

## Tri-State Oversight Committee



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## Three-Year Safety and Security Review of the Washington Metropolitan Area Transit Authority

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### Safety Element 21: Procurement

**Review Conducted: April - May 2013**

**Draft Report: June 24, 2013**  
**Final Report: August 22, 2013**

## **Introduction**

Representatives from the Maryland Department of Transportation (MDOT), the District of Columbia Department of Transportation (DDOT), and the Virginia Department of Rail and Public Transportation (DRPT) comprise the Tri-State Oversight Committee (TOC), which provides regular oversight of the Washington Metropolitan Area Transit Authority (WMATA) Metrorail system. To comply with State Safety Oversight Final Rule 49 CFR Part 659, the Federal Transit Administration (FTA) requires states to designate a State Safety Oversight (SSO) agency to administer safety and security programs for rail transit and fixed guideway systems within their jurisdictions. Specifically, 49 CFR Part 659 requires TOC to conduct an on-site safety review of each element of the WMATA System Safety Program Plan (SSPP) at least once every three years. These reviews must assess WMATA's implementation with all 21 elements of its SSPP and seven elements of its Security and Emergency Preparedness Plan (SEPP), along with related plans and procedures. Beginning in 2013, the TOC has split its Three-Year Safety and Security Review topic areas into separately occurring reviews spread out during a three-year period.

The following report documents the observations and findings of the TOC's review of Procurement. The TOC Program Standard and Procedures defines WMATA requirements for Procurement in Element 21 of Section 10 and in Appendix D. This element of the SSPP should include a description of the measure, controls, and assurances in place to ensure that safety principles, requirements, and representations are included in the WMATA Metrorail procurement process

The on-site portion of the review occurred April 19, April 23, and May 16, 2013.

## **Methodology**

The TOC review team included representatives from TOC and its technical consultant, Transportation Resource Associates. In advance of the review, the TOC requested and reviewed numerous WMATA plans, policies, and procedures. During the on-site review sessions, the review team interviewed WMATA personnel, reviewed various documents and records, and conducted field inspections to assess conditions and compliance with procedures. Persons interviewed, documents received, and locations visited are noted at the end of this report. As the review progressed, TOC representatives discussed preliminary findings and addressed questions from WMATA personnel. This report identifies conditions evident during the review period, regardless of the status of potential remediation activities.

Findings are categorized as Findings of Non-Compliance or Findings of Compliance with Recommendation. A Finding of Non-Compliance refers to an instance of WMATA operating out of compliance with an applicable internal or external written requirement, plan, policy, rule, standard, or procedure. Findings of Non-Compliance may be safety- or security-critical in nature. If a Finding of Non-Compliance is identified, WMATA is

required to develop an appropriate Corrective Action Plan (CAP) and take action to achieve compliance with the applicable requirement.

A Finding of Compliance with Recommendation refers to a condition whereby WMATA may technically be conducting business in compliance with existing WMATA, TOC, or FTA procedures and requirements; however, there may be no relevant written plan, policy, or procedure in place, or the existing plan, policy, or procedure is not in accordance with industry best practices or standards (such as those by the American Public Transportation Association). Additionally, WMATA may have a resource or organizational issue preventing sufficient devotion of resources to system safety or security activities. In response to a Finding of Compliance with Recommendation, WMATA is required to formally respond in writing, and is strongly urged to develop an appropriate CAP to update relevant plans, policies, rules, and/or procedures, or to address a particular identified resource or organizational issue.

This review, including all findings presented in this report, intends to assist WMATA with enhancing system safety and security throughout Metrorail operations. Upon receipt of this draft report, WMATA had 30 days to respond with comments regarding the content of this report, primarily for accuracy. The TOC took comments into consideration before releasing this final report. Upon receipt of the final report, WMATA has 45 days to develop CAPs in response to each finding as noted above.

The TOC would like to thank WMATA personnel for their professionalism and cooperation throughout the review process.

