



U.S. Department  
of Transportation

**Federal Transit  
Administration**

Headquarters

1200 New Jersey Avenue, SE  
Washington, DC 20590

**MAY 18 2016**

Mr. Paul Wiedefeld  
General Manager and Chief Executive Officer  
Washington Metropolitan Area Transit Authority  
600 Fifth Street, NW  
Washington, DC 20001

**Subject: WMATA Response to FTA Safety Directive 16-3**

Dear Mr. Wiedefeld:

I recognize and thank you for the commitment that you and your leadership team have shown in addressing the safety concerns that the Federal Transit Administration (FTA) has identified as a result of our ongoing inspections and investigations. We appreciate your responsiveness to the action items outlined in FTA's *Safety Directive 16-3 Required Actions to Address Persistent Critical Open Safety Findings*, issued on May 7, 2016 as outlined in your letter, issued May 13, 2016.

As you know, this safety directive focused on four immediate actions related to giving priority to safety over service and communicating this emphasis to employees, mitigating the risks of smoke and fire events, and enhancing emergency response capabilities. FTA has verified that WMATA has successfully completed several of the required actions; however, we are seeking some additional information to help verify that all immediate action items outlined in the safety directive have been satisfied.

Immediate Action #1 – Prioritize Safety before Operational Convenience

To address FTA's requirement that WMATA's supervision must reinforce "safety over service in decision-making" as part of the safety stand-down for all employees to be completed by May 16, 2016, WMATA developed written communications for employees and a formal presentation to review critical lessons learned from the Federal Center SW Station arc flash incidents on May 5, 2016 and emergency response procedures with employees.

A safety notice ("Safety Trumps Service") and a corresponding Safety Bulletin 16-05, focusing on the importance of safety in decision-making were distributed to all employees on May 12, 2016. FTA reviewed a presentation that WMATA developed for the safety stand-downs that emphasizes safety over service, presents lessons learned from the Federal Center incident, and reviews emergency response Standard Operating Procedures (SOPs). Another Safety Bulletin for immediate track access was also distributed to Rail Operations Control Center (ROCC) employees as part of the safety stand-downs.

FTA is encouraged by the steps WMATA has taken to complete the training and emphasize the importance of safety. We will continue to monitor WMATA's decision-making actions to ensure safety is prioritized over operational convenience.

#### Immediate Action #2 – Mitigate Fire and Smoke Risk

The FTA required WMATA to take enhanced action to monitor and manage the traction power load in high-risk areas in tunnels. To address the FTA's specific actions, WMATA initiated infrared railcar testing on the Red Line on May 9, 2016, with system-wide testing to be completed by May 18, 2016. WMATA also is expediting its review of data, establishing a five-week continuous data collection and analysis cycle, as opposed to a quarterly cycle. Quality and Internal Compliance Operations (QICO) has been assigned to verify this work and the completeness of the analysis.

In addition, to address safer power management in high risk areas, WMATA established reduced maximum authorized speeds on three line segments (Orange Line: Rosslyn to Minnesota; Blue/Silver Line: Rosslyn to Benning Road, and Red Line: Grosvenor to DuPont Circle). FTA will also undertake a joint review with WMATA of the risks and benefits of additional power management strategies such as number of cars in train length, regenerative braking on the traction power electrification system, and railcar traction power motors.

Finally, WMATA has committed to conducting an inspection of all tunnel areas to identify clogged drains, water leaks, and mud conditions, and to documenting areas of water leakage on or puddled around wayside power cables, and to completing water remediation work in these areas by June 4, 2016. Daily inspections will be conducted in identified areas until the work is completed.

