



AGENDA ITEM #5

TO: Chairman Hudgins and NVTC Commissioners
FROM: Rick Taube
DATE: August 26, 2010
SUBJECT: WMATA Items

The National Transportation Safety Board has released its recommendations on WMATA's June 22, 2009 fatal accident. Details are attached.

At NVTC's June meeting the commission discussed Virginia Transportation Secretary Sean Connaughton's May 26th letter. Secretary Connaughton asked NVTC to sign the new multi-year funding agreement on behalf of the Commonwealth. He also asked that NVTC agree to appoint two state representatives to the WMATA Board. The commission did not act on the Secretary's request, but did ask staff to develop the following items for consideration at NVTC's July 1st meeting:

1. Complete an analysis of the legal issues;
2. Prepare exhibits showing relative financial commitments to WMATA of the Commonwealth and NVTC's localities; and
3. Write a draft response to Secretary Connaughton.

At NVTC's July meeting two slightly different resolutions were proposed to address the discussion of WMATA governance, but action was deferred to the September 2nd meeting.

Previously a lengthy Power Point was provided containing financial information and responding to Secretary Connaughton's request for representation on the WMATA Board. It is being updated and will be available on September 2nd.

Following discussion, the commission should determine how it wishes to proceed and advise staff on next steps.





NTSB NEWS

NATIONAL TRANSPORTATION SAFETY BOARD · WASHINGTON D.C. 20594

Stay Connected

- [Receive Press releases by e-mail](#)
- [Subscribe to our RSS feeds](#)



FOR IMMEDIATE RELEASE: July 27, 2010
SB-10-29

NTSB CITES TRACK CIRCUIT FAILURE AND WMATA'S LACK OF A SAFETY CULTURE IN 2009 FATAL COLLISION

The National Transportation Safety Board today determined that last year's fatal collision of two Washington Metropolitan Area Transit Authority (WMATA) trains on the Red Line in Washington, D.C., was a failure of the track circuit modules that caused the automatic train control (ATC) system to lose detection of one train, allowing a second train to strike it from the rear. The NTSB also cited WMATA for its failure to ensure that a verification test developed after a 2005 incident near Rosslyn station was used system wide. This test would have identified the faulty track circuit before the accident.

Contributing to the accident was the lack of a safety culture within WMATA; ineffective safety oversight by the WMATA Board of Directors and the Tri-State Oversight Committee (TOC); and the Federal Transit Administration's (FTA) lack of statutory authority to provide federal safety oversight. Additionally, WMATA's failure to replace or retrofit the 1000-series rail cars, after these cars were shown in previous accidents to exhibit poor crashworthiness, contributed to the severity of passenger injuries and the number of fatalities.

On June 22, 2009, at approximately 5 p.m., train 112 struck the rear of stopped train 214 near the Fort Totten station in Washington, D.C. The lead car of train 112 struck the rear car of train 214, causing the rear car of train 214 to telescope about 63 feet into the lead car of train 112. Nine people aboard train 112 were killed as a result of the accident, including the train operator, and dozens were injured.

"The layers of safety deficiencies uncovered during the course of this investigation are troubling and reveal a systemic breakdown of safety management at all levels," said Chairman Deborah A.P. Hersman. "Our hope is that the lessons learned from this accident will be not only a catalyst for change at WMATA, but also the cornerstone of a greater effort to establish a federal role in oversight and safety standards for rail transit systems across the nation."

As a result of this investigation, the NTSB made recommendations to the U.S. Department of Transportation, the FTA, TOC, WMATA, Alstom Signaling and transit authorities in six states using GRS Generation 2 modules. Issue areas included safety oversight, equipment inspection and maintenance guidelines and procedures, and targeted equipment removal and replacement.

A synopsis of the NTSB report, including the probable cause, conclusions and safety recommendations, is available on the NTSB website.

The NTSB's full report will be available on the website in several weeks.

Metro demonstrates safety commitment, compliance with NTSB recommendations, including replacement of 1000 series rail cars

For immediate release: July 26, 2010



Dozens of safety improvements have been made since 2009 accident

Metro received a formal pre-award approval letter today, July 26, from the Federal Transit Administration (FTA) for the procurement of the 7000 series rail cars from Kawasaki using Passenger Rail Investment and Improvement Act of 2008 (PRIIA) funds, allowing Metro to move forward with a notice to proceed.