### **Current Conditions**

The Procurement Department (PRMT) participates in the acquisition of capital and non-capital vehicles, equipment, systems and spare parts. The procurement process is supported by internal stakeholders such as the Department of Safety and Environmental Management (SAFE), Corporate Quality Assurance and Warranty (CQAL), the Office of Quality Assurance and Warranty (QAAW), and Storerooms Materials and Logistics (SRML). Components are purchased as recommended by the original equipment manufacturer, by product demand, or when a component becomes obsolete.

One objective of the Procurement Department is to ensure that all equipment and materials which internal stakeholders (such as Rail Transportation, Car Maintenance, Plant Maintenance, or Engineering offices) identify as safety-critical are coordinated with assistance through SAFE, QAAW, and CQAL. PRMT coordinates safety-critical purchases with other departments through the Inventory Management System. A requester files an Inventory Item Update Request (IIUR). IIURs are routed through the department approval chain that requires supervisory approval. Once approved, the IIUR is electronically routed to the next level of authority needed for approval to purchase. For safety-critical items, an additional level of approval is required by SAFE, according to the *Procurement Manual, Chapter 2: Inventory Management System*.

These stakeholders have varied responsibilities in ensuring component compatibility to existing equipment and safety in designs, installation and testing.

All safety-critical acquisitions must meet the specifications prepared by Engineering, approved by SAFE, and are subject to a predefined Quality Assurance/Quality Control (QA/QC) process. PRMT and QAAW maintain a close working relationship with the acquisition staff in the rail engineering and maintenance departments to facilitate an effective and compliant procurement processes. SAFE supports the procurement process to assure that hazardous materials are appropriately acquired and controlled, and include the management of Material Safety Data Sheets (MSDS).

The audit team conducted field assessments of the MSF 400 and Alexandria Storeroom facilities to determine how the PRMT and SRML departments manage safety in their facilities. The audit team found the facilities to be clean and very well organized. Procured material is received, verified, separated, and counted prior to storage or internal delivery. Hazardous materials are received and properly identified and stored with sufficient spill control procedures and mechanisms in place. Flammable and combustible hazardous materials are stored in separate rooms and/or flammable material cabinets within the facilities.

All rail vehicle components at MSF 400 are separated for detailed inspection by the QAAW Department. QAAW Inspectors conduct component inspection against required engineering specifications. The audit team reviewed MSF 400 safety training records for personnel for forklift training and hazardous material spill control training. The audit team also checked hard-copy MSDSs on file for three hazardous chemicals stored in the facility:

<b>Class / Lot</b>	<b>Product</b>	<b>MSDS on file</b>
R91-50-0134	Grease	Yes
R91-50-0117	15w/40 oil	Yes
R91-50-0135	Grease	Yes

The spot check of MSDS on file for Alexandria Storeroom is discussed in the findings below.

PRMT has instituted a Quality Products List (QPL) program, which is intended to prevent the unauthorized purchase of any safety-critical material throughout WMATA departments; this may include, for example, hazardous materials and Personal Protective Equipment. Each QPL item has certain internal user procurement restrictions. The operations user can only purchase from an approved supplier based on compatibility, economy, efficiency, environmental, safety, reliability, standardization, or warranty. The Purchasing Manager must approve a QPL item before Materials Management can establish the QPL record in inventory.

QAAW uses a process similar to the QPL program that requires a series of management-level signatures for approval to procure controlled or restricted material. The QAAW process is only for rail vehicle components.

The PRMT and QAAW departments have equivalent programs to ensure control of safety critical items but different work process. CQAL and QAAW managers confirmed they have separately functioning processes, and that they are determining whether it is better to have one process used for both internal departments. The TOC encourages both departments to work together on this improvement to comply with one unified procedure.

Although QAAW has taken the initiative to conduct special audits of PRMT processes regarding the quality and exactness of incoming parts and materials, there does not appear to be a method for potential hazards to tie into WMATA's Safety Measurement System (SMS). The SMS, which is relatively new, appears to be WMATA's central log for the analysis and mitigation of hazards. Although it is not a finding, WMATA should determine a way to track system-wide trends and problems related to procurement that could lead to incidents on the rail system if left unmitigated. This link may consist of direct input into the SMS from PRMT, SRML, QAAW, and other departments involved in procurement, or a liaison who communicates information on potential hazards between these departments and SAFE.

