy Johnson (SMNT)	05/01/18	08/01/18
4.	Integrate Quality Control Checks into Maximo	SMNT will integrate quality control checks as work orders into Maximo for record keeping purposes. SMNT will submit three months of quality control Maximo records after implementation.	Gairy Johnson (SMNT)	05/01/18	08/01/18
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	08/01/18	09/03/18

Completion Documentation & Performance Measures

- Evidence of developed second level quality control inspection checklist as prescribed under actionable item #1.
- Evidence of revised maintenance control policy as prescribed under actionable item #2.
- Evidence of performed quality control and safety compliance checks as prescribed under actionable item #3.
- Evidence of quality control checks being recorded in Maximo as prescribed under actionable item #4.

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

[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Party

SMNT   Gairy Johnson   ███████████████████   4/26/18
                                                    (Signature/Date)

Second-Level Responsibility

SSRV   Randall Grooman   ████████████████   4/26/18
                                                    (Signature/Date)

Purpose and Scope

On April 05, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC), Communications Section (COMM), and Shops and Material Support (SAMS). This Internal Corrective and Preventative Action Plan (iCAPA) has been developed to address required action QICO-SS-SMNT-18-03 and the associated finding(s).

Required Action

QICO-SS-SMNT-18-03	*Systems Maintenance (SMNT)*	*Moderate*

Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Finding(s)

- F-SS-AFC-18-05: Maintaining a controlled training and certification program for employees and contractors is necessary to retain the competency level.
    - o *Measure: Safety Training & Certification. Risk: Safety – Moderate (3.4)*
- F-SS-COM-18-03: Maintaining a controlled training and certification program for employees and contractors is necessary to retain the competency level.
    - o *Measure: Safety Training & Certification. Risk: Safety – Moderate (3.4)*
- F-SS-SAM-18-03: Maintaining a controlled training and certification program for employees and contractors is necessary to retain the competency level.
    - o *Measure: Safety Training & Certification. Risk: Safety – Moderate (3.4)*

Action Plan Overview

Systems Maintenance (SMNT) will update the current training matrix confirming all required training are included in the matrix. SAFE will review the training matrix for accuracy and provide concurrence for safety related training.

Business Impact - Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the FTA 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[1]	Est Start[2]	Est End[3]
1.	Update SMNT Training Matrix	Update AFCS, COMM, SAMS personnel training matrix to include specific training requirements, periodicities for management, and each technician grade. SMNT will provide training matrix.	Gairy Johnson SMNT	05/01/18	07/11/18
2.	Training Matrix Review	SAFE will review required safety courses for accuracy. SAFE will provide evidence of review and concurrence with the training matrix as applicable.	Patrick Lavin SAFE	07/11/18	08/15/18
3.	Standard Operating Procedure (SOP) for Required Training	Develop SOP for administering and tracking training and certification records for AFC, COMM and SAMS personnel. SMNT will provide SOP.	Gairy Johnson SMNT	05/01/18	09/26/18
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	09/26/18	10/31/18

Completion Documentation & Performance Measures

- Evidence of updated training matrix as prescribed per actionable item #1.
- Evidence of developed SOP as prescribed per actionable item # 3.

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[1] In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.
[2] Est Start – Estimated Start Date.
[3] Est End – Estimated Completion Date.
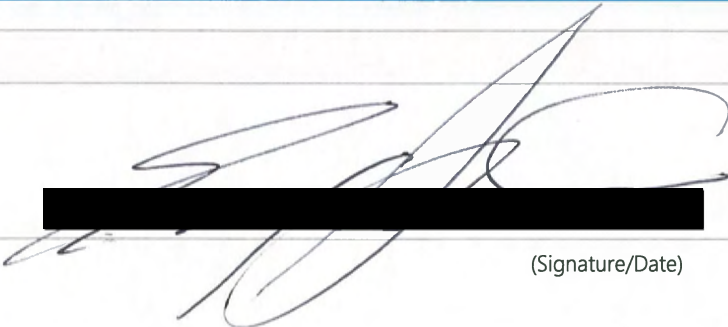
Responsible Party

SMNT   Gairy Johnson

(Signature/Date)   4/26/18

Second-Level Responsibility

SSRV   Randall Grooman

(Signature/Date)   4/26/18

SAFE   Patrick Lavin

(Signature/Date)   4/26/18

SYSTEMS MAINTENANCE SHOPS AND MATERIAL SUPPORT iCAPAs

Return to Summary of Required Actions

Purpose and Scope

On April 5, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC), Communications Section (COMM), and Shops and Material Support (SAMS). This Internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SS-SMNT-18-01 and the associated finding(s).

