




INTERNAL REVIEW

Metro's Structure Inspections

In response to the internal review report for Metrorail's Automatic Train Control Inspection and Maintenance dated May 4, 2017. QICO has coordinated with Operations and Engineering departments to develop three comprehensive CAPs. Each CAP outlines the findings, requirements and recommendations addressed, and a detailed action plan outlining responsible parties and specific actionable items.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Corrective Action Plan (CAP) Commitment



Joseph Leader
Chief Operating Officer (COO)

6/19/2017
Date

WMATA INTERNAL OVERSIGHT

Corrective Action Plan (CAP) Acknowledgement



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

06/19/17
Date



Eric Christensen
Chief, Internal Compliance (INCP)

6/19/17
Date



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

6/20/17
Date



CORRECTIVE ACTION PLAN

Purpose and Scope

On May 4, 2017 QICO issued an internal review of Metrorail’s Automatic Train Control Inspection and Maintenance. This Corrective Action Plan (CAP) has been developed to address the following finding and required actions per **QICO-ATC-17-01**.

QICO Finding

QICO Recommendation

F-ATC-17-02: The ATCM Maintenance Control Policy does not outline technical training required for mechanics or supervisors, according to grade or experience.

-Establish clear training requirements for each mechanic grade including periodicity and develop methods of capturing on-the-job training in accordance with the Maintenance Control Policy. Develop training plan to comply with updated requirements.

Required Action

QICO-ATC-17-01: Establish clear training requirements for each mechanic grade including periodicity and develop methods of capturing on-the-job training in accordance with ATCM’s Maintenance Control Policy. Develop training plan to comply with updated requirements.

(Risk Rating: Elevated) ■

Plan Description

Operations Management Services (OPMS) and Automatic Train Control Maintenance (ATCM) will finalize the training matrix identifying training requirements and frequencies by mechanic level. The mentoring program that was created in response to FTA SMI CAP R-2-16-d by OPMS contains an On-the-Job Training (OJT) log that addresses documenting OJT activities by required ATC competencies. OPMS and ATCM are reviewing and documenting the on-the-job training requirements. ATCM will issue a department Policy outlining these requirements.

Business Impact – Budget/Cost Estimate

- **Process Execution** – A current process/procedure exists that meets the QICO Required Action, This type of initiative does not need additional resources.

PLAN SCHEDULE

Actionable items		Description	Responsible Party*	Estimated Start	Estimated Completion
1	Training Matrix	Working with ATCM management to finalize training matrix that identifies training requirements for each ATC mechanic levels.	Linda Stoffregen (OPMS)	06/12/17	10/02/17
2	On-the-Job Training (OJT)	OPMS and ATCM will review and document the on-the-job training requirements.	Linda Stoffregen (OPMS)	06/12/17	10/02/17



PLAN SCHEDULE

Actionable items		Description	Responsible Party*	Estimated Start	Estimated Completion
3	Policy and Instruction	Issue an ATCM Policy and Instruction detailing the on-the-job-training requirements and training matrix.	Jerry Flanders (ATCM)	10/02/17	10/31/17
4	QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	10/31/17	11/27/17

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

COMPLETION DOCUMENTATION

Performance Measures

- 100% completion of training matrix.
- 100% completion of ATCM Policy and Instruction detailing the on-the-job-training requirements

RESPONSIBLE PARTIES

ATCM	Jerry Flanders	
OPMS	Linda Stoffregen	

SECOND LEVEL RESPONSIBILITY

AGM RAIL	Andrew Off	
----------	------------	--



CORRECTIVE ACTION PLAN

Purpose and Scope

On May 4, 2017 QICO issued an internal review of Metrorail’s Automatic Train Control Inspection and Maintenance. This Corrective Action Plan (CAP) has been developed to address the following finding and required actions per QICO-ATC-17-02.

QICO Finding

QICO Recommendation

F-ATC-17-03: Inconsistent communication between successive shifts on corrective maintenance work orders in Maximo results in ineffective record keeping of work completed during each shift.

Establish shift turnover standards, including requirements for documenting work completed and any issues that occur during each shift for communication to the oncoming crew.

F-ATC-17-04: ATCM supervisors are not performing quality control checks as required in ATCM’s Maintenance Control Policy.

Establish controls to ensure supervisory quality control checks are completed, including items related to safety and maintenance activities.

F-ATC-17-05: QICO could not identify applicable work orders when reviewing completed Preventative Maintenance (PM) data sheets.

Coordinate the implementation of a Work Order (WO) number field in all Preventative Maintenance Data Sheets.

F-ATC-17-06: Preventative Maintenance Work Orders (WOs) in the enterprise asset management database (Maximo) does not contain the current revised versions of instructions and/or sample data sheets.

