



U.S. Department
of Transportation

**Federal Transit
Administration**

Headquarters

1200 New Jersey Avenue, SE
Washington, DC 20590

August 12, 2016

Mr. Patrick Lavin
Chief Safety Officer
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001

Subject: Final Approval of Safety Directive 16-2 Corrective Action Plans

Dear Mr. Lavin:

Thank you for the updated Corrective Action Plan (CAP) submittal from the Washington Metropolitan Area Transit Authority (WMATA) in response to Safety Directive 16-2 issued by the Federal Transit Administration (FTA) on December 15, 2015. The FTA WMATA Safety Oversight Office (FWSO) reviewed each of the 102 proposed CAPs developed to address the Category 1 safety findings and required actions and each of the 29 proposed CAPs developed to address the Category 2 and 3 safety findings and required actions specified in Safety Directive 16-2.

The 131 total CAPs meet the FWSO's expectations and are therefore approved. As we discussed in communications in April and May, and most recently on June 29, 2016, we greatly appreciate your willingness to expedite completion dates and activities related to CAPs discussed in FTA's letter of April 18, 2016 (Immediate Actions to Address Fire/Life Safety and the Protection of Workers on the Right-of-Way), FTA's letter of May 11 (Urgent Repairs Required Prior to Start Up of WMATA SafeTrack Plan), and FTA's Safety Directive 16-3: Required Actions to Address Persistent Critical Open Safety Findings, issued on May 7, 2016.

Thank you for your commitment to resolving these CAPs. We look forward to working with your team as they address these findings and required actions. For additional information or assistance, please contact me at (202) 366-3616 or via email at Sean.Thompson@dot.gov with any questions.

Sincerely,

SEAN L THOMPSON

Digitally signed by SEAN L THOMPSON
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Sean Thompson
Director, FTA WMATA Safety Oversight
Office of Transit Safety and Oversight

Mr. Patrick Lavin

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Enclosure: Safety Directive 16-2 Corrective Action Plan Tracking Matrix

cc: Paul Wiedefeld, General Manager and Chief Executive Officer, WMATA
Andy Off, Acting Deputy General Manager Operations, WMATA
Angel Peña, Managing Director, Quality and Internal Compliance Operations,
WMATA
Sharmila Samarasinghe, Chair, Tri-State Oversight Committee