Required Action

QICO-SS-SAM-18-01 *Systems Maintenance (SMNT)* *Moderate*

Establish and implement a departmental procedure that governs configuration changes, with an emphasis on safety.

Applicable Finding(s)

- F-SS-SAM-18-05: The presence of a department specific procedure governing configuration changes is critical to safe and reliable change management.
    - *Measure: Managing Safety in System Modification Risk: Safety – Moderate (3,3)*

Action Plan Overview

SMNT will incorporate a configuration control management and document control procedure with specific requirements for Engineering Modification Instruction (EMI) implementation to the revised Maintenance Control Policy (MCP) for the SAMS branch, in accordance with Operations Administrative Procedure (OAP) 200-06.

Business Impact - Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the 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[1]	Est Start[2]	Est End[3]
1.	Revise and update the Maintenance Control Policy (MCP)	SMNT-SAMS will provide configuration control management and document control procedure in accordance with OAP 200-06, and incorporate in to revised MCP. SMNT will submit MCP.	Gairy Johnson SMNT	05/02/18	08/01/18
2.	Toolbox Meeting	SMNT-SAMS will conduct toolbox meetings with maintenance personnel to communicate the configuration management and document control procedure revisions to the MCP. SMNT-SAMS will submit toolbox meeting notes and sign-in sheets.	Gairy Johnson SMNT	08/08/18	08/18/18
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	08/18/18	09/05/18

Completion Documentation & Performance Measures

- Evidence of configuration control policy incorporated in the MCP.
- Toolbox meeting notes and sign-in sheets demonstrating evidence of discussion regarding revised MCP.

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

[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Parties

SMNT   Gairy Johnson   4/26/18

(Signature/Date)

Second-Level Responsibility

SSRV   Randall Grooman   4/26/18

(Signature/Date)

SYSTEMS MAINTENANCE COMMUNICATIONS BRANCH iCAPAs

Return to Summary of Required Actions

Purpose and Scope

On April 5, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC), Communications Section (COMM), and Shops and Material Support (SAMS). This Internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SS-SMNT-18-01 and the associated finding(s).

Required Action

QICO-SS-COM-18-01	*Systems Maintenance (SMNT)*	*Elevated*

Establish a quality control program to promote compliance to the inspection and calibration requirements. The program should include specific check points, frequency of checks, and the responsible parties.

Applicable Finding(s)

- F-SS-COM-18-05: Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working environment.
    - *Measure: Occupational Safety & Health Risk: Safety – Elevated (4,4)*

Action Plan Overview

Create an updated test equipment calibration schedule and run overdue reports on a weekly basis. The shift supervisor will be responsible for ensuring that equipment is sent to SAMS for calibration. The Assistant Superintendent will ensure that the master list is kept current.

COMM will have the Assistant Superintendent review the preventive maintenance (PM) work orders within their area of responsibility and have the supervisor document why the PM will be delayed. Supervisors will monitor and certify that PMs are being completed monthly. The supervisor will document why the PM will not be completed by the end of the month as noted in the COMM Maintenance Control Policy.

Business Impact - Budget/Cost Estimate

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

PLAN STRUCTURE

	Actionable Items	Description	Responsible Party[1]	Est Start[2]	Est End[3]
1.	Weekly Calibration Overdue Reports	Shift supervisors will run calibration overdue reports using Maximo on a weekly basis, and submit to Assistant Superintendent for review. SMNT will submit three months' worth of reports.	Gairy Johnson SMNT	05/30/18	08/29/18
2.	Monthly PM Compliance Reports	Assistant superintendents will conduct monthly checks for PM compliance using Maximo records and require supervisors to supply justification for delayed PMs. SMNT will submit six months' worth of compliance reports.	Gairy Johnson SMNT	05/30/18	10/31/18
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	10/31/18	11/28/18

Completion Documentation & Performance Measures

- Maximo records indicating compliance with the calibration requirements as prescribed under actionable item #1.
- Maximo records indicating compliance with the PM requirements as prescribed under actionable item #2.

