R-362A

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: June 23, 1981

Forwarded to:

Mr. A. S. Boyd
President and Chief Executive Officer
National Railroad Passenger Corporation
400 North Capitol Street, N.W.
Washington, D.C. 20001

SAFETY RECOMMENDATION(S)

R-81-67 and -68

About 8:37 p.m. on October 30, 1980, two locomotive units and seven of eight cars of southbound Amtrak passenger train No. 21, the Inter-American, derailed while moving at a speed of 63 mph through a 10-mph turnout on the Illinois Central Gulf Railroad at Springfield, Illinois. Six persons were injured and total damage was estimated at $593,000. 1/

The investigation of this accident revealed that the engineer and fireman of Amtrak No. 21 were unfamiliar with and apparently failed to comprehend aspects displayed by signals governing the approach to K. C. Junction, an interlocking where southbound trains could be routed three different ways. Passenger trains could be routed on the straight line with a maximum permissible speed of 79 mph, or they could be routed, as was done in this instance, through a 10-mph turnout. Elsewhere on ICG's Alton District, all remotely-controlled CTC turnouts had a maximum permissible speed of 30 mph. The signals on this district were all of the color-position type except at K. C. Junction and at Iles Tower, the location of the southbound approach signal for K. C. Junction. At these locations, ICG installed color-light type signals in 1975 and 1976. There was no visibly striking difference between the combinations of aspects displayed for the two routes that passenger trains could take. Although Alton District train crews were unfamiliar with the color-light type signals, they were not indoctrinated on these signals until 1978. Inasmuch as ICG provides rules training and examination only on a quadrennial basis, the crews have had no additional training since that time.

Dispatchers habitually avoided routing passenger trains through the 10-mph turnout at K. C. Junction. The crew of Amtrak train No. 21 could not recall when they had last been routed through the 10-mph turnout, and it is likely that they rarely, if ever, saw the combination of signal aspects displayed for their train on the night of the accident. Avoiding the use of the 10-mph turnout was an unsafe practice

1/ For more detailed information, read Railroad Accident Report--"Derailment of Amtrak Train No. 21, the Inter-American, on the Illinois Central Gulf Railroad, at Springfield, Illinois, October 30, 1980" (NTSB-RAR-81-5).

because it became commonplace and may have caused train crews to anticipate such action. In addition, since the signal aspects displayed for the route through the 10-mph turnout would rarely, if ever, be seen at K. C. Junction or any other location on the Alton District, they could not be readily recognized and comprehended by the train crews.

Also contributing to this accident were the lack of proper reference points in the timetable or on the wayside signs to indicate the 15- and 25-mph speed restrictions at Springfield and the practice of allowing passenger trains to operate as fast as 79 mph for less than 1 mile beyond the 25-mph restriction. This tended to encourage schedule-conscious engineers to violate the 25-mph restriction and as a result reduced the time they had to comprehend the signals at Iles. Amtrak No. 21 had reached a speed of 47 mph before the locomotive reached the end of the 25-mph restriction on the night of the accident.

The investigation revealed that the engineer had a history of violating speed restrictions and signal rules prior to being assigned to passenger service about 60 days before the accident. Yet, he received no additional instruction or training from ICG operating or safety officers before being allowed to take a regular passenger job. Although he had remarked to his immediate supervisor that he had been operating trains faster than allowable speeds to "help out with on-time performance," no effort was made to routinely monitor the engineer's performance.

The investigation further revealed that the engineer of Amtrak No. 21 had been required by ICG's chief medical officer to wear bifocal eyeglasses at all times while on duty to correct a deficiency in distance vision. The investigation developed that the engineer was not wearing the glasses on the night of the accident. It was further learned that the responsible ICG supervisors had never determined that the engineer knew and understood the full intent of the restriction.

Since 1969, the Safety Board has investigated 17 accidents involving passenger trains on the ICG and its predecessor. As a result of these accidents, 62 persons were killed and 808 persons suffered injuries. Many of these accidents involved Amtrak trains and in fact the first major Amtrak accident occurred on the Illinois Central a little more than a month after Amtrak became operative. Five collisions and derailments involving Amtrak trains occurred on the ICG during the 13 months preceding the Springfield accident. As in the case of Springfield, all but one of these occurred within a 200-mile radius of Chicago. The most serious of these accidents was the head-on collision between an Amtrak train and a standing ICG freight train at Harvey, Illinois, in October 1979. 2/ This was caused by a switchtender throwing a main track switch in front of the passenger train. The investigation developed that the switchtender had been inadequately trained and supervised and that electric interlocks had been removed from the main track switches without the substitution of some other positive means to prevent accidental misalignment of the switches.

During the past decade, the Safety Board, through its investigations of accidents, has repeatedly cited basic inadequacies in ICG rules, practices, and personnel training. Engineering changes have continued to cause operating situations that ultimately are at least factors in serious accidents. Employee compliance with and supervisory enforcement of rules and prescribed operating practices have continued to be deficient.

2/ Railroad Accident Report--"Head-end Collision of Amtrak Train No. 392 and ICG Train No. 51, Harvey, Illinois, October 12, 1979" (NTSB-RAR-80-3).

The Harvey and Springfield accidents indicate that there has been no demonstrable change in the situation or in ICG's policies concerning operational safety.

Amtrak was justifiably concerned with "on-time" performance, but should not have allowed this concern to overshadow its concern for the safety of its trains and its passengers. Although ICG operated its trains, Amtrak could have remedied the situation by operating the trains over other railroads between Chicago and St. Louis. Since Amtrak elected to use ICG, Amtrak operating supervisors and safety supervisors should have closely monitored ICG's management of Amtrak trains, particularly after the Harvey accident. They could have regularly made on-board and lineside checks and should have routinely monitored the speed recorder tapes removed from their locomotives. Route engineers should have been concerned with the track and signal changes at Iles - K. C. Junction.

As a result of this investigation, the National Transportation Safety Board recommends that the National Railroad Passenger Corporation (Amtrak):

> In cooperation with the Illinois Central Gulf Railroad, develop a program of close surveillance of the operation of its trains on ICG's Alton District which includes the compliance of train crews with speed restrictions and signal aspects, as well as the monitoring of locomotive speed recorder tapes. (Class II, Priority Action) (R-81-67)
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> Make route and schedule studies to determine that Amtrak trains can be safely operated over the ICG's Alton District on the existing schedules. (Class II, Priority Action) (R-81-68)

KING, Chairman, DRIVER, Vice Chairman, BURSLEY, and GOLDMAN, Members, concurred in these recommendations. McADAMS, Member, did not participate.

By: James B. King
Chairman