## **Summary of Findings**

### **Findings of Non-Compliance**

#### **Finding of Non-Compliance 1: QAAW and CQAL do not currently perform QA/QC on materials to the extent described in SSPP sections 21.1 and 21.4**

Section 21.1 notes that the offices of "PRMT, CENI, and CENV working with CQAL and QAAW and BMNT working with CQAL to develop quality control procedures in accordance with the WMATA Quality Assurance Program Manual that include the evaluation of new materials and equipment to ensure compatibility with existing equipment and systems" as well as "to ensure that defective parts are not introduced into the system. Further, Section 21.4 states that QAAW's receiving inspection procedures cover "any rail system materials, parts, tools and equipment." However, interviews of management determined that QAAW only performs these functions for rail *vehicle* equipment parts and related material, not infrastructure or systems.

Recommended Corrective Action: QAAW and CQAL should expand their scope to perform QA/QC functions to procurement within other safety-critical areas such as infrastructure and systems. Otherwise, SSPP Section 21 should be revised to reflect the current objectives of the procurement process when partnering with QAAW and CQAL, while noting aspirations to expand in the future.

**Finding of Non-Compliance 2: The PRMT or SAFE department does not evaluate and/or inspect contractor equipment for use on the Metrorail System.**

The SSPP Section 21.3 indicates that all contractor equipment and vehicles intended for use on the Metrorail system or on authority property must be evaluated and approved by the Contracting Officers Technical Representative, and are subject to review and approve by SAFE prior to use. During multiple interviews, WMATA personnel stated they were unsure if action is currently implemented. Procedure OAP 208-04, Contractor Rail Equipment Inspection, requires inspection of all contractor Hi-rail equipment used on the rail system. No other documents submitted to the audit team identify other contractor equipment inspection.

Recommendation for Corrective Action: WMATA should develop a program to evaluate and/or inspect contractor equipment for use on its rail system, in accordance with the SSPP, to prevent accidents.

**Finding of Non-Compliance 3: Not all hazardous materials had corresponding hard-copy MSDS on file in the local facility audited.**

The audit team checked MSDS on file for three randomly chosen hazardous chemicals stored in Alexandria Storeroom:

<b>Class / Lot</b>	<b>Product</b>	<b>MSDS on file</b>
R91-50-0090	Hydraulic Oil	No
R91-50-0117	15w/40 Oil	Yes
R91-50-0163	Hydraulic Oil	No

The binder of MSDS information should be up-to-date with materials housed in the storeroom, in case employees need urgent access. Even though MSDS may be available electronically, employees should be able to depend on the hard-copy binder provided in the facility. Storeroom Managers stated they would resolve the issue immediately, but WMATA should examine this from a systematic approach.

Recommendation for Corrective Action: WMATA should ensure, through new procedures and ongoing departmental audits, that hazardous materials procured have corresponding hard-copy MSDS information on file before the materials are accepted into storerooms. All localized storerooms should also ensure the dependability of their current MSDS binders by assessing immediately whether all materials in stock have corresponding sheets available. Otherwise, WMATA should disregard its hard-copy MSDS binders and ensure that all employees in storerooms have direct electronic access to the complete catalog of MSDS information.

**Finding of Non-Compliance 4: Section 21.2 of the SSPP contains an outdated reference.**

SSPP Section 21.2 states, “All chemicals and hazardous materials are procured in compliance with chapter 6.3, ‘Inventory Communication Tools’ of the WMATA *Maintenance and Materials Policy and Procedure Manual*, June 2008 and the WMATA *Safety Rules and Procedures*, Procedure No. 4.2/1, *Hazard Communication Program*.”

The above reference is out of date; there is an August 2011 version of the manual.

Recommendation for Corrective Action: Revise the SSPP to reflect the most up-to-date references and procedures.

### **Findings of Compliance with Recommendation**

#### **Finding of Compliance with Recommendation 1: Several procurement documents furnished to the review team are missing official signatures, dates, or authors (by department).**

Some process verification documents were cut from other unknown documents with no author and/or date. Such deficiencies of these documents include the following:

- MSF Evacuation Plan, 2011, no author
- Handling of compressed gas cylinders, no author or date
- MSF Process and Materials Manual, 2011, no author
- Issuing Stock Item for Storeroom Usage Guideline, no author or date
- Receiving and Safe Handling of Repairable Train Components Guideline, no date or author
- How to Safely Handle and Issue Compressed Gas Cylinders, no date or author
- Chemical Shelf Life Procedure, no date or author.

