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National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: August 28, 1997

In Reply Refer To: R-97-37

Mr. James Lee Witt, Director
Federal Emergency Management Agency
500 C Street, SW
Washington, DC 20472

About 5:39 p.m. on February 16, 1996, Maryland Rail Commuter (MARC) train 286 collided with National Railroad Passenger Corporation (Amtrak) passenger train 29 near Silver Spring, Maryland. En route from Brunswick, Maryland, to Union Station in Washington, DC, MARC train 286 was traveling under CSX Transportation Inc. (CSXT) operation and control on CSXT tracks. MARC train 286 passed an APPROACH signal before making a station stop at Kensington, Maryland; proceeded as if the signal had been CLEAR; and, then, could not stop for the STOP signal at Georgetown Junction, where it collided with Amtrak train 29. All 3 CSXT operating crewmembers and 8 of the 20 passengers on MARC train 286 were killed in the derailment and subsequent fire. Eleven passengers on MARC train 286 and 15 of the 182 crewmembers and passengers on Amtrak train 29 were injured.¹

The National Transportation Safety Board determined that the probable cause of this accident was the apparent failure of the engineer and the traincrew because of multiple distractions to operate MARC train 286 according to signal indications and the failure of the Federal Railroad Administration (FRA), the Federal Transit Administration (FTA), the Maryland Mass Transit Administration (MTA), and the CSXT to ensure that a comprehensive human factors analysis for the Brunswick Line signal modifications was conducted to identify potential sources of human error and to provide a redundant safety system that could compensate for human error.

Contributing to the accident was the lack of comprehensive safety oversight on the CSXT/MARC system to ensure the safety of the commuting public. Contributing to the severity of the accident and the loss of life was the lack of appropriate regulations to ensure adequate emergency egress features on the railroad passenger cars.

¹For more detailed information, read Railroad Accident Report--*Collision and Derailment of Maryland Rail Commuter MARC Train 286 and National Railroad Passenger Corporation Amtrak Train 29, near Silver Spring, Maryland, on February 16, 1996* (NTSB/RAR-97/02).

The investigation identified problems with the Montgomery County Fire and Rescue Services (MCFRS) preparedness for railroad passenger train accidents; the CSXT, the MTA/MARC, and the MCFRS contingency planning; and the interaction between these three agencies. The MCFRS activated the fire annex section of the *Montgomery County Emergency Management Agency (MCEMA)* disaster plan; however, the fire annex section did not provide for interchange with the CSXT or MARC, which was evident when interactions were not consistently maintained between the supervisors or dispatchers or both of the MCFRS, the CSXT, and MARC. The MCFRS personnel were not receptive to the CSXT offers for assistance. The fire annex section did not provide for railroad representatives to respond to strategic locations to contribute their expertise and assistance.

The CSXT attempted to assist in evacuating passengers by moving trains closer to the accident site and only complicated the emergency response efforts. Although this attempt was consistent with the CSXT practice for controlling train movements and providing assistance, the MCFRS was not familiar with railroad operations because no procedures had been coordinated between the CSXT and the MCFRS. As a result, the accident scene was evacuated about 6:30 p.m. by emergency responders who feared that another train was entering the accident site. The MCEMA disaster plan did not contain procedures for responding to railroad passenger train accidents. To achieve the protocols and procedures described in any emergency management plan, emergency drills should be performed in conjunction with local emergency management agencies and with the railroad to reinforce training, to test communications, and to determine whether procedural changes are needed.

The Safety Board has found in other accident investigations² that emergency responders can be hampered in their search and rescue, as well as extrication, efforts because of the lack of emergency plans, inaccessible terrain along railroad property, accounting for number of passengers, difficult extrication caused by rescue tools inadequate for the construction of and materials in passenger equipment, coordination and communication with railroads and emergency responders, and infrequent disaster drills for emergency responders. With the exception of the nationwide Amtrak service, only certain localities have commuter passenger railroad service. Many rural emergency response agencies may never have had the opportunity to respond to a rail disaster involving fire. With the advent of high-speed passenger rail service, increased development of commuter railroad systems, and widespread rail transportation of hazardous materials, however, the likelihood of more communities being involved in a railroad emergency of this type has increased. The Safety Board therefore concluded that the lack of appropriate training for emergency responders in the areas of emergency planning, coordination and communications, rescue methods, inaccessible terrain along railroad property, familiarity with railroad equipment, and disaster drills may become a recurrent problem for other emergency response organizations unless a national effort is made to address emergency response training for railroad accidents. Consequently, the Safety Board believes that the Federal Emergency Management Agency should include in its training at the U.S. Fire Administration National Fire Academy a curriculum that addresses the needs of State and local emergency management agencies to respond to a major railroad accident and that familiarizes emergency response organizations with railroad equipment and appropriate rescue methods for railroad accidents.

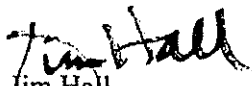
²Railroad Accident Reports—*Rear-end Collision of Amtrak Passenger Train 94, the Colonial, and Consolidated Rail Corp Freight Train ENS-121 on the Northeast Corridor, Chase, Maryland, January 4, 1987 (NTSB/RAR-88/01); Head-on Collision of National Railroad Passenger Corporation (Amtrak) Passenger Trains Nos. 151 and 168, Astoria, Queens, New York, New York, July 23, 1984 (NTSB/RAR-85/09); Derailment and Subsequent Collision of Amtrak Train 82 with Rail Cars on Dupont Siding of CSX Transportation Inc at Lugoff, South Carolina, on July 31, 1991 (NTSB/RAR-93/02); and Derailment of Amtrak Train No. 2 on the CSXT Big Bayou Canot Bridge near Mobile, Alabama, on September 22, 1993 (NTSB/RAR-94/01).*

Therefore, the National Transportation Safety Board recommends that the Federal Emergency Management Agency:

Include in your training at the U.S. Fire Administration National Fire Academy a curriculum that addresses the needs of State and local emergency management agencies to respond to a major railroad accident and that familiarizes emergency response organizations with railroad equipment and appropriate rescue methods for railroad accidents. (R-97-37)

Also, the Safety Board issued Safety Recommendations R-97-9 through -21 to the FRA; R-97-22 through -25 to the FTA; R-97-26 through -31 to the CSXT; R-97-32 through -35 to the MTA; R-97-36 to the U.S. Department of Transportation; R-97-38 to the Governor and the General Assembly of Maryland; R-97-39 through -42 to the Association of American Railroads; R-97-43 to the MCEMA; R-97-44 to the Baltimore County Emergency Management Agency, the Baltimore City Emergency Management Agency, the Metropolitan Washington Council of Governments, the Jefferson County Commissioners, and the Berkeley County Commissioners; and R-97-45 to the American Short Line Railroad Association, the Brotherhood of Locomotive Engineers, the United Transportation Union, the International Brotherhood of Teamsters, and the American Public Transit Association. The Safety Board also reiterated Safety Recommendations R-87-16, R-92-10, and R-93-12 to the FRA; R-92-16 to the General Electric Company; and R-92-17 to the Electro-Motive Division of General Motors. If you need additional information, you may call (202) 314-6430.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By: 
Jim Hall
Chairman