



NATIONAL TRANSPORTATION SAFETY BOARD

An independent Federal agency

**Testimony of the Honorable T. Bella Dinh-Zarr, PhD, MPH
Vice Chairman
National Transportation Safety Board
Before the
Subcommittee on Transportation and Public Assets and
Subcommittee on Government Operations
Committee on Oversight and Government Reform
United States House of Representatives
on
D.C. Metro: Update
Washington, DC
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Good afternoon Chairman Mica, Chairman Meadows, Ranking Member Duckworth, Ranking Member Connolly and the Members of the Subcommittees. Thank you for inviting the National Transportation Safety Board (NTSB) to provide you an update on our investigation into the January 12, 2015 smoke and electrical arcing accident that occurred near the L'Enfant Plaza station.

The NTSB is an independent Federal agency charged by Congress with investigating every civil aviation accident and significant incidents in the United States and significant accidents and incidents in other modes of transportation – rail, highway, marine and pipeline. The NTSB determines the probable cause of accidents and other transportation events and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

L'Enfant Plaza Accident: Background

On January 12, 2015, about 3:15 p.m. eastern standard time, Washington Metropolitan Area Transit Authority (WMATA) Metrorail train 302 stopped after encountering heavy smoke while traveling southbound on the Yellow Line in a tunnel between the L'Enfant Plaza Station and the Potomac River Bridge. After stopping, the rear car of the train was about 386 feet from the south end of the L'Enfant Plaza Station platform.

A following train stopped at the L'Enfant Plaza Station at about 3:25 p.m., and was also affected by the heavy smoke. Passengers of both trains, as well as passengers on the station platforms, were exposed to the smoke. Passengers from train 302 were evacuated by D.C. Fire and Emergency Services approximately 45 minutes after the train stopped. WMATA Police officers provided assistance in guiding train passengers from the underground platform to the surface. As a result of the smoke, 86 passengers were transported to local medical facilities for treatment. Another nine people sought medical attention. There was one passenger fatality.

NTSB Recommendations on L'Enfant Plaza Accident

The NTSB initiated its investigation immediately after the accident occurred on January 12, 2015. Soon thereafter we identified concerns with the ventilation systems that required immediate action. On February 11, 2015, we made three urgent recommendations to WMATA. The NTSB makes urgent recommendations to address circumstances that create an imminent danger to the public. These urgent recommendations called on WMATA to: (1) assess the subway tunnel ventilation system verifying it is in good repair; (2) to develop and implement detailed written ventilation procedures for its operation control center; and (3) base these procedures on the most effective strategy for fan direction and activation to limit passengers' exposure to smoke. In addition, we urged WMATA to incorporate these procedures into its ongoing training and exercise programs.

In companion recommendations, we also urged the Federal Transit Administration (FTA) to audit all properties with underground rail operations to assess their ventilation systems, and recommended that the American Public Transportation Association inform its membership of the risks posed by inadequate ventilation systems.

More recently, we learned that some electrical connections associated with the power supply to the third rail were improperly constructed and installed without “sealing sleeves” when we examined electrical components from a smoke event that occurred in the tunnel near the Court House station on February 11, 2015. The NTSB investigation into the February 11 occurrence found cable connectors missing “sealing sleeves”. This deficiency can allow moisture and contaminants to come into contact with high voltage conductors. We have yet to determine whether this deficiency was a cause or contributed to the January 12 accident, but lack of “sealing sleeves” can increase the risk of electrical arcing. Therefore, on June 6, 2015, we recommended WMATA promptly develop and implement a program to ensure that all power cable connector assemblies are constructed and installed in accordance with its engineering design specifications, which include installation of “sealing sleeves”.

We currently are awaiting a response from WMATA regarding all four of these recommendations. We will continue to work with WMATA to ensure that they are implemented in an effective and efficient manner.