Retirement of the 1000 series cars, the oldest in the fleet, is Metro's number one safety priority. The National Transportation Safety Board recommended that Metro's 1000 series rail cars, the oldest in the fleet, be replaced with more modern vehicles that will be equipped with advanced crashworthiness systems technology.

Of the 428 new cars, 128 of them will enable the expansion of Metro service on the Dulles rail corridor and 300 of the cars will be used to replace the 1000 series cars, which will improve safety and reliability of Metro's fleet.

"The award is significant because it allows us to follow through on a key National Transportation Safety Board recommendation, to address our top safety priority and continues to work to improve safety," said Metro Interim General Manager Richard Sarles.

Metro has conducted a top-to-bottom overhaul of its safety program and taken dozens of actions to build a strong safety culture at the transit agency and improve safety, including implementing NTSB recommendations in advance of the July 27 NTSB Board meeting on the June 22, 2009 train collision at Fort Totten.

"We have begun to see the beginning of a safety culture shift from one that was reactive to one that is proactive in taking steps to solve and correct issues, so that issues don't become problems," Sarles said, citing the agency's decision to pull all 100 of the 4000 series railcars to fix the door motors as an example of a precautionary proactive action that demonstrates the type of commitment to a safety culture the agency is strengthening.

Over the last year, Metro has taken proactive steps to replace and improve its equipment, make changes to its train control system, upgrade its infrastructure, expand safety training, rebuild its safety department and make extensive changes internally to change the Metro safety culture. The agency has proactively addressed real and potential safety concerns; sought advice from and hired experienced transportation safety experts; and implemented a communications strategy that allows the public to track monthly progress through an online vital signs report.

"Just as we have worked proactively and cooperatively with the NTSB to implement recommendations during the last year in advance of the NTSB's final findings, we stand ready to continue to work with them to build on our progress to date. We are committed to considering and following through on the findings and recommendations," Sarles said.

Immediately following the June 22, 2009 accident, Metro took the following steps related to its train control system and loss of shunt tool:

- Changed the operations of trains to manual mode.
- Instituted a twice-daily evaluation of its track circuits.
- Established test procedures to identify track circuits susceptible to parasitic oscillation, which is under review by the NTSB.
- Began work simultaneously, on a real-time 24/7, automatic track circuit monitoring system inclusive of loss of shunt, which is scheduled to be implemented in December 2010.
- When replacing impedance bonds, Metro installs a track circuit module from the same manufacturer, solely as a precautionary measure.

In diligently addressing other NTSB requirements and recommendations, Metro has:

- Approved a contract to replace the 1000 series rail cars with the 7000 series rail cars.
- Begun to install rollback protection on all rail cars. (The 1000 series will be completed by the end of this month.)

- Implemented an aggressive schedule to install guarded switches to decrease risk of a derailment. Metro has installed 114 of 178, with two more to be completed during the Labor Day weekend and an additional two during the Columbus Day weekend with the remainder to be completed by the end of FY 12 as a result of the more aggressive schedule.
- Reorganized the maintenance and engineering divisions within the new Transit Infrastructure and Engineering Services department to ensure better cooperation and improved communication between the two disciplines.
- Established a program to identify rail operators who are at a high risk for sleep disorders.
- Established a new standard for the maintenance of rail car wheels.
- Developed a comprehensive rail lubrication procedure, which is currently being tested.

Just as Metro has taken these actions to date, it is committed to continuing to work with the NTSB on recommendations that are expected to come from the July 27 meeting. The Metro Board of Directors has dedicated more than \$30 million in Metro's capital budget to be used to begin to address the added recommendations over the next three years.

Metro has already followed through on the recommendations received from the FTA's Audit by revising its Roadway Worker Protection Program / Training, strengthening communication between the General Manager and Chief Safety Officer and increasing safety staffing, resources and training. The FTA has determined that Metro's response to its audit is "open and acceptable."

As recommended by the FTA, Metro has retained and started work with independent safety experts to assist with developing a Hazard Management Program, revise the System Safety Program Plan, assess the expertise of the Safety Department, implement a Configuration Management Program, draft recovery plans for internal safety audits and open accidents and improve safety communications across the agency.

