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R-648

# NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C. 20594



## Safety Recommendation

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**Date:** September 30, 1994

**In Reply Refer To:** R-94-6 through -8

Mr. Thomas M. Downs  
President  
National Railroad Passenger Corporation (Amtrak)  
60 Massachusetts Avenue, N.E.  
Washington, D.C. 20002

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On September 22, 1993, about 2:45 a.m., barges that were being pushed by the towboat MAUVILLA in dense fog struck and displaced the Big Bayou Canot railroad bridge near Mobile, Alabama.<sup>1</sup> About 2:53 a.m., National Railroad Passenger Corporation (Amtrak) train 2, the Sunset Limited, en route from Los Angeles, California, to Miami, Florida, with 220 persons on board, struck the displaced bridge and derailed. The three locomotive units, the baggage and dormitory cars, and two of the six passenger cars fell into the water. The fuel tanks on the locomotive units ruptured, and the locomotive units and the baggage and dormitory cars caught fire. Forty-two passengers and 5 crewmembers were killed; 103 passengers were injured. The towboat's four crewmembers were not injured.

Amtrak uses signs and placards, as well as briefings, to inform passengers about the safety features on its trains. This accident casts doubt on the effectiveness of Amtrak's briefing system for communicating such information.

Signs in Amtrak cars indicate the location of first-aid kits, fire extinguishers, and emergency windows; signs on the ceilings adjacent to emergency windows are phosphorescent. Each emergency window has signs explaining how to remove it from both the inside and the outside. Signs posted in the car vestibules and elsewhere throughout the cars also give

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<sup>1</sup>For more information, read Railroad-Marine Accident Report—*Derailed Amtrak Train No. 2 on the CSXT Big Bayou Canot Bridge Near Mobile, Alabama, September 22, 1993* (NTSB/RAR-94/01).

instructions about window removal. Some passengers on train 2 reported having noticed the signs on the emergency windows.

Amtrak has provided written guidelines on safety briefings in two employee publications. The *General Rules/Manuals of Service Instructions for On Board Service Employees* state:

All train attendants are responsible for including the following information as part of their routine passenger orientation:

That they have received special training in handling unusual or emergency situations and are prepared to assist in the event of such occurrence.

That passengers should notify their attendant immediately if they become aware of any emergency on the train.

That they are available for passengers' questions about procedures and locations of exit doors, emergency windows in their cars and fire extinguishers.

According to the "Guidelines for Effective Announcements" in Amtrak's *Manual of Instruction for Transportation Department Employees*, conductors are required to make the following announcement during departures from all stations:

Please observe in the seat pocket in front of you or on the bulkhead at each end of your car, an Emergency Exit Instruction Card. Please take a moment to read the procedures for emergency door and window exit instructions.

Thus, both on-board service (OBS) personnel and conductors have responsibility for safety briefings on Amtrak trains. Amtrak's written guidelines do not further delineate their duties in this area. Train 2's assistant conductor testified that he usually reinforces the safety briefings provided by the OBS supervisor. The lead service attendant said he believed that he heard a safety briefing over the public address system, and two passengers indicated that because of information provided by the traincrew, they knew the location of emergency exits. Several passengers did not recall hearing a safety briefing by anyone during their trip from Los Angeles to Mobile. If safety briefings were provided in all sections of the train, they were not effective because some passengers reported that they did not receive the information.

Moreover, while Amtrak's manuals state that such briefings are to be routinely given at all stations, an Amtrak official testified that the briefings are to be provided at the beginning of a trip and at major stops, noting that a "major stop" has not been defined. He added, "You want to have enough announcements that are informative but not so many that it becomes a burden. . .so it varies by route and type of service." Los Angeles might reasonably be

considered a major stop; however, some passengers boarding there said they were not given a safety briefing. They believed that such a briefing would have helped them evacuate the train quickly.<sup>2</sup> After the accident, several passengers said they did not recall hearing a safety briefing when they boarded the train.