In addition, the Procurement Procedures Manual does not have a signature page; the TOC recommends (but does not require) that high-level documents be signed by WMATA managers responsible for their execution.

Recommendation for Corrective Action: Address the bulleted deficiencies and re-submit the affected portions of the listed documents.

#### **Finding of Compliance with Recommendation 2: There is no written policy, procedure, or guideline for drivers regarding the transfer of hazardous materials to decentralized storerooms.**

The audit team asked whether there were any policies or procedures for drivers moving hazardous materials from the MSF to other WMATA storerooms; this could include how to resolve problems during transport (traffic accident with release, unsecured container spill onto a highway, etc). The drivers have been instructed to call their supervisors for guidance.

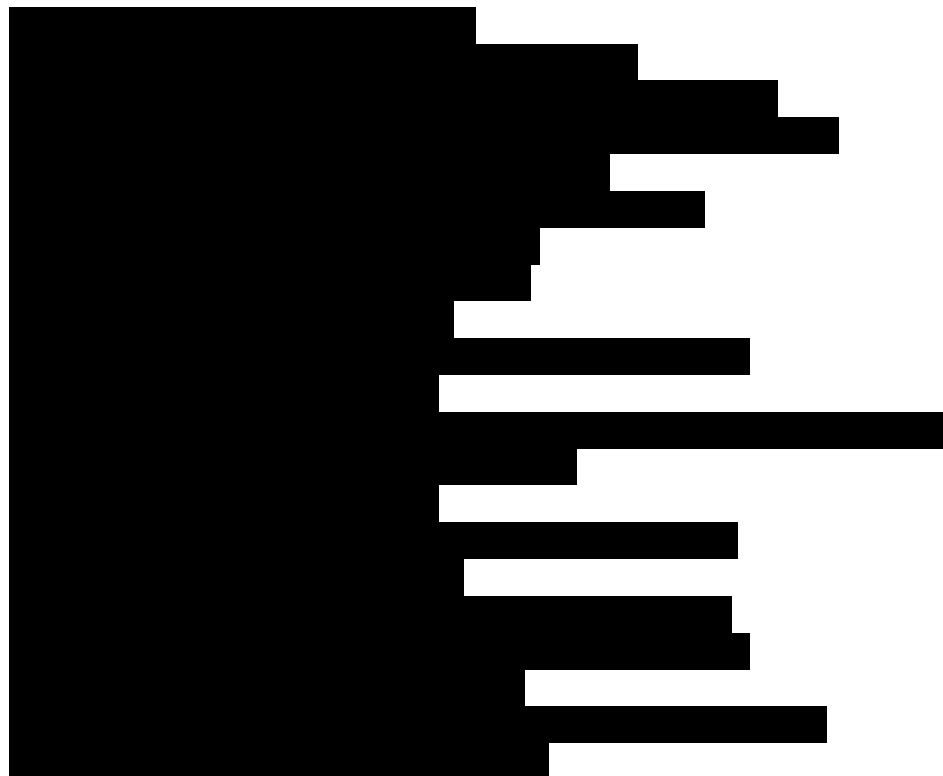
Recommendation for Corrective Action: WMATA should create a written document informing employees about how to handle problems involving the proper transfer of hazardous materials to storerooms. The procedure should contain, at a minimum, a requirement to have a copy of the transporting chemicals' MSDS and emergency contact numbers (internal and external) should an incident occur.

**Finding of Compliance with Recommendation 3: The MSF field audit found an excessive amount of unsupported air filters stacked to the ceiling, posing a potential fire and safety hazard.**

The stacks of these filters pose a risk of falling. As explained to the audit team, a one-time delivery of 13 months worth of filters have been delivered for storage. This is not an issue of scarce equipment, as the filters have a lead time of 3 days. Section 21.1 of the SSPP notes that PRMT should practice the "Avoidance, elimination, or reduction of safety hazards by design change, safety devices, and parts or material selection."