Establish requirements to update Maximo when preventative maintenance instructions and data sheets are changed or revised. Implement supervisory controls to ensure accurate records are maintained.

F-ATC-17-07: ATC corrective maintenance records, as identified in the enterprise asset management database (Maximo), indicate a backlog of open work orders dating back to 2012.

Verify the current status of open work orders, updating the database to reflect current status. Implement supervisory controls to ensure accurate status of work orders.

F-ATC-17-08: ATC Maintenance utilizes only paper records for preventative maintenance inspection data sheets.

Establish requirements to capture and store documentation of completed inspections/maintenance, exploring the possibility of utilizing the enterprise asset management database (MAXIMO).

Required Action

QICO-ATC-17-02: Review and perform necessary revision to maintenance documentation, including the Maintenance Control Policy (MCP), and establish supervisory updated requirements.

(Risk Rating: Moderate)



Plan Description

F-ATC-17-03: Automatic Train Control Maintenance (ATCM) developed a SharePoint as an internal communication resource between shifts. Personnel will be trained on the use of this comprehensive data which will include labor resource data. In addition ATCM will provide all maintenance personnel with written instructions on how to complete corrective maintenance work orders in Maximo.

F-ATC-17-04: ATCM has established requirements and procedures in its Maintenance Control Policy (MCP) for quality control/compliance spot checks (level 1), spot checks of supervisor work (level 2) and resulting documentation to be completed by each supervisor. This includes reviewing data sheets and adding defects to new work orders. ATCM will provide completed PMs for review.

F-ATC-17-05: Rail Services (RAIL) will review all inspection & preventative maintenance data sheets to determine an efficient way to link to the issued work order and establish a policy to implement the results of data sheet analysis.

F-ATC-17-06: Engineering realized having different revision levels for procedures and datasheets can create confusion. To overcome the potential confusion, engineering will state within the procedure the revision level for the associated datasheet as well. This will help both maintenance and any auditors confirm the correct datasheets are being used. Language will be included in the next revision of the ATC-4000 to require datasheet revision levels to be entered on all ATC procedures. The updated 4K manual is expected to be ready for review by September 2017 and an expected implementation before the end of the year.

F-ATC-17-07: Automatic Train Control Maintenance (ATCM) will establish a team to review and close open work orders. The team has already started the process, the issue is that it's not just Corrective Maintenance (CM) work orders. ATCM will create a complete list of the backlogged open work orders disclosing the different types & give quarterly updates on the progress made closing out the open work orders as time permits.

F-ATC-17-08: RAIL will analyze options to efficiently capture and store documentation of completed inspections/maintenance for TRST, TRPM and ATCM.

Business Impact – Budget/Cost Estimate

- **Process Execution** – A current process/procedure exists that meets the QICO Required Action, This type of initiative does not need additional resources.

PLAN SCHEDULE

Actionable items		Description	Responsible Party*	Estimated Start	Estimated Completion
1	Screenshots of SharePoint	Screenshots of SharePoint and training instructions.	Jerry Flanders (ATCM)	07/05/17	07/31/17
2	Acknowledgement of use of SharePoint	Memorandum notice that the new ATCM SharePoint is an additional tool for shift turnover communication between shifts.	Jerry Flanders (ATCM)	07/05/17	08/31/17
3	Maximo Work Order Instructions- Supervisors	Revise current written instructions on how to create a detailed account of work performed on corrective maintenance work orders in Maximo.	Jerry Flanders (ATCM)	07/05/17	08/31/17