From the board room to the platforms, safety has been elevated at all levels of Metro. Among the many actions taken, Metro has:

- Reinforced the role of its safety department, increasing staffing in the department by 40 percent with more than 230 years of experience in safety, incident investigation, training, quality assurance, industrial hygiene, and environment management.
- Established monthly reports to the Board of Directors, who receive public updates on injury rates and incidents, trends, compliance with oversight agency action plans and status reports on safety programs, such as training and implementation of the Safety Measurement System, all of which is posted online for the public's review.
- Invited the Tri-State Oversight Committee to provide public quarterly reports during the Board's Customer Service and Safety Committee meetings.
- Implemented Safety Action Report Meetings with the General Manager and front-line superintendants.
- Assigned safety officers in rail yards and bus facilities.
- Increased coordination, communication and reporting with the Tri-State Oversight Committee, including working with the committee on a recent Triennial Audit.

Sarles said that the future success of Metro's safety program will depend on identifying and preventing hazards from ever occurring. With that, the agency has taken the following measures to create a safety culture focused on prevention within the organization:

- Started development of a new Safety Management System that provides a comprehensive view of all safety-related incidents, tracks the progress of incident investigation and monitors the status of corrective actions.
- Established and publicized an internal safety hotline for employees to anonymously report safety concerns.
- Strengthened its whistleblower protection policy and initiated discussions with its largest union to establish a procedure that encourages reporting of near misses without punitive consequences.
- Established an aggressive investigation focus in the event of any alleged retaliation against employees who report safety violations.
- Conducted a safety culture survey with 97 percent of active employees (9,400) completing the survey, which will serve as a benchmark for improvement.
- Retained independent consultants to complete an assessment of Metro's safety culture.

With a \$1 billion capital spending plan, the largest capital budget since the completion of the 106-mile rail system, Metro is also making other needed equipment and infrastructure improvements focused on maintaining a state of good repair, such as rehabilitating its heavily used Red, Orange and Blue lines.

In addition to working with the NTSB, Metro has also worked with the Tri-State Oversight Committee to close 202 of 256 corrective action plans over the last six years. Safety officials also

continue to work with the Federal Transit Administration (FTA).

News release issued at 1:58 pm, July 26, 2010.



Tell a friend about this story

Subscribe to notifications of Metro news releases

[Press releases](#) | [Press room](#)

Sarles updates NTSB on numerous safety actions taken by Metro

For immediate release: August 9, 2010



Initiatives to address recommendations already underway

Metro General Manager Richard Sarles made the following remarks at a joint meeting between the Metro Board of Directors and the National Transportation Safety Board on Monday, August 9, at Metro headquarters :

Chairman Benjamin, Chairman Hersman and members of the WMATA and National Transportation Safety boards, I appreciate the opportunity to brief you on the progress Metro has made in response to the NTSB recommendations we received two weeks ago.



On July 27, I and members of Metro's executive leadership team were in attendance, listening carefully to the NTSB board meeting proceedings to gain a full understanding of the findings and recommendations. We deeply appreciate the deliberation and careful analysis that went into the investigation and are committed to following through on each recommendation, as well as learning from the NTSB's observations and findings.

Immediately following the NTSB board meeting, we set out to address each of the 16 recommendations. Within 24 hours of that meeting, I assembled Metro's senior leadership team and have met with them regularly since then to begin developing a plan to act upon each and every recommendation as quickly as possible.

I'd like to walk through the actions that we are taking in response to each of the NTSB recommendations.

First, with respect to the recommendations for the Metro Board to revise policies and processes to further codify and improve safety oversight of Metro, staff is ready to implement your direction on a revised policy statement on the Board's oversight of system safety. We are also prepared to join you in amending our mission statement to reflect the Board and management's renewed commitment to safety. Additionally, as you previously directed, the Chief Safety Officer will report monthly to the Board on our safety progress to date, including responsiveness and compliance with safety oversight agencies, such as the National Transportation Safety Board.



Track Circuit Modules

The NTSB made two recommendations intended to reduce the potential of parasitic oscillation in track circuits.

We have already replaced Alstom modules at 34 locations in the system, are in the process of replacing eight more and are planning to replace modules at the remaining 61 locations. We will soon present the full expedited replacement plan to our Board.

With respect to inspection of track circuit modules, beginning in November we will increase the frequency of our inspections on audio frequency track circuit modules within the rail system from annual to quarterly inspections. We will continue the loss of shunt review twice daily until the testing is completed on the real-time alert system, and we can implement it.

Improving Internal Communications

In response to a recommendation to improve the dissemination of safety-related information, we have developed a cross-functional committee to develop procedures that ensure clear communication and document receipt of all technical bulletins and other safety-related information. We will begin to put these procedures in place within the next 60 days.