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Change Management	WMATA's Safety Department is not as involved in the review of engineering designs or in the change control process as specified in the System Safety Program Plan (SSPP), and the Maintenance Control Policy (MCP) manual is not referenced in the SSPP.	WMATA must ensure the Safety Department's involvement in the review of engineering designs and in the Change Control Board. Also, the System Safety Program Plan (SSPP) must be updated to reference the Maintenance Control Policy (MCP) manual.	TOC-CMT-15-008-A	May 2016	Closure Request Under Review
Change Management	WMATA is not following its safety and security certification process as required.	WMATA must ensure that the Safety Certification Review Committee (SCRC) meets and votes as required, and that corrective actions and mitigations developed to address the results of threat and vulnerability analysis are mitigated following the certification process.	TOC-CMT-15-004-A	June 2016	Closure Request Under Review
Collisions	Insufficient visual cues exist to inform flagmen and train operators of the outer fouling limits in rail yards.	For Brentwood rail yard, and all other rail yards, paint stripes on asphalt adjacent to tracks to indicate fouling limits and "No Parking."	TOC-COL-15-007-A	June 2016	Closure Request Under Review
Derailments	The Equipment Operator failed to perform a proper pre-inspection and did not notice the improper placement of the rail lift cylinder pin, which dropped down and came into contact with switch D99 heel block, causing the derailment.	WMATA must provide documentation and evidence of training to ensure that Equipment Operators and Supervisors conduct complete pre-trip inspections, and understand proper clamping and operation of the Auto-Lift.	TOC-DRL-15-003-A	July 2016	Closure Request Under Review
Collisions	Power cable connections are infringing on the dynamic envelop of trains and track equipment.	After completing an inspection to identify and correct any locations with improperly aligned stub-ups and other third rail power boot anomalies, the Office of Transit Structures (TRST) and	TOC-COL-15-006-A	July 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		the Power Branch within the Office of Systems Maintenance (POWR) must conduct an analysis to identify mitigations in place to prevent recurrence of this infringement, and submit to FTA.			
Emergency Egress	Emergency egress landings and areas of refuge blocked with debris and/or equipment.	WMATA must address the debris and equipment blocking the emergency access landings and area of rescue assistance identified by the TOC. WMATA also must ensure that contractors are briefed on proper safety protocol and that WMATA personnel periodically inspect contractor work on WMATA property.	TOC-EGR-15-002-A	July 2016	Closure Request Under Review
Fires	The cab heater in the 5000 series vehicles overheats resulting in the potential for fire, smoke and vehicle damage.	The cab heater in the 5000 series vehicles must be re-engineered to ensure its safe performance. WMATA must demonstrate completion of this engineering work, and the successful installation of the modified cab heater components in the 5000 series railcars.	TOC-FIR-15-003-A	July 2016	Closure Request Under Review
Collisions	Metal ceiling tile became loose, detached from ceiling, and fell to the trackbed, where it collided with the collector shoe of a revenue train.	Provide FTA with the results of the push pull tests completed on ceiling panels at Smithsonian, Metro Center, Gallery Plan, Farragut North, Judiciary Square and Union Station to confirm that associated locking clips were fully engaged and securing the panels from falling, as well as the Red Line Ceiling Rehabilitation Quality Control Report developed from the incident, and the new contact specifications established for ceiling tile installation work on the Red Line.	TOC-COL-15-004-A	July 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Derailments	Tie Crane 07 derailed on a section of track with a suspended joint.	TRST must provide FTA with copies of the reports documenting the results of follow-up inspections conducted to ensure the sufficiency of track ballast.	TOC-DRL-15-002-A	August 2016	Open
Red Signal Violations	Radio communications must be improved to ensure focused attention on train movements.	While WMATA is completing its program to address FTA's SMI finding R-6 (regarding radio discipline), WMATA must immediately require proper read back from vehicle operators for vehicle movement instructions from ROCC, Interlocking Operators, and Supervisors. Also, for equipment movements, employees piloting equipment must call out the signal aspect and indication ahead on the radio and the vehicle operator must repeat back.	TOC-RED-15-002-A	August 2016	Open
Occupational and Shop Safety Compliance	There were no evacuation plan maps visible in the West Falls Church Yard Service and inspection facility.	WMATA must post evacuation plan maps consistently in all railcar Service and Inspection facilities.	TOC-OSP-15-009-A	September 2016	Closure Request Under Review
Automatic Train Control	The ATC Preventive Maintenance (PM) Summary 2014 Report does not show that PM was scheduled or completed for Preventive Maintenance Inspections (PMI) 1011B, 1012A, 3002B, or 3013.	WMATA's ATC Branch must meet the PM frequency requirements of ATC-1000 and ATC-3000 standards for the identified PMIs. WMATA's ATC Branch must provide a printout or screenshots showing the tests added to Maximo as well as evidence of appropriate completion as scheduled.	TOC-ATC-15-003-A	September 2016	Closure Request Under Review
Other Accidents	WMATA must document the roles and involvement of Automatic Train Control (ATC) Engineering in the EMI process.	WMATA must develop a configuration document to reflect the involvement of ATC Engineering in EMI implementation process.	TOC-OTR-15-005-A	September 2016	Open
Structures Maintenance and	Information on tunnel leaks is not regularly recorded or acted upon	WMATA must revise track inspection procedures, documentation, and	TOC-SRT-15-002-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Training	in a timely manner.	reporting processes to ensure that leak measuring and monitoring is a routine aspect of inspections in tunnels.			
Structures Maintenance and Training	Structures Maintenance Managers are not documenting quality control checks as required by the Maintenance Control Policy (MCP).	WMATA must update its existing quality control check procedure to make it more specific, including a checklist and specific instructions for Structures Maintenance Managers to conduct spot checks through field verification and to document results or corrective actions that are completed.	TOC-SRT-15-003-A	September 2016	Open
Structures Maintenance and Training	There is no work order connection between InspectTech findings and MAXIMO entries	WMATA must improve use of the InspectTech program to display the work order ticket number created in MAXIMO or note when no work order is needed, for each deficiency noted in an inspection.	TOC-SRT-15-006-A	September 2016	Open
Change Management	According to Section 1.6, WMATA's Safety and Security Management Plan (SSMP) for the 7000 series vehicle production and acquisition must be reviewed and updated annually.	WMATA must conduct a review of the SSMP to ensure it reflects current safety certification, testing, acceptance, and auditing practices for the 7000 series fleet construction and delivery, and update the SSMP to reflect current practices, if necessary, based on the results of the review.	TOC-CMT-15-001-A	September 2016	Open
Change Management	Concerns have been identified regarding the level of involvement that WMATA's Safety Department has in overseeing, auditing and monitoring the safety certification process for the production and acquisition of the 7000 series vehicles.	WMATA's Safety Department must perform or oversee audits of the safety and security certification program carried out by the Chief Vehicle Engineering (CENV) as prescribed by the SSMP for the remainder of the project. WMATA must also produce a procedure prescribing how each audit will be completed.	TOC-CMT-15-002-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Emergency Egress	Telephones in Areas of Rescue Assistance (AORA) and in the shafts' landings are not subject to regularly scheduled inspections.	WMATA must develop and implement a telephone inspection schedule, procedure, and checklist for inspecting telephones in the AORA and egress shafts.	TOC-EGR-15-001-A	September 2016	Open
Occupational and Shop Safety Compliance	WMATA's hearing conservation program does not meet OSHA requirements.	WMATA must develop and implement a hearing conservation program in compliance with Occupational Safety and Health Administration (OSHA) requirements.	TOC-OSP-15-001-A	September 2016	Open
Roadway Worker Protection Program Implementation	WMATA's Safety Department is not required to sign-off of procurements above a specified threshold.	WMATA must develop criteria to ensure the Department of Safety and Environmental Management (SAFE) signs off on Procurement actions above a designated threshold, and Procurement must modify its Procurement Procedures Manual to include criteria for SAFE sign-off.	TOC-RWP-15-009-A	September 2016	Open