Since most OBS crewmembers were asleep in the dorm-coach and since the train attendants were in the cars on the bridge, passengers in the submerged cars had to make decisions on their own and evacuate without assistance. The fact that at least some passengers apparently had not received safety briefings added to the confusion. Fortunately, a few passengers took control of the situation, located exits, and told others what to do. Safety briefings give passengers confidence that they know what actions to take in the event of an emergency and thus help motivate them to respond appropriately.

The Safety Board concludes that some passengers on board train 2 were unaware of safety information and that Amtrak does not have an effective system for apprising passengers of such information. Current written guidelines allow the OBS supervisor and train attendants to determine at which stations they will give briefings about emergency procedures, and the guidelines direct conductors to make an announcement about such procedures during departures from all stations. However, according to an Amtrak official, the conductor's announcement is required at the beginning of the trip, and either the conductor or OBS personnel are to give additional briefings at "major" stops, which have not been defined. The Safety Board believes Amtrak needs to develop and implement a uniform system to effectively apprise passengers of information pertaining to safety features.

During rescue activities, an Amtrak representative provided the incident commander with a partial passenger and crew list and told him that about 200 people were on board. A list compiled later the next day showed 207 people. The delay in providing an exact count caused problems because the incident commander had to assign personnel to spend a day counting tickets to help develop a passenger list. In addition, emergency responders did not know when to discontinue rescue operations because the count changed frequently. The railroad was not aware that three infants were on board because they were not ticketed. If Amtrak had issued nonrevenue tickets for the infants, they would have been included on the passenger list.

The Safety Board concludes that emergency responders were at a disadvantage because they were unable to obtain an adequate passenger and crew list from Amtrak until the next day. The Safety Board believes Amtrak needs to improve its passenger and crew count procedures so that accurate passenger lists can be furnished to local authorities with minimum delay.

According to passengers in coach 34040, which remained on the bridge, darkness prevailed outside the car after the derailment. Battery-powered emergency lighting, available inside the coach, provided some illumination, but only the traincrew had flashlights, which were

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<sup>2</sup>The conductor on train 2 in Los Angeles is no longer employed by Amtrak; despite repeated attempts, investigators were unable to contact him after the accident to ask him whether he had given a safety briefing.

not part of Amtrak's emergency equipment. A few passengers had penlights to use while walking down the tracks in the dark. The Safety Board concludes that because Amtrak did not equip its passenger cars with portable lighting, passengers were at a disadvantage in evacuating the train. The Safety Board believes train 2 should have been equipped with portable lighting for use by passengers in an emergency.

Passengers reported that once cars entered the water, emergency lighting became inoperable, further complicating evacuation from the submerged cars. Without light from a few penlights and from the fire that ensued following the accident, no light would have been available to passengers in these cars. Because emergency lighting was unavailable in the submerged cars, passengers had difficulty locating and moving to exits in the dark. The Safety Board is unable to determine whether emergency lighting, if operable, would have been effective in the muddy water.

Therefore, the National Transportation Safety Board recommends that the National Railroad Passenger Corporation:

Develop and implement a uniform system to effectively apprise passengers of information pertaining to safety features. (Class II, Priority Action) (R-94-6)

Develop and implement procedures to provide adequate passenger and crew lists to local authorities with minimum delay in emergencies. (Class II, Priority Action) (R-94-7)

Equip cars with portable lighting for use by passengers in an emergency. (Class II, Priority Action) (R-94-8)

Also, the Safety Board issued Safety Recommendations I-94-3 through -6 to the U.S. Department of Transportation; I-94-7 and M-94-30 to the U.S. Army Corps of Engineers; M-94-31 through -38 to the U.S. Coast Guard; I-94-8 to the Federal Emergency Management Agency; M-94-39 through -41 to The American Waterways Operators, Inc.; M-94-42 through -45 to the Warrior & Gulf Navigation Company; R-94-9 and -10 to the Association of American Railroads; and R-94-11 and -12 to the American Short Line Railroad Association.

The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter. Please refer to Safety Recommendations R-94-6 through -8 in your reply. If you need additional information, you may call (202) 382-6840.

Acting Chairman HALL and Members LAUBER, HAMMERSCHMIDT, and VOGT concurred in these recommendations.

  
By: Jim Hall  
Acting Chairman