In order for FTA to verify that this action has been completed, please send the following items by **Tuesday, May 31, 2016**:

- The report documenting the results from the infrared railcar run-through and the identified "hot spots."
- The QICO report verifying infrared testing work and completeness of analysis.
- The prioritized list of locations requiring drain work/water remediation and/or cable work and schedule.
- The water leak inspection checklist.
- Scheduling of meeting with WMATA to discuss engineering issues related to traction power system, consist length and regenerative braking (proposed for Wednesday, June 22, 2016)

#### Immediate Action #3 – Improve Emergency Planning and Preparedness

For this immediate action, the FTA required WMATA to re-visit its emergency planning, exercises, training and readiness programs to ensure their adequacy for all critical WMATA



offices. The FTA also required an update on the new Fire/Life Safety 1000 testing and inspection procedure and training program, and specified that, by May 16, 2016, WMATA must conduct specific training with ROCC personnel regarding the tunnel ventilation system and guidelines and diagrams developed for tunnel fans, under platform fans and dome fans.

WMATA currently conducts quarterly full-scale drills, and, in order to address FTA's Safety Management Inspection required action R-2-17-b, has completed a gap analysis regarding required emergency response training that must be delivered to WMATA's front-line employees. WMATA has provided FTA with an implementation plan showing that training will be developed and completed for front-line Metrorail employees at the end of 2018. Given the safety implications, FTA plans to work with WMATA to advance the timing of this training.

WMATA's Fire/Life Safety 1000 testing, inspection and maintenance procedure (now called Plant Maintenance or PLNT 1000) has already been approved. Tunnel ventilation testing and maintenance are presently being performed to standards very similar to the new PLNT 1000 procedure; however, under the new procedure, responsibility for managing the testing in the ROCC will move to the Maintenance Operations Center (MOC). Due to changing responsibilities and the need for additional MOC staff to manage this function, it will not be fully implemented until February 2017. We also understand that training protocols for PLNT employees, ROCC controllers, and MOC personnel are still being finalized. In order to address this immediate action and comply with the May 16, 2016 completion date, WMATA has received an advanced copy of training materials from the vendor to train ROCC personnel, and this training was completed by May 16, 2016.

WMATA has also issued two authority-wide staff notices: the Incident Command System and Notification Pocket Guide and a requirement for all frontline personnel to complete the National Incident Management System (NIMS) IS-700 training developed on-line by the Federal Emergency Management Agency (FEMA) by December 31, 2018.

Finally, WMATA is developing scenarios for testing of ROCC employees, as well as a computer-based training course. WMATA also now has a commitment in place with the Metropolitan Washington Council of Governments to staff a full-time Fire Liaison position at the ROCC 24/7.

In order for FTA to verify that this action has been completed, please send the following items by **Tuesday, May 31, 2016**:

- A copy of the scenarios for training/assessing ROCC personnel response to emergency situations.
- In-depth schedule for providing the training identified for SMI Required Action R-2-17-b to Metrorail frontline personnel by the end of 2018.

#### Immediate Action 4 – Conduct a Safety Stand-down

On May 5, 2016, the FTA required WMATA to conduct a safety stand-down to ensure that management, supervisors, roadway workers and controllers understand all applicable WMATA and FTA requirements for safe operations, and to conduct an After Action Review of the Federal Center SW Station arc flash incidents.

WMATA substantially completed this activity by May 16, 2016, reaching over 90 percent of the Metrorail employees. FTA inspectors observed several of the stand-downs to confirm that they covered the approved presentation and effectively reviewed procedures related to managing fire and smoke emergencies, inspecting and maintaining infrastructure critical to smoke and fire prevention, and managing passenger evacuations.

FTA is encouraged by WMATA's safety stand-down efforts to date and will work with you to ensure that all remaining employees will receive the necessary training.

Thank you again for working to complete safety-critical work in a timely manner, including addressing these immediate actions, which will help us to ensure the safety of WMATA's passengers, employees, and infrastructure. Please contact the Director of FTA's WMATA Safety Oversight (FWSO) Office, Mr. Sean Thompson, at (202) 366-3616 or via email at Sean.Thompson@dot.gov, with any questions or concerns.

Sincerely,



Carolyn Flowers  
Acting Administrator

cc: Patrick Lavin, Chief Safety 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



May 13, 2016

Ms. Carolyn Flowers  
Acting Administrator  
Federal Transit Administration  
1200 New Jersey Avenue SE, E46-332  
Washington, DC 20590

Subject: Safety Directive 16-3

Dear Ms. Flowers:

In response to Safety Directive 16-3 of May 7, 2016 requesting that WMATA take four immediate actions, WMATA is submitting the following response.