Roadway Worker Protection Program Implementation	Not all equipment used in field welding or in support of welding operations is inspected daily.	WMATA must require daily inspection of all equipment, especially hydraulic hoses, on any Prime Mover or track equipment used for welding operations, and this inspection must be documented as part of a vehicle daily inspection checklist.	TOC-RWP-15-013-A	September 2016	Open
Safety Department Procedures and Responsibilities	WMATA has not conducted required internal reviews of the Metro Transit Police Department and its own implementation of the System Safety Program Plan.	WMATA must complete the internal safety and security reviews as required.	TOC-SAF-15-001-A	September 2016	Open
Safety Department Procedures and Responsibilities	WMATA has not documented its process for updating the System Safety Program Plan, including the management of comments.	WMATA must update its System Safety Program Plan, or develop a separate procedure, documenting its approach to updating the System Safety Program Plan	TOC-SAF-15-003-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		(SSPP) and managing comments.			
Safety Department Procedures and Responsibilities	WMATA's Safety Department does not always notify WMATA's Safety Oversight regarding major testing and commissioning activities for the 7K Fleet.	WMATA's Safety Department must update plans or procedures to ensure that WMATA's Safety Oversight is notified of, and invited to attend, major testing and commissioning activities for the 7K Fleet	TOC-SAF-15-005-A	September 2016	Open
Safety Department Procedures and Responsibilities	WMATA's policy instruction on the Design Control Board does not explicitly address SAFE's participation as presented in the SSPP, Section 5.4.3.	WMATA must update its policy instruction P/1 4.14/2 to explicitly clarify SAFE's role in the Design Control Board and to ensure consistency with SSPP Section 5.4.3.	TOC-SAF-15-008-A	September 2016	Open
Structures Maintenance and Training	There is not a complete asset list of structures.	WMATA must create a complete asset list of WMATA structures along with details/characteristics relevant to maintenance.	TOC-SRT-15-005-A	September 2016	Open
Systemwide Maintenance and Vehicles	Many Communications Technicians have not received classroom training on the 490 MHz radio system.	WMATA must complete required training for Communications Technicians on the 490 MHz radio system.	FTA-SVT-15-004-A	September 2016	Open
Systemwide Maintenance and Vehicles	WMATA experienced a broken third rail that resulted in suspended service.	WMATA must conduct follow-up inspection to ensure integrity of repair.	FTA-SVT-15-005-A	September 2016	Open
Systemwide Maintenance and Vehicles	Car Maintenance Job Plans do not have document control features such as revision numbers/dates or managerial approval.	Initiate a document control process to add revision numbers/dates and manager approval of all procedures for Car Maintenance Job Plans.	FTA-SVT-15-006-A	September 2016	Open
Systemwide Maintenance and Vehicles	The Branch Avenue Service and Inspection facility contains a large pressure (hydro-blaster) parts washer that does not have an associated Job Plan for ongoing preventive maintenance safety inspections	WMATA's Office of Plant Maintenance must create a Job Plan inspection procedure and checklist for the large pressure (hydro-blaster) parts washer at Branch Avenue based on the recommendations from the original equipment manufacturer.	FTA-SVT-15-008-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
NTSB Recommendations	Ensure that the lead married-pair car set of each train is equipped with an operating onboard event recorder.	Ensure that the lead married-pair car set of each train is equipped with an operating onboard event recorder.	NTSB R-10-21-A	September 2016	Open
NTSB Recommendations	Develop and implement a program to monitor the performance of onboard event recorders and ensure they are functioning properly.	Develop and implement a program to monitor the performance of onboard event recorders and ensure they are functioning properly.	NTSB R-10-22-A	September 2016	Open
NTSB Recommendations	Assess your subway tunnel ventilation system to verify the state of good repair and compliance with industry best practices and standards, such as those outlined in the National Fire Protection Associations NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems. (Urgent)	Assess your subway tunnel ventilation system to verify the state of good repair and compliance with industry best practices and standards, such as those outlined in the National Fire Protection Associations NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems. (Urgent)	NTSB R-15-8-A	September 2016	Open
Automatic Train Control	Pre-printed Data Sheets with checkmarks already added were used for PM 3003.	WMATA's ATC Branch must ensure any electronic copies of the 3003 Interlocking inspection Data Sheet are replaced with blank copies. WMATA's ATC Branch must provide its updated policy as well as a signed memorandum validating that all remaining pre-filled Data Sheets have been destroyed.	TOC-ATC-15-004-A	September 2016	Open
Change Management	WMATA is not developing Engineering Modification Instructions (EMIs) for all infrastructure-related changes.	WMATA must develop a procedure to ensure infrastructure changes result in Engineering Modification Instructions (EMIs), and that SAFE ensures Site Specific Work Plans (SSWPs) contain EMIs before approving them, when necessary.	TOC-CMT-15-005-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Change Management	WMATA does not have a consistent approach to configuration control of technical documents.	WMATA must implement a program to provide configuration control of the technical documents relating to the WMATA Metrorail infrastructure. WMATA's new Product Life Cycle Management (PLM) program must include and address this requirement.	TOC-CMT-15-006-A	September 2016	Open
Collisions	Corroded hardware caused a section of a metal staircase to fall into the trackbed at Rhode Island Ave Station, where a revenue train struck it.	Provide the FTA with the results of the system wide inspection conducted for all steel staircases, and the annual station inspection report modified to specifically list "stair structure" as an inspection component and "connection hardware" as a sub-component. Also provide report from Maximo documenting completed inspections and repairs for steel staircases in calendar year (CY) 2014 and CY 2015.	TOC-COL-15-002-A	September 2016	Open
Collisions	Equipment Operator was unqualified to perform work assigned.	Conduct assessment of the training provided to Equipment Operators after issues have been identified with their performance, including those that result in suspensions, and develop and implement an approach to ensure their training and qualification prior to return to service.	TOC-COL-15-005-A	September 2016	Open
Derailments	A combination of factors led to an increased Lateral over Vertical (L/V) force that caused low speed wheel climb. While WMATA has addressed most of these conditions, most rail fleets still need friction modifiers for dry rail conditions.	WMATA must install wheel flange friction modifiers on most of the remaining fleets, similar to the 5000 series installation.	TOC-DRL-15-001-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Emergency Egress	Several fire extinguishers in AC and COMM rooms at Ft. Totten and Gallery Place to have out-of-date inspection tags.	WMATA (POWR and the Communications Branch within the Office of Systems Maintenance (COMM)) should add the fire extinguishers in the air conditioning (AC), traction power substation, tie breaker station, and COMM rooms, respectively, to MAXIMO to ensure regular inspections occur.	TOC-EGR-15-003-A	September 2016	Open
Emergency Egress	WMATA must resolve outstanding issues with the condition of lights and safety features in several stations as identified by the TOC.	WMATA must address the issues with lights, outlets, blocked egress, battery rooms and eye washes, guardrails and ventilation called out on Pages 9-11 of the TOC Three-Year Safety and Security Review: Stations Maintenance Final Report: June 30, 2015.	TOC-EGR-15-006-A	September 2016	Open
Occupational and Shop Safety Compliance	WMATA must update its hazard communication procedure to address changed processes and organization, and an update to the 2012 OSHA Hazard Communication rule.	WMATA must revise and update its Hazard Communication Procedure revision, to incorporate existing practices and the requirements of the 2012 OSHA Final Rule. WMATA must also provide a copy of the completed procedure to the FTA.	TOC-OSP-15-002-A	September 2016	Open
Occupational and Shop Safety Compliance	WMATA mechanics did not demonstrate strong awareness of how find and use Material Safety Data Sheets (MSDS) in accordance with OSHA Standard 1910.1200, and following WMATA's new process.	WMATA must take steps through training, safety campaigns, demonstrations and toolbox talks with employees to ensure that mechanics can use and access the new MSDS system.	TOC-OSP-15-003-A	September 2016	Open
Occupational and Shop Safety Compliance	Battery storage rooms at Alexandria and West Falls Church may require mechanical ventilation.	WMATA must conduct air quality testing in battery storage/charging rooms at Alexandria and West Falls Church to assess the accumulated level of hydrogen gas. WMATA must install	TOC-OSP-15-004-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		mechanical ventilation with exhaust to the outside if the volume of hydrogen gas makes up more than one (1) percent of the total volume of air in the battery room.			