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

[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Parties

SMNT   Gairy Johnson   5/25/18

(Signature/Date)

Second-Level Responsibility

SSRV   Randall Grooman   4/26/18

(Signature/Date)

SYSTEMS MAINTENANCE AUTOMATIC FARE COLLECTION BRANCH iCAPAs

Return to Summary of Required Actions

Purpose and Scope

On April 5, 2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an Internal Safety and Security Review report regarding Office of System Maintenance (SMNT) offices: Automatic Fare Collection (AFC) Section. This Internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-AFC-18-01 and the associated finding(s).

Required Action

QICO-SS-AFC-18-01	*Systems Maintenance (SMNT)*	*Elevated*

Establish a quality control program to promote compliance to the inspection, calibration, and storage requirements. The program should include specific check points, frequency of checks, and the responsible parties.

Applicable Finding(s)

- F-SS-AFC-18-04: Timely inspections and calibration of facilities and equipment is essential to maintaining a safe and reliable working environment.
    - o *Measure: Occupational Safety & Health. Risk: Safety – Elevated (4, 4).*
- F-SS-AFC-18-06: Proper storage of hazmat materials in department facilities is essential to maintaining a safe and secure work environment
    - o *Measure: Job Safety. Risk: Safety – Moderate (3, 3).*

Action Plan Overview

AFC will ensure the 28 overdue equipment are calibrated and closed out in Maximo. To ensure compliance going forward AFC shift supervisors will run calibration reports on a weekly basis. The Assistant Superintendent will ensure that the master list is kept current.

AFC will revise and submit monthly office safety inspection sheets and SMNT will develop a Standard Operating Procedure (SOP) for the disposal of hazardous materials.

Business Impact - Budget/Cost Estimate

- Process Improvement – A current process/procedure needs to be optimized to address the FTA 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[1]	Est Start[2]	Est End[3]
1.	Overdue AFC Calibration Equipment	AFC will ensure the 28 AFC overdue test equipment for calibration is completed and closed. AFC will provide equipment calibration status report from Maximo.	Gairy Johnson SMNT	05/30/18	08/29/18
2.	Weekly Calibration Overdue Reports	Shift supervisors will run calibration overdue reports on a weekly basis, and submit to Assistant Superintendent for review. AFC will submit three months' worth of reports.	Gairy Johnson SMNT	05/30/18	08/29/18
3.	Monthly Office Safety Inspection Sheet	AFC will revise monthly office safety inspection sheet to include the disposal of hazardous materials. AFC will submit revised office safety inspection sheet.	Gairy Johnson SMNT	05/30/18	08/29/18
4.	Standard Operating Procedure For Disposal of Hazardous Materials	SMNT will develop a Standard Operating Procedure (SOP) for the disposal of hazardous materials. SMNT will submit SOP.	Gairy Johnson SMNT	05/30/18	08/29/18
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	08/29/18	10/01/18

Completion Documentation & Performance Measures

- Evidence of completed and closed overdue equipment calibration as prescribed per actionable item # 1.
- Evidence of calibration overdue reports as prescribed per actionable item # 2.
- Evidence of revised monthly office safety inspection sheet as prescribed per actionable item # 3.
- Evidence of SOP as prescribed per actionable item # 4.

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[1] In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.
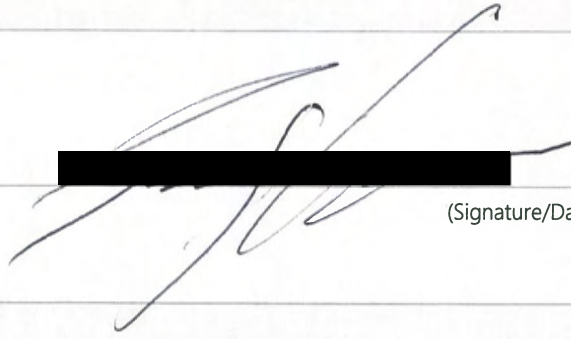
[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Parties

SMNT   Gairy Johnson

(Signature/Date)   4/25/18

Second-Level Responsibility

SSRV   Randall Grooman

(Signature/Date)   4/26/18

OFFICE OF ELEVATORS AND ESCALATORS iCAPAs

Return to Summary of Required Actions

Purpose and Scope

On 04/05/2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an internal safety and security review report regarding Office of Elevators and Escalators. This internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SSELES-18-01 and the associated findings.