NTSB Investigative Hearing

The NTSB conducted an investigative hearing on June 23 and 24, 2015, as part of its investigation of the WMATA L’Enfant Plaza smoke and electrical arcing accident. The hearing examined four broad issue areas, including the state of WMATA’s infrastructure; emergency response efforts; WMATA’s organizational culture; and FTA and the Tri-state Oversight Committee’s (TOC) efforts to address public transportation safety. Witnesses from various parties involved provided important first-hand insight on what happened and addressed larger questions raised by the accident. Additionally, the NTSB brought in representatives from Montgomery County Fire and Rescue Services, Montgomery County, Maryland; Metro-North Railroad; and the Office of Rail Regulation, United Kingdom; to share their relevant experience in preventing and responding to accidents.

WMATA’s Organizational Culture

One of the purposes of the investigative hearing was to examine WMATA’s organizational culture. The NTSB heard testimony about the steps WMATA has taken since previous accidents, its internal structure, and its communication across the organization. This hearing was not the first time that the NTSB has examined WMATA’s organizational culture. Following the June 22, 2009 WMATA train collision near the Fort Totten station in Washington, D.C., that resulted in 9 fatalities and 52 injuries, the NTSB identified a number of organizational factors at WMATA that contributed to the accident. As a result, the NTSB issued 16 safety recommendations to WMATA.¹ All of these recommendations have acceptable action or acceptable response by WMATA.

¹ R-10-007 through -022.

During our investigative hearing, we focused on communication from the front line employees to the top level executives and across different organizations within WMATA. Organizational units can become insular, which is often referred to as a silo effect. Many interviews with the WMATA employees that were involved in the January 12 accident indicated that “the right hand didn’t know what the left hand was doing” demonstrating a concerning siloing effect.² Also during the emergency response, we heard about the challenges of WMATA and local emergency responders when it came to radio and other communications between the agencies. Since the 2009 Fort Totten accident, witnesses indicated that WMATA has improved its safety culture but that further improvements are still needed. For example, in 2013, WMATA implemented its “Close Call” program that allows employees to report safety problems anonymously. An official with ATU Local 689 testified that WMATA employees have become more comfortable reporting safety lapses through the Close Call program, but some remain reluctant to speak out because they fear retribution.

In an effort to gain an outside perspective on how to improve the safety culture within an organization, the NTSB also heard testimony from an official with Metro-North Railroad. Metro-North Railroad recently has had some very significant accidents and has dealt with organizational issues similar to WMATA. One of the ways Metro-North Railroad enhanced its safety culture was changing its department structures so that safety and security were not combined as one department, but now are two separate departments. In addition, Metro-North Railroad underwent efforts to ensure that training was allocated properly across all of its departments. Further, the Metro North official emphasized the need for a strong leader that truly believes that safety is the top priority; on-time-performance must follow safety.

FTA and TOC Efforts for Public Transportation Safety

The investigative hearing also explored the FTA’s safety oversight of rail transit as mandated by the Moving Ahead for Progress in the 21st Century (MAP-21) Act that was enacted in July 2012. This included inquiring about the role of the FTA in ensuring consistent safety oversight of rail transit and execution of the regulations. We also examined the safety oversight efforts of WMATA by the TOC, the FTA-designated state safety oversight agency. Comparatively, the panel reviewed the experiences of an international organization with regulatory oversight of rail and the regulatory efforts of the Federal Railroad Administration (FRA) and its effects on safety oversight.

The week prior to the hearing, the FTA completed a Safety Management Inspection of WMATA’s rail and bus systems. As a result of that inspection, the FTA issued 44 safety findings in eight categories regarding WMATA’s Metrorail system. The hearing focused on these findings and the FTA’s limited resources to conduct similar comprehensive inspections on other transit operations across the country.

The hearing also focused on the role of the TOC and its ability to adequately oversee WMATA’s operations. Through the testimony, we learned that the FTA does not have regulatory

² NTSB, *Exhibit B5: NTSB Operations Group Factual Report*, Docket ID: DCA 15 FR 004 (April 15, 2015).

programs providing boots on the ground inspectors to assure compliance similar to how the FRA and the United Kingdom assure safe transportation. Also we heard the TOC has extremely limited resources and authority in its ability to provide oversight of WMATA's daily operations and long-term improvement plans. Further, although the TOC applied to the FTA to become certified as a state safety oversight agency in 2013 under the new MAP 21 requirements, the TOC currently is not certified. This lack of certification will affect its ability to obtain funds from the FTA.