Occupational and Shop Safety Compliance	Incompatible hazardous materials were not stored separately at multiple Service and Inspection shop locations.	WMATA must separate incompatible hazardous materials into their respective compatible flammable storage cabinets, and take steps to ensure continued compliance such as reinstruction of personnel, and emphasis during upcoming Car Maintenance 12-point shop inspections.	TOC-OSP-15-006-A	September 2016	Open
Occupational and Shop Safety Compliance	Evacuation plan maps throughout Service and Inspection facilities are difficult to decipher.	WMATA must update all evacuation plan maps to identify the user's location (i.e. "You are here"), to improve legibility, and identify the meaning of important icons.	TOC-OSP-15-008-A	September 2016	Closure Request Under Review
Other Accidents	Contact occurred between boom and right-of-way fence due to tight clearance and position of the load.	WMATA must instruct operators to lower the load when it becomes bound and reattach the rail tongs; this will relieve tension.	TOC-OTR-15-001-A	September 2016	Open
Other Accidents	Engineering Modification Instructions must be available in the field for production crews.	Production Crews must have Engineering Modification Instructions (EMI) available in the field.	TOC-OTR-15-003-A	September 2016	Open
Other Accidents	WMATA's Office of Plant Maintenance does not have a formal procedure in place requiring the inspections and restoration of equipment used in an emergency or an emergency drill or exercise.	WMATA's Office of Plant Maintenance must implement a procedure to direct its staff to inspect and restore the equipment used during an emergency event or exercise within a given time period following an event, perhaps within 72 hours.	TOC-OTR-15-008-A	September 2016	Open
Other Accidents	WMATA's Office of Plant Maintenance does not have a	WMATA's Office of Plant Maintenance must PLNT develop a procedure for	TOC-OTR-15-009-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	formal procedure, separate from the dry standpipe testing procedure, to ensure that dry standpipes are dry after use in testing or an emergency event.	drying dry standpipes after use, such as testing or an emergency event.			
Other Accidents	West Falls Church Yard must develop a scheduling resource document outlining scheduled yard storage activity.	WMATA must develop a scheduling resource document outlining yard storage activity for West Falls Church Yard.	TOC-OTR-15-014-A	September 2016	Open
Roadway Worker Protection Program Implementation	WMATA does not have a formal equipment inspection and safety briefing procedure for flashbutt welding.	WMATA must develop a Flashbutt Welding Procedure, which, at a minimum, identifies and covers the following: a) Site examined for hazards prior to work commencement (flammable hazards, debris, tripping hazards etc.); b) Detailed unit inspection performed and documented; c) Inspection of Hydraulic hoses performed and documented; d) Signed detailed work briefing; e) Emergency plan for tunnel or structure evacuation communicated and documented in Safety Briefing, if applicable; f) Minimum to Maximum number of personnel allowed to work in area defined; g) Job Specific responsibilities briefed by supervisor for each work assignment before work commencement; h) Ensuring that hydraulic hoses are secured away from welding operation and only positioned in area of original weld for profiling after cool off period; i) Rail profiling does not commence after welding for a certain time period (cool	TOC-RWP-15-001-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		off period); j) Place rail slag in fire resistance/puncture proof bucket once cooled off; k) Require supervisor's primary assignment is to oversee operation (no physical work); l) If using heavy equipment and emergency occurs, equipment is to be placed in a stop/engine off state, vehicle secured (brake applied) and personnel safely exit vehicle and work area, moving away from emergency situation.			
Roadway Worker Protection Program Implementation	Job Hazard Analyses are not always developed for field welding activities.	WMATA must develop a Job Hazard Analysis (JHA) for field welding rail end joints to produce Continuous Welded Rail (CWR) track.	TOC-RWP-15-002-A	September 2016	Open
Roadway Worker Protection Program Implementation	Lessons learned regarding safe field welding protocols have not been shared with employees and contractors.	WMATA must conduct a series of Safety Stand Downs with employees and contractors to emphasize safe welding protocols.	TOC-RWP-15-003-A	September 2016	Open
Roadway Worker Protection Program Implementation	The development and issuance of technical documentation does not appear to be governed by an engineering standard or procedure.	WMATA must develop or update its engineering process for developing, reviewing, approving, issuing and updating technical documentation.	TOC-RWP-15-008-A	September 2016	Open
Roadway Worker Protection Program Implementation	WMATA has no special campaign and program devoted to "Hot Work."	WMATA must develop a "Hot Work" program.	TOC-RWP-15-011-A	September 2016	Open
Roadway Worker Protection Program Implementation	WMATA does not always use high temperature equipment for welding operations.	WMATA must require hydraulic hoses for welding and grinding operations that are designed to be used in high temperature environment or install a protective sleeves to prevent mechanical damage to the hoses. If such proper hoses or protective sleeves do not exist, WMATA	TOC-RWP-15-014-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		must find an alternate mitigation against mechanical damage to hoses in welding and grinding operations.			
Safety Department Procedures and Responsibilities	WMATA's Safety Department does not always submit draft and final accident investigation reports on time.	WMATA must make required accident investigation submittals on-time.	TOC-SAF-15-009-A	September 2016	Open
Systemwide Maintenance and Vehicles	Material Storage Facility (MSF) policy manual does not conform to SSPP requirements.	WMATA must establish formal documented policies for safety-critical inventory management methodologies below: a) Configuration management and document control of all MSF internal documentation, including change control, annual review, and SAFE/MTPD review for compliance with the SSPP and System Emergency Program Plan (SEPP); and b) Internal Controls, including reviews for documentation compliance, updated MSDS processes for MSF warehouse and for supervision and quality assurance, and as pertains to industrial safety assurance per 29 CFR.	TOC-SVT-15-001-A	September 2016	Open
Systemwide Maintenance and Vehicles	Formal SOPs are needed to document safety-critical tasks and activities performed by maintenance personnel.	WMATA must develop SOPs for maintenance personnel that cover: a) All interactions with IT, including system failures; b) Maintenance Engineer position description to cover all of the tasks and activities required; c) Field relief process for revenue collection items; d) Job safety analyses for the maintenance engineering staff; e) Appropriate interactions with MOC (facilities, communications, etc.). This activity must be coordinated with	TOC-SVT-15-002-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		initiatives underway to address SMI Required Action R-4-27-A.			
Automatic Train Control	Supervisors' and managers' Maximo Start Centers (dashboards) only allow queries for inspections three months' past due. Delays in inspections conducted at less frequent intervals such as annual or five-year inspections are not actively tracked.	WMATA must add a Maximo Start Center option to see all past due inspections, and the ATC Branch must regularly assess this information for maintenance scheduling as it currently does on a monthly basis.	TOC-ATC-15-008-A	September 2016	Open
Automatic Train Control	The new annual code rate frequency test, developed as part of WMATA's Return to Automatic Train Operations (ATO) program, had not yet been added to Maximo as a regular preventive maintenance inspection.	WMATA must add this new inspection to Maximo for regular scheduling, along with any additional inspections created or increased in frequency as a result of the Return to ATO report.	TOC-ATC-15-010-A	September 2016	Open
Fires	WMATA must test its ability to acknowledge and investigate fire alarms in the Silver Line stations within 15 seconds as per NFPA requirements.	WMATA must test the applicability of Permanent Order T-13-12, Revision 1, to Standard Operating Procedure (SOP) #8: Fire and Smoke in a Station.	TOC-FIR-15-001-A	September 2016	Open
Other Accidents	WMATA requires its radios to be calibrated biennially; records showed some radios were multiple years out of date.	WMATA must develop a program to ensure portable radios are not used for extended periods beyond calibration. As part of this program, WMATA must implement and/or enforce a program for WMATA departments to notify the Communications Branch when portable or mobile radios are out of service/no longer used and then remove the equipment from MAXIMO.	TOC-OTR-15-012-A	September 2016	Closure Request Under Review