Required Action

| QICO-SS-ELES-18-01 | *Office of Elevator and Escalator Services (ELES)* | *Overall Risk – Moderate (3,3)* |

Required Action: Perform a review of all administrative and maintenance functions; Ensure each function has a documented procedure and is well configured for identification and traceability purposes to meet WMATA's System Safety Program Plan (SSPP) guidelines.

Applicable Findings

- F-SS-ELES-18-01: The presence of a departmental specific procedure governing configuration changes in collaboration with SAFE approval is critical to safe and reliable change management as per the requirements in the SSPP.
    - *Measure: Managing Safety in System Modification. Risk: Safety – Moderate (3,3)*
- F-SS-ELES-18-03: The implementation of a safety control plan related to rulebook compliance is essential to maintain a safe work enviorment.
    - *Measure: Safety Management. Risk: Safety – Moderate (3,3)*
- F-SS-ELES-18-04: Timely inspections and calibration of facilities and equipment is essential to maintain a safe and reliable working enviorment.
    - *Measure: Occupational Safety & Health. Risk: Safety – Elevated (4,4)*
- F-SS-ELES-18-05: Maintaining up to date procedures, policies and checklists is essential to assure ELES technicians have the proper resources to perform work accurately.
    - *Measure: Configuration Management. Management. Risk: Service Delivery – Moderate (3,3)*

Action Plan Overview

PLAN OVERVIEW

ELES will revise SOPs to include communication with SAFE. ELES will revise procedures to address deferred maintenance, revision dates and make the most recent versions available on the ELES website.

Business Impact - Budget/Cost Estimate

- **Process Improvement** – A current process/procedure needs to be optimized to address the 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[1]	Est Start[2]	Est End[3]
1.	Modify service bulletin procedure	Modify service bulletin procedure to include routing to SAFE. Submit revised service bulletin procedure.	Madhavan Kozhipurath (ELES)	05/01/18	06/05/18
2.	Establish Safety and Security Certification procedure	Develop and submit a new Standard Operating Procedure (SOP) for safety and security certification.	Cedric Watson (ELES)	05/01/18	06/05/18
3.	Complete supervisor safety audit reports	Provide supervisor quality audit reports for each region for June 2018 in accordance with Operations Administrative Policy (OAP) 100-01.	Rolando Grimaldi (ELES)	06/01/18	07/11/18
4.	Modify SOP to address deferred maintenance	Modify SOP 212-19 to address assets not maintained in the 30-day cycle. Train journeymen and apprentices on procedure modifications. Submit revised SOP and signed acknowledgments from staff.	Rolando Grimaldi (ELES)	05/01/18	08/15/18
5.	Provide revision dates on controlled documentation	Add revision dates to hydraulic elevator MCP, traction elevator MCP, return station/carriage procedure, and comb impact adjustment procedure. Submit revised documents.	Rolando Grimaldi (ELES)	05/01/18	08/15/18
6.	SOP distribution	Update the ELES website with the most-recent versions of safety-related SOPs. Provide screenshot of updated website.	Rolando Grimaldi (ELES)	05/01/18	08/15/18
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	08/21/18	09/11/18

Completion Documentation & Performance Measures

- 90 percent of journeymen and apprentices acknowledge policy modification included in actionable item number 4.

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[1] In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.
[2] Est Start – Estimated Start Date.
[3] Est End – Estimated Completion Date.

Responsible Parties

ELES	Madhavan Kozhipurath		4/26/18
			(Signature/Date)

ELES	Rolando Grimaldi		4/26/18
			(Signature/Date)

ELES	Cedric Watson		4/26/18
			(Signature/Date)

ELES	Mitchell Nici		4/26/18
			(Signature/Date)

Second-Level Responsibility

SSRV	Randall Grooman		4/28/18
			(Signature/Date)

Purpose and Scope

On 04/05/2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an internal safety and security review report regarding Office of Elevators and Escalators. This internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SSELES-18-02 and the associated finding.

Required Action

QICO-SS-ELES-18-02	*Office of Elevator and Escalator Services (ELES)*	*Elevated (4.4)*

Required Action: Maintain and control an up-to-date training matrix and establish a procedure to periodically review training records.