Wayside Communications

The next recommendation from the NTSB addressed the need to remove unnecessary communication equipment along the wayside that might interfere with the automatic train control system.

We are currently working to identify all locations throughout the rail system where unnecessary wayside communication equipment exists, and are developing a plan to disable and/or remove it. We anticipate beginning the first phase of removal by December.

Safety Analysis

There are two recommendations related to the Automatic Train Control system: to conduct a complete analysis of foreseeable failures and to address the findings of that analysis.

At the Board's direction, we have retained an independent firm who can perform a rigorous safety analysis of the automatic train control system and provide recommendations to address potential failures identified as a result of the analysis. We are presently working to develop the scope, schedule and budget for the project.

Cable Insulation Resistance Testing

The NTSB also recommended that cable insulation resistance testing become part of our periodic maintenance requirements.

A schedule is being developed to perform nightly cable insulation resistance testing as part of a larger comprehensive cabling maintenance review. We will provide the Board with additional information on the testing schedule.

Federal Transit Administration Final Report

The NTSB recommended that we, in cooperation with the Tri-State Oversight Committee, address the findings of the March 4, 2010, FTA audit.

I am pleased to report that we have submitted our initial response from the recent Federal Transit Administration audit to the Tri-State Oversight Committee in April and provided an update on our activity to the Tri-State Oversight Committee and Federal Transit Administration's Office of Safety and Security last week. We will submit our status report to the Federal Transit Administration and Tri-State Oversight Committee before the August 30 deadline.

Operational Data on On-Board Recorders

An additional recommendation was that we review data from on-board recorders in trains and the Advanced Information Management system.

Senior staff meets monthly to review data on reliability, maintenance and engineering, and then to develop trend analyses. We will include a review of the data from on-board recorders installed on rail cars in these meetings. Local 689 union representatives have agreed to participate in the meetings as well.

Non-Punitive Safety Reporting Program

The NTSB recommended the establishment of a non-punitive safety reporting program to collect incident reports from across Metro and share the review of those incident reports across the entire organization.

With regard to this recommendation, the Board of Directors took the first step by strengthening the Authority's whistle-blower protection policy. Management has also established a safety hotline for employees to anonymously report safety concerns. But we want to encourage employees further and ensure that they identify and report problems. To that end, we have initiated discussions with Local 689 to establish a procedure and program for the reporting of near misses without punitive consequences.

Hazard Identification & Hazard Management

The NTSB made two recommendations related to the evaluation of risk and the resolution of corrective actions.

In September, Metro's Executive Safety Committee which was previously established as the Standing Safety Executive Committee will review hazard identification and hazard management. This process will be included in the System Safety Program Plan. Further, as part of its monthly meetings, the Executive Committee will review safety audits, open corrective action plans and take the necessary steps to adequately address the corrective actions in a timely manner.

Removal of 1000 Series Cars

The NTSB recommended that Metro remove the 1000 series rail cars from service as soon as possible and replace them with rail cars that are comparable to the 6000 series rail cars in terms of crashworthiness.

A few weeks ago, our Board of Directors approved a contract to replace the 1000 series cars, which are the oldest cars in the fleet, with new generation 7000 series rail cars. The new cars will be equipped with advanced crashworthiness technology.

We will also examine the service and safety impacts of removing the 1000 series cars from service, or other operational alternatives, and report back to the Board.

Installation and Maintenance of On Board Event Recorders

The final two recommendations called for ensuring that the lead married-pair rail car set in each train has an operating on-board event recorder, and that we develop a maintenance program for our on-board recorders.

We are developing a plan to equip the 4000 and 1000 series cars with onboard event recorders. The 2000, 3000, 5000 and 6000 series cars are already equipped with event recorders. The enhanced maintenance criteria of the on-board event recorders will be incorporated in the preventative maintenance and inspection process beginning in November.

In the coming years, Metro faces a number of challenges and we appreciate that the Metro Board has already dedicated more than \$30 million over the next three years in our capital budget to begin addressing the NTSB recommendations and has retained a team of experts to examine and make recommendations on WMATA's safety culture.

Metro's staff is ready to meet these challenges in cooperation with the FTA, the NTSB, the Tri-State Oversight Committee and our other safety partners and under the leadership of the Metro Board.

News release issued at 5:38 pm, August 9, 2010.



Tell a friend about this story

Subscribe to notifications of Metro news releases

[Press releases](#) | [Press room](#)