Roadway Worker	Clarification is needed regarding	WMATA must revise SOP #1A	TOC-RWP-15-007-A	September 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Protection Program Implementation	roles and responsibilities during emergencies in a work shutdown area.	“Command, Control and Coordination of Emergencies on the Rail System” to re-define the responsibilities of ROCC and Maintenance Operations Control Center (MOCC) personnel when emergencies occur within a shutdown area.			
Derailments	TRST Management failed to effectively communicate to the workforce regarding the defective switch 107 in Shady Grove Yard and the need to keep it clamped. TRST also failed to repair switch 107 when Supervision identified that the switch points were not properly tucked against the associated stock rail.	WMATA must provide FTA with the documentation regarding TRST’s inspection of all hand throw switches system wide, and evidence regarding the replacement of the switch rod and switch stand at New Carrollton Rail Yard and the repairs at Shady Grove. Also provide evidence that TST repainted hand throw switch targets at A99.	TOC-DRL-15-004-A	October 2016	Open
Other Accidents	Additional personnel are required to at West Falls Church Yard during peak periods to support increased train movement activities.	WMATA must conduct a staffing assessment and increase personnel resources at West Falls Church Yard during peak periods.	TOC-OTR-15-013-A	October 2016	Open
NTSB Recommendations	Develop and implement detailed written tunnel ventilation procedures for operations control center staff that take into account the probable source location of smoke and fire, the location of the train, the best evacuation route, and unique infrastructure features; these procedures should be based on the most effective strategy for fan direction and activation to	WMATA must develop and implement detailed written tunnel ventilation procedures for operations control center staff that take into account the probable source location of smoke and fire, the location of the train, the best evacuation route, and unique infrastructure features; these procedures should be based on the most effective strategy for fan direction and activation to limit passenger exposure to smoke. (Urgent)	NTSB R-15-9-A	October 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	limit passenger exposure to smoke. (Urgent)				
Roadway Worker Protection Program Implementation	The Safety Department does not have a formal process for reviewing coordinated work plans for shutdowns.	WMATA must develop a formal procedure for the Safety Department to review and approve Coordinated Work Plans (for shutdowns).	TOC-RWP-15-012-A	October 2016	Open
Safety Department Procedures and Responsibilities	Procurement procedures for addressing safety elements are out-of-date in the SSPP.	WMATA must update its SSPP to accurately document how safety issues, concerns and requirements are managed and addressed in the procurement process.	TOC-SAF-15-007-A	October 2016	Closure Request Under Review
Structures Maintenance and Training	Defects from structures inspections listed on inspection reports are very general.	WMATA must enhance written inspection procedures to require documentation of all the defects based on location and quantity (possibly as estimated overall linear footage per area of the asset) as a baseline so that the structure conditions can be compared over time and monitored for any deterioration requiring intervention.	TOC-SRT-15-007-A	November 2016	Open
Structures Maintenance and Training	The Federal Highway Administration (FHWA) condition rating system and software package for bridges is also used for other structures. The general component condition rating guidelines (obtained from the FHWA Coding Guide) are to be used in the evaluation of bridge components. There are no specific definitions or guidelines that correlate to rating the condition for structures other than bridges.	WMATA must establish discrete definitions or guidelines on the rating scale for the condition of structures such as tunnels and passenger stations (all structures other than bridges), and institute software for inspection management that is appropriate for structures other than bridges.	TOC-SRT-15-011-A	November 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
NTSB Recommendations	As part of the implementation of the procedures developed in response to Safety Recommendation R-15- 009, incorporate the use of the procedures into your ongoing training and exercise programs and ensure that operations control center staff and emergency responders have ample opportunities to learn and practice activating ventilation fans. (Urgent)	As part of the implementation of the procedures developed in response to Safety Recommendation R-15- 009, incorporate the use of the procedures into your ongoing training and exercise programs and ensure that operations control center staff and emergency responders have ample opportunities to learn and practice activating ventilation fans. (Urgent)	NTSB R-15-10-A	December 2016	Open
Occupational and Shop Safety Compliance	Oxygen and acetylene compressed gas cylinders were stored together at some Service and Inspection shop locations.	WMATA must follow its own requirements and separate incompatible flammable gases 20 feet from each other in a protective compressed gas cylinder cage at all its facilities.	TOC-OSP-15-007-A	December 2016	Open
Structures Maintenance and Training	WMATA's structures division has not been inspecting certain assets as often as required.	WMATA must conduct an assessment to determine which assets, such as escalator shafts, are not being inspected as often as originally required and intended, and then establish and implement a new inspection schedule that includes these assets.	TOC-SRT-15-001-A	December 2016	Open
Systemwide Maintenance and Vehicles	There was excessive water leaking from the roof in the Alexandria Yard Service and Inspection facility.	WMATA must initiate additional, immediate actions to mitigate this hazard such as 1) deploying tarps and funneling to an exterior location, and 2) complete the roof repair/replacement project as soon as possible.	FTA-SVT-15-007-A	December 2016	Open
NTSB Recommendations	Promptly implement appropriate technology that will automatically alert wayside workers of	WMATA must promptly implement appropriate technology that will automatically alert wayside workers of	NTSB R-8-004-A	December 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks.	approaching trains and will automatically alert train operators when approaching areas with workers on or near the tracks.			
Automatic Train Control	Many Data Sheets are not being returned to Field Offices for Supervisor sign-off and entry of defects into Corrective Maintenance (CM) work orders.	WMATA's ATC Branch must enforce a clear method to ensure that personnel turn in copies of their Data Sheets to both Train Control Rooms and Field Offices. The ATC Branch must work with WMATA's Safety and Quality functions to schedule routine audits of Field Office paperwork and Corrective Maintenance work orders.	TOC-ATC-15-005-A	December 2016	Open
Automatic Train Control	Supervisor signatures were missing from batches of Data Sheets.	WMATA's ATC management must develop a procedure and conduct quality control spot checks of Supervisors' work to ensure they are fully completing their duties (such as reviewing Data Sheets and adding defects to new work orders).	TOC-ATC-15-006-A	December 2016	Open
Automatic Train Control	There are no minimum requirements for WMATA ATC Branch Supervisors' quality control spot checks or rule compliance assessments of frontline personnel.	WMATA's ATC Branch must establish requirements in its Maintenance Control Policy (MCP) for quality control spot checks and resulting documentation to be completed by each Supervisor. (Note: This is different than the separate finding (TOC-ATC-15-006) that prescribes spot checks of Supervisor work; this finding relates to Supervisor spot checks of technician work.)	TOC-ATC-15-011-A	December 2016	Open
Emergency Egress	There were numerous uncovered electrical outlets in stations.	WMATA must submit a schedule with completion dates for implementation of covering electrical outlets. Additionally, the Station Manager's inspection	TOC-EGR-15-005-A	December 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		checklist must be revised to include checks for covered electrical outlets and opening work orders for uncovered outlets.			
Occupational and Shop Safety Compliance	Records for heavy lifting equipment certification at West Falls Church and Branch Avenue Service and Inspection shops were not available for review.	WMATA must store and maintain shop equipment load testing certification documents at each facility.	TOC-OSP-15-005-A	December 2016	Open
Roadway Worker Protection Program Implementation	Fatigue may have played a role in this accident.	WMATA must continue its fatigue management study and apply results to Track and Structures employees.	TOC-RWP-15-005-A	December 2016	Open
Roadway Worker Protection Program Implementation	Radio communications could have been more effective and professional before and during the emergency evacuation.	WMATA, including ROCC and TRST Management, must review all communications including emergency communications during this accident and develop lessons learned for ROCC and MCC staff with an emphasis on effective and professional communications during emergency situations.	TOC-RWP-15-006-A	December 2016	Open