Applicable Finding

- F-SS-ELES-18-06: Developing and maintaining a controlled training matrix is necessary to sustain the competency level of employees to safely perform their duties.
    - *Measure: Application & Fulfillment Risk: Safety – Elevated (4.4)*

Action Plan Overview

Develop and maintain an SOP and a controlled training matrix to track and sustain the competency level of employees and ensure safety during work performance.

Business Impact - Budget/Cost Estimate

- **Process Improvement** – A current process/procedure needs to be optimized to address the FTA 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[1]	Est Start[2]	Est End[3]
1.	Update ELES training matrix	Update the ELES personnel training matrix to include certification, expiration, and requalification dates. Submit updated matrix.	Mitchell Nici (ELES)	05/15/18	08/15/18
2.	Establish standard operating procedure (SOP) for required training	Establish an SOP for administering training and certification to employees and contractors in safety-related positions. Submit SOP.	Mitchell Nici (ELES)	07/09/18	08/15/18
3.	Safety measurement system (SMS) training	Submit SMS training records for all applicable employees.	Mitchell Nici (ELES)	05/15/18	08/15/18
4.	Hazard Waste Management (HWM) training	Submit HWM training records for all applicable employees.	Mitchell Nici (ELES)	07/09/18	08/15/18
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	08/21/18	09/11/18

Completion Documentation & Performance Measures

- 100 percent of applicable employees are trained on SMS
- 100 percent of applicable employees are trained on HWM

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[1] In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.
[2] Est Start – Estimated Start Date.
[3] Est End – Estimated Completion Date.

Responsible Parties

ELES   Mitchell Nici   4/26/18
                                                              (Signature/Date)

Second-Level Responsibility

SSRV   Randall Grooman   4/28/18
                                                              (Signature/Date)

Purpose and Scope

On 04/05/2018, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued an internal safety and security review report regarding Office of Elevators and Escalators. This internal Corrective and Preventive Action (iCAPA) has been developed to address required action QICO-SSELES-18-03 and the associated finding.

Required Action

QICO-SS-ELES-18-03   *Office of Elevator and Escalator Services (ELES)*   *Overall Risk – Elevated (4.4)*

Required Action: Assess the safety compliance in all ELES materials storage areas and take immediate corrective actions. Review the current inspection and quality control procedures and update where applicable to achieve a robust process for safe working conditions.

Applicable Finding

- F-SS-ELES-18-07: Complying with material handling and storage safety requirements is necessary for a safe and reliable working environment.
  - *Measure: Safety Training & Certification* Risk: *Safety – Elevated (4.4)*

Action Plan Overview

ELES employees will comply with material handling and storage safety requirements to ensure a safe and reliable working environment by submitting a signed policy acknowledgments from active field employees

Business Impact - Budget/Cost Estimate

- **Process Improvement** – A current process/procedure needs to be optimized to address the FTA 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[1]	Est Start[2]	Est End[3]
1. Fluorescent tube handling	Enforce fluorescent tube handling policy and provide proper means of storage and disposal in stations. Submit signed policy acknowledgments from active field employees.	Rolando Grimaldi (ELES)	05/09/18	07/09/18
2. Spill pallet storage	Enforce chemical storage policy and provide spill pallets where needed. Submit signed policy acknowledgments from active field employees.	Rolando Grimaldi (ELES)	05/09/18	07/09/18
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	07/16/18	07/31/18

Completion Documentation & Performance Measures

- 95 percent of field employees acknowledge florescent tube handling policy.
- 95 percent of field employees acknowledge chemical storage policy.

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

[2] Est Start – Estimated Start Date.

[3] Est End – Estimated Completion Date.

Responsible Parties

ELES	Rolando Grimaldi		4/26/18
			(Signature/Date)

ELES	Mitchell Nici		4/26/18
			(Signature/Date)

Second-Level Responsibility

SSRV	Randall Grooman		4/21/18
			(Signature/Date)

SUPPLEMENTAL MATERIALS

Quality Assurance, Internal Compliance & Oversight (QICO)

"Quality Trumps Quantity"

Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)

- **Safe Work Standards:** The existence and effectiveness of department policies, procedures, manuals, work instructions, safety and security practices, and other safety and security requirements that define department safe work practices.
- **Work Measurement:** The existence and effectiveness of operational goals (indicators) and sound management routines to achieve these goals.
- **Configuration Management:** The existence and effectiveness of processes, tools and techniques to manage changes to a system to achieve intended outcomes.
- **Safety Management:** The existence and effectiveness of supervision strategy to ensure personnel are adequately qualified to perform work safely.

Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)

- **Application & Fulfillment:** Adherence to existing/adopted policies, procedures, and standards; including applicable engineering or other technical requirements that specify material and/or workmanship standards.
- **Job Safety:** Adherence to safety requirements, including enterprise-wide standards (e.g. MSRPH) or those specific to a particular type of work (e.g. PPE).
- **Safety Training & Certification:** The existence and effectiveness of a training strategy to ensure personnel are adequately qualified to perform work.
- **Regulations & Oversight:** Adherence to requirements, guidelines, and recommendations from external/regulatory authorities and internal oversight functions, including items issued for corrective and preventive actions.

Hazard Management (SSPP Elements 6, 10, 11, & 19)

- **Hazard Identification:** Assessing the existence of a hazardous condition that has been identified.
- **Hazard Risk Assessment:** The performance of gathering all data, conducting interviews & field inspections to determine the risk level and prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution.
- **Hazard Mitigation:** Assessing the effectiveness of hazard tracking and documentation of all systems to mitigate and prevent reoccurrence.

Safety & Security (SSPP Elements 7, 8, 9, 14 & SEPP)

- **Security Management:** From a security perspective assess role in the maintenance of security and the environment as it pertains to Employee/Contractor Background Check, Access Control and Management of Threats & Vulnerabilities.
- **Managing Safety in System Modification:** Evaluation and Assurance that a proposed modification does not adversely affect the system, vehicle, equipment or facility previously certified under the System Safety & Security process.
- **Emergency Management:** Assess the adherence of the department's coordination with The Office of Emergency Management for specific duties to mitigate emergencies.
- **Occupational Safety & Health:** Validate the development of Safety programs and the administration of training to required personnel.

Risk Assessment Methodology

Risk is defined as an uncertain event or condition that, if it occurs, has a positive or negative effect on the organization's objectives and operations (both threats and opportunities). It is assessed on the combination of the probability of occurrence of risk and the severity of the risk. Risk management is an attempt to answer the following questions:

- What can go wrong? – The Risk
- How bad are the consequences? – The Impact
- How often does/will it happen? – The Probability of Occurrence
- Is the risk acceptable? – The Risk Treatment, Remediation

Categories of Risk

- *Service Delivery* – A broad range of risks with direct or indirect impact on daily transit and / or business operations. The risk of direct or indirect losses or other negative effects due to inadequate or failed internal business or transit operations, or from external events that impair internal processes, people, or systems.
- *Financial* – The risk to achievement of the Authority's mission arising from an inability to manage credit, debt and financial leverage, and other financial resources. Financial risk would also include risk arising from adverse movements in market rates or the Authority's inability to meet its obligations.
- *Legal & Compliance* – Risks arising from a failure to comply with applicable laws and regulations and a failure to detect and report activities that are not compliant with statutory, regulatory, or internal policy requirements. Failure to comply with prescribed guidelines and established practices. This would also include a lack of awareness or ignorance of the relevant standards, guidelines or regulations.
- *Safety* - The risk of achievement of the Authority's mission arising from failures to prevent hazards that may cause harm to human, equipment, or the environment. This would also include risk arising from the Authority's inability to comply with safety-related legal or regulatory standards.
- *Strategic* – Risks arising from failure to achieve strategic or tactical objectives, an adverse business decision, or a lack of strategic direction and leadership. This would also include the ineffective implementation of the strategic plans, a lack of business strategies developed to achieve goals, and inadequate resources deployed against the achievement of those goals. Strategic risks can be affected by changes in the political environment such as changes in administration and resulting changes in strategic priorities. Strategic risks can also be triggered by actions of key stakeholders such as the Tri-Jurisdictional law makers or the Federal Transit Authority (FTA).
- *Technology* – The risk of unexpected losses from inadequate systems, breaches in information technology security, and inadequate business continuity planning. This would also include risks to the achievement of the Authority's mission arising from the inability of networks, security, and technologies to meet Metro's evolving needs.
- *Reputation* – The risk to the achievement of the Authority's mission arising from negative internal or external stakeholder opinion. Reputation risk affects the Authority's ability to establish new and /or sustain existing relationships.

