

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

AS-4

106 R-325

ISSUED: November 21, 1980

Forwarded to:

Mr. Prime F. Osborne
Chairman and Chief Executive Officer
Seaboard Coast Line Railroad Company
500 Water Street
Jacksonville, Florida 32202

SAFETY RECOMMENDATION(S)

R-80-50

About 7:33 a.m., on April 2, 1980, northbound Amtrak passenger train No. 82 collided head-on with Seaboard Coast Line Railroad (SCL) freight train Extra 2771 South at Lakeview, North Carolina. Train No. 82 overran a stop signal at the north end of the double track and entered the single track which Extra 2771 South had been authorized to use. Twenty-nine crewmembers and ninety-four passengers were injured, and damage was estimated at \$1,145,492. 1/

After receiving a clear signal at Southern Pines, North Carolina, train No. 82 departed on the west main track. Because of several rail-highway grade crossings in the area north of Southern Pines and because of the dense fog, the engineer blew the whistle frequently.

As the engineer approached signal No. 222.4, he applied the air brakes to slow the train to comply with the 50-mph speed restriction through a curve just north of approach signal No. 222.4 and then released them. He said he did not see the signal aspect until he was within 100 feet of it because of the heavy fog. As he passed the signal, he said he caught a glimpse of it and called it aloud to himself as "clear." As the train moved northward, it passed through the 50-mph restricted speed curve and then gained speed again as it moved down a 1.0 percent grade toward Fleet Interlocking, the north end of the double track.

1/ For more detailed information, read "Railroad Accident Report--Head-on Collision Between Amtrak Train No. 82 and Seaboard Coast Line Extra 2771 South, Lakeview, North Carolina, April 2, 1980" (NTSB-RAR-80-8).

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The Safety Board believes that, despite the fog, the engineer knew the location of his train on the railroad but the fog prevented his seeing the aspect of signal No. 222.4 until the train was very close to the signal. Whether or not the engineer actually saw the aspect displayed by signal No. 222.4 is questionable, but according to his testimony, he understood it to display a green or a clear aspect. Tests conducted after the accident indicated that the actual aspect displayed was an "approach" aspect.

As a result of his failure to either clearly see the signal aspect or to interpret it correctly, the engineer allowed the train to continue at the authorized speed for a clear signal. When the train approached the interlocking signal at Fleet, the engineer saw a "stop" aspect; however, it was not possible to stop the train before it passed the signal. The engineer of train No. 82 immediately radioed the crew of Extra 2771 South and warned them that train No. 82 had passed the stop signal and entered the single track. This enabled the engineer of Extra 2771 South to apply the brakes and reduce the speed of the freight train before the trains collided.

Although the locomotive of train No. 82 was equipped with cab signals and train control equipment, they were not operable on the SCL track because the wayside system was not compatible. However, if the system had been compatible, the engineer of train No. 82 would have received an audible indication when the locomotive passed signal No. 222.4, and if he had failed to acknowledge the signal and had failed to control the train's speed in accordance with the signal indicated, the train would have automatically stopped.

On February 7, 1972, ^{2/} the Safety Board recommended that the FRA develop a comprehensive program for future requirements in signal systems that would require, as a minimum, that all mainline trains be equipped with continuous cab signals in conjunction with automatic-block signals and that all passenger trains be equipped with continuous automatic speed control (train control).

On July 3, 1972, the FRA responded that, based on accident statistics involving signal failures or the failure of an engineer to comply with a signal indication, it could not justify a requirement for the railroads to install train control and cab signal systems. Economic reasons were also cited as a factor. Consequently, no action has been taken to implement the intent of the recommendation. In two subsequent accident reports, ^{3/} the Safety Board reiterated to the FRA the need for train control. Notwithstanding the position taken by the FRA, the Safety Board believes that the safety merits of train control are well established and that installation of necessary wayside signal systems and train equipment is justified as a safety measure when conducted in connection with the upgrading of signal systems.

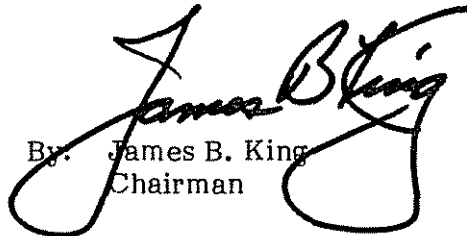
^{2/} Special Study, "Signals and Operating Rules as Causal Factors in Train Accident, February 7, 1972" (NTSB-RSS-71-3).

^{3/} Railroad Accident Report--"Rear-end Collision of Two Texas and Pacific Railroad Company Freight Trains, Meeker, Louisiana, May 30, 1975" (NTSB-RAR-75-9) and Railroad Accident Report--"Rear-end Collision of Conrail Commuter Trains, Philadelphia, Pennsylvania, October 16, 1979" (NTSB-RAR-80-5).

Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends that the Seaboard Coast Line Railroad:

Develop a program for its signal system that will require, as a minimum, that all mainline trains be equipped with continuous cab signals in conjunction with automatic-block signals and that all passenger trains and passenger train routes be equipped with continuous automatic-speed control (train control). (Class II, Priority Action) (R-80-50)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.


By: James B. King
Chairman