

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: June 23, 1981

Forwarded to:

Mr. J. T. Collinson
President and Chief Executive Officer
Chessie System Railroad
P.O. Box 6419
Cleveland, Ohio 44101

SAFETY RECOMMENDATION(S)

R-81-70 through -73

At 9:56 a.m. on February 9, 1981, Baltimore & Ohio Railroad Company's Brunswick Helper 7603-7545 and eastbound train No. 88 collided head-on while being operated in opposing directions on the No. 2 eastward main track. The trains collided in a 1°40' curve about 4,000 feet east of Germantown, Maryland. The fireman and the front brakeman of No. 88 and the engineer and the front brakeman of the Brunswick Helper were injured. Damage was estimated at \$701,000. 1/

Brunswick Helper 7603-7545 had received written and verbal authority from the train dispatcher to operate westbound on the eastbound track from Gaithersburg, Maryland, to Rocks, Maryland. The speed tape removed from the second unit of the Helper locomotive following the accident indicated that it was being operated in compliance with the speed requirements. The enginecrew of the Brunswick Helper was unable to monitor the railroad radio system because the radio speaker was inoperable on unit 7603, and they had no knowledge of the presence of No. 88 until it was sighted approaching in a 1°40' curve.

Train No. 88 was given a predeparture clearance by the operator at WB Tower in Brunswick, Maryland, and allowed to depart. The crew was not given any advance information as to the location of the Brunswick Helper. When No. 88 encountered an approach signal aspect at Seneca Fill, the reason for the restricted signal aspect was not known. Nevertheless, the fireman called the signal aspect to the conductor over the radio, and he reduced the speed of the train to conform to the signal indication. The Brunswick Helper's presence was known only after it was sighted approaching in the 1°40' curve.

When an eastbound train leaves WB Tower for Baltimore, Maryland, it can be routed either over the Metropolitan Subdivision (Metro SD) or it can be diverted at Rocks and routed over the Old Main Line Subdivision (OML SD). The OML SD dispatcher controls the train's movement between Brunswick and Rocks at which point he can operate switches and signals to route it to either subdivision. He

1/ For more detailed information, see "Railroad Accident Report--Head-On Collision Between Baltimore & Ohio Railroad Company Train No. 88 and Brunswick Helper 7603-7545 Near Germantown, Maryland, on February 9, 1981." (NTSB-RAR-81-6)

observes and records the time a train passes Rocks. The Metro SD dispatcher (Baltimore Terminal) does not receive an indication when a train passes Rocks, and it has not been an operational procedure for the OML SD dispatcher to give this information to the Baltimore terminal dispatcher. Furthermore, the OML SD dispatcher does not tell the operators at QN Tower at Washington, D.C., WB Tower in Brunswick, or HX Tower in Baltimore when a train passes Rocks. WB Tower reports a train's departure to either QN Tower or HX Tower or vice versa, but with the possibility of an eastbound train's being routed at Rocks, which is done frequently, the operators at QN and HX Towers often do not know what train is approaching them, and they have to ask the dispatcher for the train's identity. If a train leaving Brunswick is reported to either tower and it fails to reach them, the operators may assume that the train was diverted at Rocks, and thus take no action to determine its location. For this reason the operator at QN Tower did not raise a question to the Baltimore Terminal dispatcher as to the location of No. 88 the morning of the accident, even though he knew the train had left Brunswick.

Just before the accident on February 9, 1981, the Baltimore Terminal dispatcher had been issuing train orders on the Metro SD to route passenger trains around a broken rail. In addition, he had track work in progress and he had on-track-operated vehicles on another subdivision for which he had to give train information. During all this activity he was handling routine operations on other subdivisions assigned to him. In the midst of these activities, it became necessary to get the Brunswick Helper's crew back to Brunswick before they violated the Federal hours-of-service regulation which would require that they be relieved immediately irrespective of their location. Therefore, because of conflicting movements on the westbound track, which would prevent the Brunswick Helper from returning to Rocks over its normal route, the Baltimore Terminal dispatcher issued a train order to the Brunswick Helper to run it against the current of traffic on the eastward track from Gaithersburg, Maryland, to Rocks, and he overlooked No. 88 moving eastward between those points.

If the operational procedures had provided a backup check system from any or all of his coworkers involved in the reverse running movement to have reminded him of No. 88, the accident would not have happened.

The unrestricted access to the dispatchers' work area by other employees is not a desirable arrangement. Train dispatchers control an extremely complex and volatile field of activities. They need to concentrate continuously on the work in progress over their territory, and any distractions can be detrimental to their doing their best. Aside from being free from interruptions by individuals, environmental conditions such as heat, cooling, toilet facilities, and communication facilities can be distracting. All of these elements were named as contributing to distraction and being uncomfortable by the dispatchers on duty at the time of the accident when they were questioned during the Safety Board's investigation of the accident. The Safety Board believes that improvements in operating procedures and environmental conditions would reduce the risk of a similar accident.

Therefore, as a result of its investigation of this accident, the Safety Board recommends that the Baltimore & Ohio Railroad Company:

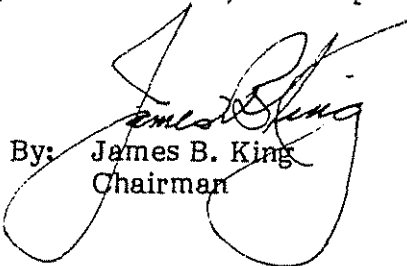
Establish a train reporting procedure at Rocks and similar locations that will enable each train dispatcher and the tower operator, in advance and to the rear of the train, to have a record of the times trains pass the reporting point. (Class II, Priority Action) (R-81-70)

Evaluate the workloads carried by the Old Main Line and the Baltimore Terminal dispatchers to determine if they are manageable. If either is not, adjust the workloads so that each dispatcher has a manageable assignment. (Class II, Priority Action) (R-81-71)

Redesign the Baltimore train dispatcher's office to provide facilities based on good human engineering principles and to eliminate the current distractions and uncomfortable environment. (Class II, Priority Action) (R-81-72)

Upgrade the radio system to eliminate the marginal coverage area between Barnesville and Gaithersburg. (Class II, Priority Action) (R-81-73)

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


By: James B. King
Chairman