Finally, an official from the Office of Rail Regulation in the United Kingdom spoke about its operations. The official stated that their authority covers both transit and rail operations and found it interesting that in the United States this authority was split between two different agencies. Further, the official discussed tools used in the United Kingdom to quantify an organization's safety culture. The NTSB requested additional information about the United Kingdom operations for evaluation as part of this accident investigation.

Conclusion

The L'Enfant Plaza accident highlights NTSB's longstanding concerns regarding the safety of both the WMATA system and mass transit safety systems nationwide. Because of this longstanding concern, this year's NTSB's Most Wanted List includes "Make Mass Transit Safer."³ Every day, millions of people take some form of mass transit to get to or from shopping, work, classes, or other destinations. The advantages of efficient mass transit cannot be overstated. But unquestionably, mass transit also must be safe. WMATA and other mass transit agencies must work to identify, define, prioritize, and mitigate the safety risks that threaten their operations and, therefore, threaten public safety.

Our investigation is ongoing and we are currently reviewing the information obtained from our recent investigative hearing and beginning to analyze the extensive factual materials we have developed in the last seven months. We anticipate that our investigation will be completed early next year, and we will keep you informed as it moves forward.

Thank you for the opportunity to testify before you today. I look forward to responding to your questions.

³ NTSB, *2015 Most Wanted List: Make Mass Transit Safer* (2015), http://www.nts.gov/safety/mwl/Pages/mwl6_2015.aspx.

Biography



Honorable T. Bella Dinh-Zarr, PhD, MPH

T. Bella Dinh-Zarr, PhD, MPH, took the oath of office as the 42nd Member of the National Transportation Safety Board in March 2015, whereupon President Barack Obama designated her as Vice Chairman of the Board for a two-year term.

Vice Chairman Dinh-Zarr trained as a public health scientist, specializing in injury prevention, and has dedicated her career to working to ensure that transportation safety is a policy priority, domestically and internationally. She previously served as the U.S. Director and Road Safety Director of the FIA Foundation, an international philanthropy with the mission of promoting safe and sustainable surface transportation. In that role, she was active in promoting the United Nations Decade of Action for Road Safety and in advocating for transportation safety and injury prevention targets in the UN Sustainable Development Goals. Dr. Dinh-Zarr is proud to have helped initiate collaborative projects to improve road safety, especially for vulnerable populations such as children and pedestrians, in developing countries in the regions of Southeast Asia, sub-Saharan Africa, and Latin America.

Previously, Dr. Dinh-Zarr has held positions at the U.S. Centers for Disease Control and Prevention (U.S. Guide to Community Preventive Services), the National Highway Traffic Safety Administration, the American Automobile Association, and the Texas Transportation Institute. She was a Presidential Appointee to the White House Conference on Aging in 2005 and has championed dignified and safe mobility for older populations through community-based services and technological solutions.

Born in Vietnam, Dr. Dinh-Zarr is the first Asian American Board Member and Vice Chairman of the NTSB. She is a graduate of Rice University in Houston, Texas, during which time she studied at La Universidad Católica de Valparaíso in Chile. She has Master of Public Health (MPH) and PhD degrees from the University of Texas School of Public Health. During graduate school, she completed a fellowship program on alcohol-related injuries with the Cochrane Collaboration and University College London and conducted one of the first systematic reviews on injury prevention in the United States and the first systematic review on seat belt laws and enforcement. Dr. Dinh-Zarr has served as the Chair of the Injury Control and Emergency Health Services for the American Public Health Association, the UN NGO Committee on Sustainable Development, and the Transportation Research Board's Global Road Safety Subcommittee.

Dr. Dinh-Zarr's term of office as a Board Member ends December 2018.