Recommendation for Corrective Action: WMATA should consider researching a "Just in Time Delivery" method to eliminate this potential hazard and others that may arise.

**Persons Interviewed**



**Documents Reviewed**

- System Safety Program Plan, Approved 2013 version, Element 21, Procurement



- METRO Maintenance and Materials Policy and Procedures Manual, PMRT, August 2011
- Environmental Compliance Officer / Deputy Environmental Compliance Officer Handbook.
- Environmental Compliance Officer Training Course.
- Warehouse Inventory Procedures Manual Vol 1 and 2 June, 2011.
- Simplified Acquisitions Hand Book, a Procurement Procedures Manual, METRO Office of Procurement and Materials, September 2011
- Procurement Procedures Manual, December 2012 version 1.0 (*incomplete, additional documents supplied to ISSA team and not TOC – see Findings*)
- Office of Rail Transportation Maintenance Operations Control, Contractor Rail Inspection Policy and Procedure, February 15, 2012

**Tab 1**

- Final Audit Report with Recommendations, a Review of Controls over Storeroom Operations; Office of Inspector General, March 24, 2010.

**Tab 2**

- Forklift Training Lesson, 10/1996
- Job Description, Storeroom Clerk A

**Tab 3**

- WMATA Instruction Handbook for Contract File Assembly and Documentation, Department of Procurement June, 1993
- Contracting Officers Technical Representative Guide, Understanding COTR's role, duties, and responsibilities, February 6, 2012.
- Office of Inspector General, Fraud Awareness Presentation.
- Various PMRT Training Documents.
- WMATA Office of Procurement and Materials, Materials Operating Procedure 1.1 Mentor Program Procedure, May 31, 2007.

**Tab 4**

- WMATA Metro Supply Facility, Personnel Training Presentation, October, 2011

**Tab 5**

- WMATA Accident/Incident Investigation SOP 10.4/0, November 4, 2011 (universal report)
- Various PMRT injury reports for 2012 and 2013.

**Tab 6**

- WMATA PRMT, Request of Proposal, formal guide. No date

**Tab 7** No TAB 7 Issued.

**Tab 8**

- METRO Supply Facility, Safety Committee Policy / Instruction
- Various Safety Meeting Minutes, 2012

**Tab 9**

- SAFE Facility Safety Inspection of Various PMRT Facilities.
- SMRL / TIES Storeroom Standard Operating Procedures, October 2011
- SMRL / TIES Inventory Shelf Life Policy, Updated December 31, 2012.
- SMRL Personnel Basic Training Program
- Receiving and Safely Handling of Repairable Train Components, no date or author.
- Handling of Compressed Gas Cylinders, no date or author.
- Environmental Standard Operating Procedure, Spill Response and Reporting.
- MSF Standard Operating Procedures, Guideline for review of MSF SOP's, December 2012.

**Tab 10**

- Paragraph, Chemical Self Guideline, CFOPRMT MSF SOP, Page 13

**Tab 11** No documents in this tab**Tab 12**

- WMATA Environmental Management Policy 10-1/1, December 12, 2008.
- MSF Evacuation Plan, no author or no date.
- WMATA Jackson Graham Building Evacuation Procedure 3.2/2, September 7, 2010
- WMATA Environmental Standard Operating Procedure, Spill Response, Reporting, and Clean Up Guideline.

**Tab 13**

- WMATA MSF / 400 Policy and Procedure for Warehouse Floor Access for Deliveries, Service Technicians Vendors and Visitors.

**Tab 14**

- WMATA System Safety Program Plan, March 2012
- WMATA METRO Employee ID Card Policy / Instruction 6.10/5, May 8, 2011
- WMATA Background Screening, External Candidates, Current and Returning Employees, Policy / Instruction 7.2.3, December 22, 2011.
- MSF Process and Materials Manual, 2011, no author.
- METRO Maintenance and Materials Policy and Procedures Manual, August 2011.