Roadway Worker Protection Program Implementation	A standard clause specifying WMATA safety requirements is not included in WMATA safety contract specifications.	WMATA must develop and include in its contract specifications a standard contract clause for safety requirements. WMATA's Safety Department must review WMATA's contract specifications to ensure use and inclusion of this clause.	TOC-RWP-15-010-A	December 2016	Closure Request Under Review
Roadway Worker Protection Program Implementation	Air monitoring is not always performed during welding operations.	WMATA must perform appropriate air monitoring during welding operations. Air must be sampled before, during, and following any work to ensure that personnel are not operating in unsafe condition.	TOC-RWP-15-015-A	December 2016	Closure Request Under Review
Roadway Worker	Adequate span of control is not	WMATA must develop a policy to require	TOC-RWP-15-017-A	December 2016	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Protection Program Implementation	always provided for Roadway Workers in Charge (RWICs); individual territories can be too large and an insufficient number of RWICs may be assigned to a work zone, particularly during shutdowns.	a Roadway Worker In Charge (RWIC) for all work zone activities with one or more working limits, including shutdowns, throughout the time that work zone is in effect. If the geographic area of a work zone does not allow for adequate span of control of a single RWIC, an appropriate number of RWICs who report to lead RWIC, must be used.			
Roadway Worker Protection Program Implementation	ROCC did not repeat back the chain markers that were listed in GOTRS nor did ROCC catch the discrepancy in the chain markers that PLNT Unit #4426 stated to ROCC on the initial call.	WMATA must develop a training PowerPoint presentation for a supplemental training tool to remind personnel of the RWIC duties and the different ways information is being communicated.	TOC-RWP-15-019-A	December 2016	Open
Structures Maintenance and Training	WMATA requires the Maintenance Control Policy (MCP) to be reviewed annually, though the last update was in February 20ruary 2013.	WMATA must complete the required MCP revision with full updates to references and procedures as necessary.	TOC-SRT-15-004-A	December 2016	Open
Red Signal Violations	WMATA Train Operators consistently feel pressure to rush through routes and speed up train movements.	WMATA must conduct an assessment of current schedule and headways to ensure realistic operating times so employees aren't speeding and rushing to make time.	TOC-RED-15-007-A	January 2017	Open
Wrong Side Door Openings	Train Operators errors caused doors to open on the wrong side.	WMATA must evaluate its program for training, observing, supervising, advising and reminding Train Operators of the requirement to comply with SOP 40 Door Operations/Station Servicing Procedure.	TOC-WSD-15-003-A	January 2017	Open
Automatic Train Control	There is no correlation between parts numbers stored in Maximo and actual Original Equipment Manufacturer (OEM) part	WMATA's ATC Branch must add pictures to part numbers in Maximo, consistently provide training it has developed regarding part numbers, and take other	TOC-ATC-15-012-A	January 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	numbers needed for maintenance.	steps to ensure part numbers are easily accessible for maintainers and technicians.			
Red Signal Violations	WMATA should implement the findings of its internal investigation to ensure that Train and Equipment Operators are prepared to approach red signals, have strategies for managing time pressure, and are sufficiently familiar with signal "hot spots" and on-standard locations.	WMATA must develop and conduct an ongoing safety campaign to make employees aware of leading causes of red signal violations, including those identified in the report "Investigation and Analysis of WMATA 2014 Red Signal Violation Incidents." The FTA expects that this campaign would help Train and Equipment Operators enhance their "personal readiness" for train movements through signals and provide strategies for managing pressure and "unintentional" rushing to meet on-time performance demands. This campaign should also emphasize locations of past signal overruns, non-standard signal locations, and signal "hot spots" with limited visibility or unusual approach requirements, and provide training on "attention performance" strategies.	TOC-RED-15-006-A	January 2017	Open
Red Signal Violations	WMATA is not providing sufficient oversight regarding train speeds.	While WMATA is completing its program to address FTA's SMI findings R-18 and R-19 (regarding operational testing programs), WMATA must immediately improve its testing and observation of Train and Equipment Operators, including regular review of track circuit downloads for speeding and speed gun testing for manual vehicle operations on the mainline and in yards.	TOC-RED-15-001-A	February 20-17	Open
Collisions	Train Operators, Yard Operators,	WMATA must conduct a system wide	TOC-COL-15-001-A	February 20-17	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	and Interlocking Operators are not following critical safety rules governing the safe movement of trains and equipment in rail yards and shops.	audit of revenue and non-revenue train movements in rail yards and shop locations to determine compliance with operating rules. Document results, and action items to address the results, in report for FTA review and approval. Implement required actions, providing FTA with quarterly updates until completion. Results may be integrated into WMATA action to address required actions for FTA's SMI findings R-18 and R-19 regarding rules compliance programs.			
Roadway Worker Protection Program Implementation	WMATA does not have a formal process for safety certifying equipment before allowing operation on the WMATA system.	WMATA must establish a Safety Certification process for all new Track Equipment, to include but not limited to Prime Movers, Hi-Rail Vehicles, etc. to make sure all safety steps including training are taken before allowing equipment operation.	TOC-RWP-15-004-A	February 20-17	Open
Roadway Worker Protection Program Implementation	WMATA's Safety Department does not always determine which equipment requires safety certification.	WMATA must develop a procedure to ensure that the Safety Department is the final authority on determining which projects should be subject to safety certification. This procedure must be referenced in the Safety and Security Certification Plan and other documents as appropriate.	TOC-RWP-15-016-A	February 20-17	Open
Safety Department Procedures and Responsibilities	WMATA or SAFE does not evaluate or inspect contractor equipment used on the Metrorail system.	WMATA's Safety Department must develop, and oversee implementation of, a procedure or process to ensure that all contractor equipment is evaluated or inspected prior to use on the Metrorail system.	TOC-SAF-15-006-A	February 20-17	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Structures Maintenance and Training	There are no procedures that define the resources needed per task in structures maintenance.	WMATA must revise existing maintenance procedures or develop new ones to include information about hours and personnel numbers needed, tools, and access requirements.	TOC-SRT-15-010-A	February 20-17	Open
Automatic Train Control	WMATA is not completing those inspection and testing activities required at infrequent intervals as part of its Automatic Train Control Branch (ATC) Preventive Maintenance (PM) program due to limitations of track access and coordination of shared resources overnight.	WMATA must implement new scheduling methods to prevent ATC maintenance from being routinely deferred; this may include additional track shutdowns during service hours to complete routine safety inspections. WMATA's action to address this finding may be coordinated with WMATA's ongoing initiative to address related SMI findings R-3-23-A through R-3-26-A or it may be handled separately for the ATC Branch.	TOC-ATC-15-001-A	March 2017	Open
Automatic Train Control	WMATA's ATC Branch and Maintenance Operations Center (MOC) must establish a consistently applied procedure for opening, documenting, and closing ATC work orders in Maximo.	WMATA's Maintenance Operations Center (MOC) must set a standard protocol for when new work tickets are opened, the level of detail to be included, and whether Controllers should check for existing work orders or always open a new one. ATC must also create a method to regularly query MAXIMO to determine areas or components suffering repeated failures, and describe this method in the Maintenance Control Policy (MCP). WMATA may coordinate this action with initiatives underway to address SMI required action R-4-29-A.	TOC-ATC-15-009-A	March 2017	Open
Change Management	WMATA's Communications Branch (COMM) is not fully	WMATA must ensure through JDAC procedures and meeting agendas that all	TOC-CMT-15-007-A	March 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	involved in Joint Development and Adjacent Construction (JDAC) projects that may negatively impact radio coverage.	affected WMATA departments, including COMM, have a chance to determine whether proposed development has a less obvious impact on infrastructure and systems.			
Other Accidents	WMATA's Station Managers are not consistently aware of procedures for response to intrusion detection alarms triggered by opening of the emergency egress hatches.	WMATA must review and clarify the Station Manager standard operating procedures and training materials pertaining to proper response procedures to intrusion detection alarms.	TOC-OTR-15-007-A	March 2017	Open