4	Implementation of new quality control/compliance spot check procedure in Maintenance Control Policy	Procedures for quality control/compliance spot checks (level 1), spot checks of Supervisor's work (level 2) including reviewing data sheets and work orders.	Jerry Flanders (ATCM)	07/05/17	07/31/17
5	Completed Preventative Maintenance's (PMs)	Provide copies of completed quality control spot check Preventative Maintenance's (PMs).	Jerry Flanders (ATCM)	07/05/17	09/28/17
6	Review all inspection & Preventative Maintenance Data Sheets	Review inspection and preventative maintenance data sheets to determine the most efficient means of linking them to work orders issued through the Maximo system for Rail Maintenance groups.	Andrew Off (RAIL)	07/03/17	12/29/17
7	Create a RAIL policy to link data sheets to work orders	Establish a policy to implement the results of data sheet analysis.	Andrew Off (RAIL)	01/02/18	01/31/18
8	Draft ATC- 4000	Draft copy of System configuration management Plan instructions and procedures (ATC 4000) manual - Language will be included to require datasheet revision levels to be entered on all ATC procedures.	Ed Popa (ENGA)	07/03/17	09/27/17
9	Final ATC- 4000	Approved copy of System configuration management Plan instructions and procedures (ATC 4000) manual - Language will be included to require datasheet revision levels to be entered on all ATC procedures.	Ed Popa (ENGA)	07/03/17	01/15/18
10	Progress Reports-Closed Work Orders	Quarterly updates on the progress made closing out backlogged open work orders.	Jerry Flanders (ATCM)	07/03/17	03/20/18
10.1	Quarterly Closed Work Orders-1	Quarterly updates on the progress made closing out backlogged open work orders.	Jerry Flanders (ATCM)	07/03/17	09/20/17
10.2	Quarterly Closed Work Orders-2	Quarterly updates on the progress made closing out backlogged open work orders.	Jerry Flanders (ATCM)	09/20/17	12/20/17
10.3	Quarterly Closed Work Orders-3	Quarterly updates on the progress made closing out backlogged open work orders.	Jerry Flanders (ATCM)	12/20/17	03/20/18
11	Review options to capture and store documentation	Analyze options to efficiently capture and store documentation of completed inspections/maintenance for TRST, TRPM and ATCM.	Francesco Palmeri (RCMP)	07/03/17	12/27/17



12	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	03/20/18	04/18/18
----	------------------------------	---	------	----------	----------


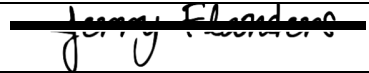

*In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

COMPLETION DOCUMENTATION

Performance Measures

- 95% of ATC supervisor's signature acknowledgement of new ATCM SharePoint's function as prescribed under actionable item #2.
- Evidence of revised written instructions as prescribed under actionable item #3.
- Evidence of the implementation of new procedure in the Maintenance Control Policy as prescribed under actionable item #4.
- Provide copies of completed quality control spot check Preventative Maintenance's (PMs) performed over a span of two (2) months as prescribed under actionable item #5.
- Final copy of RAIL policy as prescribed under actionable item #7.
- Final copy of revised ATC 4000 manual as prescribed under actionable item #9.
- 70% completion of the closeout of backlogged open work orders(as of 7/1/17) as prescribed under actionable item #10.
- Evidence of developed P/I outlining management responsibilities on electronic submission and review of records as prescribed under actionable item #11.

RESPONSIBLE PARTIES

DECO	Ed Popa	
ATCM	Jerry Flanders	
RCMP	Francesco Palmeri	

SECOND LEVEL RESPONSIBILITY

AGM RAIL	Andrew Off	
----------	------------	--



CORRECTIVE ACTION PLAN

Purpose and Scope

On May 2, 2017 QICO issued an internal review into Metrorail’s Automatic Train Control Inspection and Maintenance. This Corrective Action Plan (CAP) has been developed to address the following finding and required actions per QICO-ATC-17-03.

QICO Finding

QICO Recommendation

F-ATC-17-01: The ATC mechanics encounter delays obtaining access to the roadway for preventative maintenance inspections.

-Develop a process to determine which groups receive precedence or priority for track access, maximizing time available to complete critical maintenance/inspection activities.

Required Action

QICO-ATC-17-03: Develop a process to determine which groups receive precedence or priority for track access maximize time available to complete critical maintenance/inspection activities.

(Risk Rating: Moderate)

Plan Description

F-ATC-17-03: Given the complex challenges of working on an operating railroad and numerous issues that can disrupt planned work, the key metrics tracked with respect to Preventative Maintenance Instruction (PMI) and inspections are the completed percentage of work (measured monthly) and the quality of those inspections. Rail will establish a weekly meeting to review incidents, trends and Rail initiatives. Once a month, this meeting will review the PMI and inspection percentage completed and determine if any group needs additional resources or prioritization for ROW to complete inspections. This prioritization will also include assessment of planned capital and preventive maintenance work.

Business Impact – Budget/Cost Estimate

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

PLAN SCHEDULE

Actionable items		Description	Responsible Party	Estimated Start	Estimated Completion
1	Roadway Access – Preventative Maintenance Inspection (PMI) Monthly Meeting Minutes	Monthly meetings will include a review of ongoing track inspection and PMI activities to determine the needs of maintenance and inspection groups and establish prioritization for ROW access.	Andrew Off (RAIL)	07/27/17	10/30/17



PLAN SCHEDULE

Actionable items	Description	Responsible Party	Estimated Start	Estimated Completion
2 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	10/30/17	11/28/17

COMPLETION DOCUMENTATION

Performance Measures

- Rail Operations Control Center (ROCC) tracking for track access requests indicates number of approved vs. denied requests.

RESPONSIBLE PARTIES

Rail	Andrew Off	
------	------------	---