Immediate Action 1: Prioritize safety before operational convenience

***Supervision at all levels of MetroRail operations must ensure that decision-making is made on the basis of safety and not operational convenience. All employees will receive training on the primacy of safety in MetroRail operations as part of the safety stand-down directed in Immediate Action 4. This training must be completed by May 16, 2016.***

**Response:** In addition to the safety stand-down meetings addressed in Immediate Action 4, on Tuesday, May 10, WMATA held the first meeting in recent memory of the top 650 managers to confirm the pivotal requirement to place safety before service. During the meeting a staff notice titled "Safety Trumps Service" (Attachment A) was distributed. An email reminding managers of this directive, as well as Safety Bulletin #16-05a (Attachment B) to all employees, were distributed on May 12. A Safety Bulletin for immediate track access for the inspection of hazardous conditions (Attachment C) will also be distributed to Rail Operations Control Center employees as part of the safety stand-downs occurring between May 12 and May 16.

Immediate Action 2: Mitigate fire and smoke risk

***Conduct immediate and ongoing daily use of railcar infrared testing during peak load times to identify traction power "hot spots" on the third-rail system and then initiate immediate repairs at these locations.***

**Response:** WMATA started thermal testing on the identified high risk areas beginning Monday, May 9 on the Red Line and Tuesday, May 10

**Washington  
Metropolitan Area  
Transit Authority**

600 Fifth Street, NW  
Washington, D.C. 20001  
202/962-1234

By Metrorail:  
Judiciary Square-Red Line  
Gallery Place-Chinatown  
Red, Green and  
Yellow Lines

A District of Columbia  
Maryland and Virginia  
Transit Partnership

on the Orange Line. Testing system-wide will be completed on May 18. Any anomalies will be further investigated using hand-held thermal readers and immediate action or mitigation will be taken on any confirmed anomalies. An expedited review of data will be done, establishing a five-week continuous data collection and analysis cycle as opposed to the existing quarterly cycle. All work will be verified for completeness by the Quality and Internal Compliance department.

***In high risk areas, implement immediate mitigations to reduce amperage draw. Examples of appropriate mitigations include but are not limited to reduction of train lengths; turning-off regenerative braking to reduce power being introduced into the system; and reducing acceleration speed to draw less current (work with car manufacturer to limit acceleration speed/current draw).***

**Response:** Effective Wednesday evening, May 11, the maximum authorized speed was reduced to 45 MPH between Rosslyn and Minnesota on the Orange Line, Rosslyn and Benning Road on the Blue and Silver Lines and Grosvenor and Dupont Circle on the Red Line. On these segments of the rail lines operators are to go no higher than setting P3 when accelerating. WMATA recommends joint review by WMATA and FTA engineers of the benefits and risks in implementing regenerative braking and reducing the consist size of trains to 6 cars. After discussion with FTA, any changes to train consists must be assessed as to the impact to platform crowding and passenger safety. Further, WMATA will initiate an engineering study with FTA participation of the power system along the segments outlined above to determine and address the root cause of arcing events.

***Immediately identify areas of significant water intrusion in tunnels and conduct additional ongoing daily inspections in these areas to monitor the condition of traction power infrastructure until water remediate work is completed.***

**Response:** WMATA will conduct an inspection of all tunnel areas to identify clogged drains, water leaks and mud conditions to document areas of water leakage on or puddled around wayside power cables. A detailed prioritized list will be created and work will be scheduled based on the severity of the condition. This work will be completed by June 4, 2016. While the work is being completed inspections will occur daily in identified areas.

Immediate Action 3: Improve emergency planning and preparedness

***Immediately institute Emergency Planning, Exercises, Testing and Readiness programs for adequacy for all critical WMATA offices.***

**Response:** The Office of Emergency Management (OEM) has in place plans, training and exercises that enhance emergency preparedness for critical WMATA offices (Attachment D).