Other Accidents	There is a wide degree of variability in the manner in which Stations Conditions Checklists are completed by Station Managers, leading to defects going unreported.	WMATA must develop a Standard Operating Procedure (SOP) that covers completion of Station Conditions Checklists. Rail Transportation, the Office of Plant Maintenance, and the Power and Communications Branches within the Office of Systems Maintenance, should coordinate their expectations regarding Station Manager checks of stations and document the types of defects to be reported in the Station Conditions SOP.	TOC-OTR-15-010-A	March 2017	Open
Roadway Worker Protection Program Implementation	A communication issue as well as complacency led to a RWIC not being informed by the Supervisor of the exact chain markers of the work location.	WMATA must develop a Lesson's Learned document with an emphasis on Work Prep activities, to include ensuring that the person performing the work prep make certain that the RWIC is aware of the correct chain markers in the General Orders and Track Rights System (GOTRS) for their briefing sheet and what is instructed and communicated over the radio is repeated back verbatim.	TOC-RWP-15-018-A	March 2017	Open
Structures	WMATA does not appear to have	WMATA must identify whether training	TOC-SRT-15-008-A	March 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
Maintenance and Training	completed all required technical training for structural maintenance personnel.	is incomplete due to manpower constraints, the method to track training completion, or other factors; implement a solution to the issue such as additional training staff or use of training reminders in a Learning Management System. WMATA activity for this required action may be incorporated into SMI required actions R-2-16-A through -D.			
Structures Maintenance and Training	There is no specialized training for inspecting static structures.	WMATA must provide training for structural inspectors in static building inspection, and establish a procedure and guidelines for reporting defects and recommending repairable items specific to static structures. WMATA activity for this required action may be incorporated into SMI required actions R-2-16-A through -D.	TOC-SRT-15-009-A	March 2017	Open
Red Signal Violations	Train operators are insufficiently familiar with the location of signals on their routes and required train speeds.	WMATA must provide Train Operators and Pilots with physical characteristics training for the lines they operate on and associated yards, including regular familiarization and testing of the rail system to include control points, junctions, stations, restricted sight curves, etc. This training must be provided whenever Rail Operators make a bid to another line, and must emphasize non-standard signal wayside placement and other route irregularities.	TOC-RED-15-004-A	May 2017	Open
Red Signal Violations	Retraining for Train Operators, Equipment Operators and Pilots involved in first-time red signal overruns must be improved.	Operators and Pilots involved with a red signal overrun must be immediately removed from service and retrained. Training must include incident review	TOC-RED-15-005-A	May 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
		with field visit to signal location and full physical characteristics re-training for the line on which the red signal overrun occurred.			
Evacuations	WMATA does not have a policy for managing passenger announcements and checks when a train is instructed to enter a pocket track.	WMATA must develop a procedure to address instructions to be followed when a train must go out of service temporarily to move into a pocket/tail track.	TOC-EVC-15-002-A	Jun-17	Open
Systemwide Maintenance and Vehicles	WMATA could potentially store equipment in tail tracks, shortening available track for braking and stopping vehicle movements.	WMATA must formalize in policy or rule its long-standing practice of prohibiting the storage of equipment on tail tracks where incoming outbound trains would enter that track over a switch in the normal position.	TOC-SVT-15-003-A	Jun-17	Open
Collisions	Unsecured railing entered dynamic envelop of train in car wash.	WMATA must design and install a new railing system that reduces the number of openings and eliminates the ability of the hand rails to swing into the direction of the dynamic envelope of a rail car, in all shop locations and rail facilities to replace the sectional type of railing system currently installed.	TOC-COL-15-003-A	Jun-17	Open
Other Accidents	Diverging routes must be communicated to train operators at signals.	WMATA must create a program to install flashing lunar aspects for all diverging routes in the system.	TOC-OTR-15-002-A	Jun-17	Open
Other Accidents	Engineering approvals must be available during commissioning testing.	WMATA must implement an engineering approval process for use during commissioning testing as needed.	TOC-OTR-15-004-A	Jun-17	Open
Red Signal Violations	Job briefings for equipment operators and pilots do not always reinforce situational awareness and territory familiarization for the segment of	WMATA must require all Equipment Operators and Pilots to include in their job briefing all control points, junctions, stations, restricted sight curves, etc. that will be operated through during their	TOC-RED-15-003-A	July 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	track to be operated over during the shift.	tour of duty.			
Automatic Train Control	Many procedures described in ATC-1000 and ATC-3000 indicate special tool requirements including a volt-ohm meter, digital multimeter, megohmmeter, oscilloscope, torque wrench, or other testing device, yet data sheets do not contain prompts for tool serial numbers and calibration dates.	WMATA's ATC Branch and/or Chief Engineer of infrastructure (CENI) must add a line for tool serial numbers and calibration dates on all relevant ATC Data Sheets, and specify instructions for including this information. WMATA's ATC Branch and CENI must also update the Special Tools and Equipment section of ATC-1000 and ATC-3000 procedures to clarify tool calibration requirements. This required action should also be coordinated with the training assessment being conducted to address SMI finding R-2-16-A.	TOC-ATC-15-007-A	August 2017	Open
Automatic Train Control	The ATC Branch and the Shop and Material Support (SAMS) Group include tools in their tracking lists that are no longer being used, which prevents them from having an accurate understanding of which tools are past due for annual calibration. Also, personnel may not be returning old equipment when they receive new tools.	The ATC Branch and SAMS must conduct a full inventory of ATC tools in order to scrub Maximo and its tracking list of all tools no longer being used. The ATC Branch or SAMS must provide a revised Maximo inventory list with obsolete tools removed and regained calibration compliance. Also, the ATC Branch and SAMS must develop a documented tool distribution control method so that new equipment/tools are not issued until old ones are returned, and the person receiving the old equipment removes it from the inventory and maintenance cycle in Maximo.	TOC-ATC-15-002-A	August 2017	Open
Automatic Train Control	After initial training for ATC employees, the program is not structured with defined levels of	WMATA must implement new courses and refresher training to coincide with each mechanic level. WMATA also must	TOC-ATC-15-013-A	September 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	knowledge and feedback to employees for promotion.	provide an approved plan for training of employees before the employees can be allowed to take promotional tests that are tailored for a specific Technician level, including a process to provide feedback on deficiencies for personnel who fail. This required action should also be coordinated with the training assessment being conducted to address SMI finding R-2-16-A.			
Safety Department Procedures and Responsibilities	WMATA had not completed safety certification documentation for the Silver Line.	WMATA must complete safety certification activities and requirements for the Silver Line.	TOC-SAF-15-002-A	September 2017	Open
Red Signal Violations	Technology options may be available to reduce the occurrences of red signal overruns.	WMATA must complete an assessment of the signal system to identify potential improvements, including a review of track circuit placement in relation to wayside signal location; the use of wayside indications, signs or other systems to highlight track circuits limits for Train Operators; options for speed governors on Class 2 vehicles; the use of automatic trip stops for excessive approaching speeds; and other options.	TOC-RED-15-008-A	December 2017	Open
NTSB Recommendations	Remove all 1000-series railcars as soon as possible and replace them with cars that have crashworthiness collision protection at least comparable to the 6000series railcars.	WMATA must remove all 1000-series railcars as soon as possible and replace them with cars that have crashworthiness collision protection at least comparable to the 6000series railcars.	NTSB R-10-20-A	December 2017	Open
NTSB Recommendations	Promptly develop and implement a program to ensure that all power cable connector	WMATA must promptly develop and implement a program to ensure that all power cable connector assemblies are	NTSB R-15-25-A	December 2017	Open