Risk Assessment Process

The following risk matrix is used to assess risks within the universe of review areas. The universe (see Table 1) is comprised of the potential range of all review activities and review business units (or departments) that fall within QICO's scope and oversight authority. These business units consist of programs, processes, assets and people which together contribute to the fulfilment of the departments' strategic goals (Goal 1 - Build Safety Culture; Goal 2 - Deliver Quality Service; Goal 3 - Improve Regional Mobility; and Goal 4 - Ensure Fiscal Stability).

Risks are assessed based on the significance of their impact (see horizontal axis in Figure 1) and the probability of occurrence (see vertical axis in Figure 1). The probability ratings are rated on a scale of 1 (minimum) to 5 (maximum) and are driven by the metrics shown on the next page. The impacts ratings are also rated on a scale of 1 (minimum) to 5 (maximum) and are driven by the category of risks, which are then aligned on the metrics shown on the next page.

Each finding is given a severity rating of Insignificant, Low, Moderate, Elevated or High. All areas with Elevated / High ratings are considered to be high risk to the organization's objectives; and need to be mitigated/ reduced in severity at the earliest. The risk ratings to the findings are provided as "Type of Risk" followed by "Severity Rating (Impact, Probability)" (e.g. a finding with *"Elevated (4,3)"* would mean a 'significant (4)' impact along with a 'possible (3)' probability of occurrence).

Risk Assessment Matrix

Probability	Probability of Occurrence	Negligible (1)	Minor (2)	Moderate (3)	Significant (4)	Major (5)
Almost Certain (5)		Low	Moderate	Elevated	High	High
Likely (4)		Low	Low	Moderate	Elevated	High
Possible (3)		Low	Low	Moderate	Elevated	Elevated
Unlikely (2)		Insignificant	Low	Low	Moderate	Moderate
Rare (1)		Insignificant	Insignificant	Low	Moderate	Moderate
Probability		Potential Impact of Risk				
Impact		Negligible (1)	Minor (2)	Moderate (3)	Significant (4)	Major (5)

Risk Scale Definitions

Insignificant		Reasonable assumption that this risk will not occur and unlikely to cause the activity to fail to meet part of its objective.
Low		Reasonable assumption that this risk will likely not occur & may cause a failure of the business process to meet part of its objectives.
Moderate		Reasonable assumption that this risk may occur & may cause a failure of the business process to meet a significant part of its objectives.
Elevated		Reasonable assumption that this risk will likely occur & likely to cause a failure of the business process to meet a significant part of its objectives.
High		Reasonable assumption that this will occur & will cause a failure of the business process to meet its objectives or cause objective failure in other activities.

Potential Impact

(1) **Negligible** – Unlikely to cause the activity to fail to meet part of its objectives.
(2) **Minor** – May cause a failure of the business process to meet part of its objectives, which may expose Metro to minor financial losses, less- effective or efficient operations, some non- compliance with laws and regulations, waste of resources, etc.
(3) **Moderate** – May cause a failure of the business process to meet a significant part of its objectives, or negatively impact the objectives of other activities, which may expose Metro to moderate financial losses, reductions to or ineffectiveness of operations, non- compliance with laws and regulations, sizable waste of resources, etc.
(4) **Significant** – Likely to cause a failure of the business process to meet a significant part of its objectives, or negatively impact the objectives of other activities, which may expose Metro to significant financial losses, reductions to or ineffectiveness of operations, non- compliance with laws and regulations, sizable waste of resources, etc.
(5) **Major** – Will cause a failure of the business process to meet its objectives, or cause objective failure in other activities, which may cause or expose Metro to major financial losses, interruptions in operations, failure to comply with laws and regulations, major waste of resources, failure to achieve stated goals, etc.

Probability of Occurrence

(1) Rare – Reasonable assumption that this risk will not occur
(2) Unlikely – Reasonable assumption that this risk will likely not occur
(3) Possible – Reasonable assumption that this risk may occur
(4) Likely – Reasonable assumption that this risk will likely occur
(5) Almost Certain – Reasonable assumption that this will occur