



National Transportation Safety Board

Washington, D. C. 20594

Safety Recommendation

Date: March 23, 1992

In Reply Refer To: R-92-1

Honorable Gilbert C. Carmichael
Administrator
Federal Railroad Administration
400 7th Street, S.W., Room 8206
Washington D.C. 20590

At 8:23 a.m. on December 12, 1990, National Railroad Passenger Corporation (Amtrak) passenger train 66, consisting of a two-unit locomotive, two material handling cars, five passenger cars, one dining car, and two baggage cars, derailed and struck Massachusetts Bay Transit Authority (MBTA) commuter train 906, consisting of one locomotive, six passenger cars, and one control car, as both trains entered Back Bay station in Boston, Massachusetts.

Operated by an apprentice engineer, Amtrak train 66 was traveling 76 mph, within a 30-mph speed restriction, on a 9° 30' curve when it derailed and struck MBTA train 906 on the adjacent track. A fire ignited after the collision. On Amtrak train 66, 7 crewmembers and 43 passengers sustained injuries; on MBTA train 906, 5 crewmembers and 391 passengers were injured; and 7 firefighters sustained injuries. Estimated damage exceeded \$12.5 million.¹

Locomotive engineers were traditionally promoted from the ranks of firemen. This promotional process is not always available now. The prospective locomotive engineer usually acquired familiarity with the physical characteristics of the operating territories by working as a engine crewmember for many years. During that time, he also acquired train-handling proficiency, judgment, and other necessary operating skills under the supervision of experienced engineers who provided individualized attention. Moreover, when engineers began working in passenger service, they had usually become experienced in operating other kinds of trains before advancing to higher speed equipment.

Through its locomotive engineer training program, Amtrak is trying to provide the same basic operating knowledge and skills, but within a much shorter time

¹For more detailed information, read Railroad Accident Report--"Derailment and Collision of Amtrak Train 66 with MBTA Commuter Train 906 at Back Bay Station December 12, 1990 " (NTSB/RAR-92/01).

frame and more structured setting. Prospective engineers now receive at least part of their training in classes, and operating information pertaining to equipment and train control is technologically more advanced. The time allocated for completion of an entire engineer training program is sometimes less than 1 year. The National Transportation Safety Board believes that locomotive engineer training is a vitally important railroad management responsibility because the long-term promotional opportunities for seasoning through the ranks are diminishing.

The Safety Board is concerned that the 49 Code of Federal Regulations Part 240 final rule may not provide sufficient guidance to the railroad industry for developing, operating, and evaluating engineer training programs. The rule identifies nominal activities for acceptable training programs but does not specify which standards these activities must meet. The Safety Board takes particular notice of the exclusion of minimum training time requirements for activities such as physical characteristics qualification and learning operating skills. The Safety Board believes that after granting preliminary approval for a railroad's program, the Federal Railroad Administration (FRA) should base final approval on a thorough assessment of all training and evaluation activities.

The Safety Board also believes that the FRA should employ rigorous criteria in evaluating both new and existing programs in order to judge potential training effectiveness and to ensure an equitable approval process for all railroads. All railroads submitting requests for approval should include minimum completion targets for training activities based on actual program performance. Finally, the FRA should solicit comments from participants in the training programs for which approval is being sought and include such input in its evaluation process.

Because the rule is new, the Safety Board does not have enough information to evaluate the effectiveness of the FRA approval process. However, the Safety Board will monitor the FRA locomotive engineer certification program as it develops.

Therefore, the National Transportation Safety Board recommends that the Federal Railroad Administration:

Seek and include other input, such as comments about the quality of railroad training programs, from both instructing locomotive engineers and apprentice engineers in the programs for which approval is being sought and include such input in the evaluation process. (Class II, Priority Action)
(R-92-1)

Also, the Safety Board issued Safety Recommendations R-92-2 through -4 to the National Railroad Passenger Corporation; Safety Recommendation R-92-5 to the Brotherhood of Locomotive Engineers; and Safety Recommendation R-92-6 to the United Transportation Union.

COUGHLIN, Acting Chairman, and LAUBER, HART, HAMMERSCHMIDT, and KOLSTAD, Members, concurred in this recommendation.


By: Susan M. Coughlin
Acting Chairman