***Conduct training drills with staff to ensure they understand how to rapidly and effectively respond to emergencies and passenger evacuation. Include participation of the ROCC in these training drills. Also verify that ROCC personnel understand the guidelines and diagrams developed for tunnel fans, under platform fans and dome fans, that the new fire/life safety inspection and maintenance procedures address emergency response testing by May 16, 2016.***

**Response:** Currently, OEM conducts quarterly full-scale exercises with WMATA staff and regional jurisdictional partners. These exercises have primary objectives (i.e. command and control focusing on unified command, accountability etc.). For example, two of the four quarterly drills, held in the previous 12 months were fire/evacuation scenarios (Attachment D).

In the FTA SMI R-2-17-b, WMATA has created a clear strategy for the development and delivery of emergency response training to WMATA's frontline supervisors. As part of SMI R-2-16-c, WMATA will develop a new training curriculum to communicate the new "Fire/Life Safety 1000 – Inspection, Testing and Maintenance Procedure" to WMATA Operations and Maintenance personnel. To comply with the May 16 requirement, WMATA has worked with the vendor to receive an advance copy of the tunnel fan, under platform fan, and dome fan materials and training for ROCC personnel which will be completed by Monday, May 16, 2016.

Furthermore, two Authority-wide staff notices are being issued. The first staff notice is on the Incident Command System and Notification Pocket Guide. This pocket guide is being distributed to all frontline Operations employees. The Incident Command System (ICS) is a standardized, on-scene, all-hazards, incident management concept. ICS enables a coordinate response, regardless of the magnitude or complexity of the incident, and allows for the integration of facilities, equipment, personnel, procedures and communications operating within a common organizational structure.

To support the implementation of ICS during a major incident or emergency event, the Incident Command System and Notification Pocket Guide has been developed. The pocket guide will serve as a reference for all first responders during an emergency, as it contains recommended action items, notification processes and important contact information.

The second staff notice, National Incident Management System (NIMS) IS-700, will direct frontline Operations employees to complete the nationally recognized FEMA IS-700 course on the FEMA website. NIMS provides a consistent nationwide model to enable governments, private-sectors and non-governmental organizations to ensure that they work together during a major incident/disaster.

Staff is developing simulated exercises to emulate scenarios to ensure adherence to existing emergency response SOPs for Rail Operations Control Center employees. In addition, staff are finalizing the development of various computer based courses that will provide training on existing emergency plans.

Finally, I signed the Memorandum of Understanding, along with the Council of Governments, to solidify our commitment to staffing the Fire Liaison ROCC position to ensure 24/7 coverage.

#### Immediate Action 4: Conduct a safety stand-down

***Conduct a safety stand-down to ensure that management, supervisors, roadway workers and controllers understand all applicable WMATA and FTA requirements for safe operations. At a minimum, WMATA must accomplish the following during the safety stand-down:***

- ***Conduct an After Action Review of the Federal Center SW Station arc flash incidents on May 5, 2016.***
- ***Review with all operating personnel, supervisors and management all procedures related to managing fire and smoke emergencies, inspecting and maintaining infrastructure critical to smoke and fire prevention, and managing passenger evacuations.***
- ***All MetroRail supervisors and employees that inspect track and place it back into service are to review all policies and procedures.***

**Response:** The Department of Safety & Environmental Management created the curriculum and materials (Attachment E) for the safety



stand-down. Starting Thursday, May 12, all supervisors, managers and roadway workers will attend a two hour safety stand-down training. Training will be conducted every two hours starting May 12 and ending May 16. Signed rosters will be collected at each training. The After Action Review will be included as part of the safety stand-down trainings.

Sincerely,



Paul J. Wiedefeld  
General Manager and  
Chief Executive Officer

Attachment A: Safety Trumps Service Notice  
Attachment B: Safety Bulletin 16-05a Safety Trumps Service  
Attachment C: Safety Bulletin 16-05b Immediate Track Access  
Attachment D: Improve Emergency Planning and Preparedness  
Attachment E: Safety Stand-down Presentation