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	assemblies are properly constructed and installed in accordance with your engineering design specifications, including the weather tight seals that prevent intrusion by contaminants and moisture.	properly constructed and installed in accordance with your engineering design specifications, including the weather tight seals that prevent intrusion by contaminants and moisture.			
Change Management	WMATA rail maintenance personnel and engineers are managing both the testing and acceptance of the new 7000 series railcars while also maintaining the rest of its vehicle fleet.	WMATA must complete its staffing matrix for the 7000 series acceptance period; its roles and responsibilities matrix, including any committees created; and its training plan to ensure the readiness of WMATA personnel to receive and accept the new vehicles while also maintaining the existing fleet.	TOC-CMT-15-003-A	December 2017	Open
Emergency Egress	The vast majority of emergency call boxes tested in the field during the audit did not function correctly.	WMATA must perform a technical analysis of its Preventive Maintenance (PM) procedures to see if modifications need to be made in order to correct performance of the call boxes and improve the way technicians verify functionality. PM procedures must include a confirmed and audible connection to the Station Manager as well as rollover to the Rail Operations Control Center (ROCC).	TOC-EGR-15-004-A	December 2017	Open
Wrong Side Door Openings	Water intruded into door control junction box and was not identified during preventive maintenance.	WMATA's Chief of Vehicle Engineering must revise Preventative Maintenance Inspection (PMI) to reflect integration of car body water accumulation preventative inspection into task no. 40 of the 5000 Series PMI.	TOC-WSD-15-001-A	December 2017	Open
Wrong Side Door Openings	Water intruded into the door control junction box beyond	WMATA's Chief of Vehicle Engineering must evaluate and select a sealant for	TOC-WSD-15-002-A	December 2017	Closure Request



Category	Finding	WMATA Required Action	ID	Due Date	Required Action Status
	design levels.	use to prevent water intrusion within the car body that will affect the door operation components.			Under Review
Safety Department Procedures and Responsibilities	Passenger complaints regarding train intercoms are not always reviewed by the Safety Department.	WMATA must review passenger complaints regarding train intercoms as part of its Safety Measurement System	TOC-SAF-15-004-A	Jun-18	Open
Other Accidents	The number of required preventive maintenance inspections (PMIs) exceeds the available staff hours in the Communications Branch.	WMATA must conduct a staffing resource assessment to determine appropriate staffing levels in the Communications Branch, and must obtain the additional resources required to complete PMIs and radio maintenance.	TOC-OTR-15-011-A	July 2018	Open
Other Accidents	WMATA must do more to indicate the movements of train in and through car wash facilities	WMATA must install a Train Movement Indication system in all car wash facilities.	TOC-OTR-15-006-A	November 2018	Open
Evacuations	WMATA must increase lighting levels in the tunnels to support maintenance and emergency operations.	WMATA must complete its maintenance program to replace every light and light fixture cover in the tunnels, to include rehabbing covers where appropriate to recycle materials.	TOC-EVC-15-001-A	September 2022	Open