**Tab 15** No Tab 15 issued

**Tab 16** No Tab 16 issued

**Tab 17**

- Procurement Continuity of Operations Plan, October, 2011
- Jackson Graham Building Evacuation Procedure 3.2/2 (repeat)
- WMATA Environmental Management Policy October 18, 2002 (old version)
- SAFE MSF Facility Safety Inspection Report (repeat)
- Coordinated Safety Program and Reporting

**Tab 18**

- SAFE Facility Walkthrough Safety Inspection 2012-2013 (repeat)
- Coordinated Safety Program and Reporting Procedures, July 200.
- WMATA Construction Safety and Environmental Manual, August 5, 2002
- Storeroom Security Procedure, 2013.
- WMATA Drug and Alcohol Testing Program Policy / Instruction 7.21/4, April 30, 2002.
- WMATA Medical / EAP Guidelines, Reasonable Suspicion Drug and Alcohol Testing, no date.

**Tab 19**

- MSF Evacuation Plan (repeat)
- Environmental Management Policy (repeat)

**Tab 20**

- WMATA Policy Memorandum No. 12-09, Requirement for Background Screening on METRO Contractors and Subcontractors Performing Work or Services at any METRO Facility, August 21, 2012
- METRO Employee Identification Policy 6.0/5, June 18, 2011.
- METRO Policy Memorandum No. 9.10, Criminal Background Checks on Contractor Employees who are not US Citizens, July 30, 2009.
- METRO Policy Memorandum No. 09-07, Notification of the Requirement for Criminal background Checks on Contractors Employees Performing Work or Services at a Metro Facility April 20, 2009
- METRO Policy Memorandum No. 12-08 Conduct of an assessment of Benefits and Risk in Gain Sharing Contracts, June 7, 2012.
- METRO Policy Memorandum No.12-10 DEB Liaison Representative at Post Award Conferences, September 12, 2012.

**Tab 21**

- WMATA Department of Transit Infrastructure and Engineering Services, Supplier Shipping and Delivery Requirements Standard Operation Procedure 113-19, July 20, 2009.
- WMATA Safety Committee Policy, 10.2/2, August 2, 2011.

- WMATA Department of Transit Infrastructure and Engineering Services, QAAW Receiving Inspection Standard Operating Procedure 113-05
- WMATA SAFE Internal Audit Request Form, Procurement and Storeroom, April 19, 2013.
- METRO Standard Operating Procedure SMRL / TIES Storerooms, October 2011
- SMRL / TIES Inventory Shelf Guideline, no date or author.
- Issuing Stock Item for Storeroom Usage Guideline, no date or author.
- Office of Storerooms and Material Logistics, Storeroom Personnel Training Presentation PPP, 2011.
- Cut document, Receiving and Safely Handling of Repairable Train Components Guideline, no date or author.
- How to safely handle and Issue Compressed Gas Cylinders, no date or author.
- Supplemental Documentation, Procurement Procedures Manual, Review and Update Standard Operating Procedures for MFS Personnel, December, 2012.
  - MSDS
  - Receiving and Receipting Procedures.
  - Storeroom Security
- Department of Transit Infrastructure and Engineering Services Non-Conforming Materials Quality Hold and Containment Procedure 113-01, December 15, 2009.
- Department of Transit Infrastructure and Engineering Services Quality Assurance Corrective Action Procedure 113-04, April 2, 2012
- Department of Transit Infrastructure and Engineering Services First Article Inspection Procedure 113-06, March 26, 2010.
- Department of Transit Infrastructure and Engineering Services Control of Non – Conforming Materials Procedure 113-07, April 2, 2012
- Department of Transit Infrastructure and Engineering Services Quality Oversight Procedure 113-14, December 7, 2011
- Department of Transit Infrastructure and Engineering Services Supplier Shipping and Delivery Requirements Procedure 113-19, June 19, 2012
- Department of Transit Infrastructure and Engineering Services QAAW Monitoring and Measuring Devices 113-20, December 21, 2011
- Department of Transit Infrastructure and Engineering Services WMATA Contract Axle Inspection Requirements for 3<sup>rd</sup> Party Inspection, 113-WI-10, August 10, 2012.
- Department of Transit Infrastructure and Engineering Services WMATA Contract Wheel Inspection Requirements for 3<sup>rd</sup> Party Inspection, 113-WI-09, August 10, 2012.