

Log R-457B

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: January 4, 1984

Forwarded to:

Mr. W. H. Dempsey
President and Chief Executive Officer
Association of American Railroads
1920 L Street, N.W.
Washington, D.C. 20036

SAFETY RECOMMENDATION(S)

R-83-108 and 109

About 5:55 a.m. on April 3, 1983, Amtrak passenger train No. 820 (The Crescent), en route from New Orleans, Louisiana, to Washington, D.C., with 331 passengers and 18 crewmembers aboard, derailed when it struck a landslide near Rockfish, Virginia, on Southern Railway System (SR) track about 23 miles south of Charlottesville, Virginia. Heavy rains in the area preceded the landslide. The track had been inspected 6 hours before the accident. The train was moving about 48 mph at the time of the accident. There was no train order in effect for reduced speed in the area of the derailment. Twenty-four persons were injured, and damage was estimated to be \$232,000. 1/

The route of The Crescent through central Virginia is through mountainous terrain where the SR track is laid through many cuts. The trainmaster's concern that the heavy rains in the area on April 2 might affect train operations prompted the issuance of train order No. 587 instructing SR crews to "run carefully, looking out for slides and washouts." However, the train order did not restrict train speed, and the engineer of train No. 820 did not interpret the order as requiring reduced speed. The dispatcher issued only one written slow order—for a section of track 17 miles north of the derailment site—which was in effect on April 2 and April 3 for both northbound and southbound trains. However, the trainmaster apparently was concerned enough about two other areas, including the area where the accident occurred, that he had issued the dispatcher oral instructions for southbound train No. 819 on April 2 to reduce speed. These instructions apparently were not to continue in effect and were not given to northbound train No. 820 on April 3, which went through the area about 9 hours later. The trainmaster's concern over the weather also led to special track inspections. However, the derailment area was last inspected about 6 hours before train No. 820 collided with the landslide.

The heavy rains in the derailment area stopped about 9:30 p.m. on April 2. The weather forecasts on April 2 stated that the line of heavy showers and thunderstorms would be moving out of the area. The discontinuance of track inspections in the derailment area and the failure either to continue in effect the oral instruction to reduce speed in the derailment area on April 3 or to issue a written train order apparently were the result of the trainmaster's reduced concern over the effect of the weather on train operations once the rain ceased.

1/ For more detailed information read Railroad Accident Report—"Derailment of Amtrak Train No. 820 (The Crescent), on Southern Railway System Track, Rockfish, Virginia, April 3, 1983" (NTSB/RAR-83/10).

From the beginning, the SR's initial response to the weather situation was not effective. Train order No. 587's instruction to "run carefully" was ambiguous and did not require operating practices that would allow the engineer to perceive an obstruction and avoid a serious accident. Since operating rule 1013 that requires engineers to "take necessary precautions . . . during or after heavy rain . . ." is only a general precautionary rule, it must be supplemented by train orders or special instructions to make the rule meaningful. Under the SR rules, unless he encounters actually hazardous conditions, the engineer is not permitted to reduce timetable speed except by specific train order or special instruction; accordingly, the engineer of train No. 820 was operating the train as authorized at the time of the accident.

Even if the train had been moving at 25 mph, the speed required in the area by the trainmaster's oral instruction on the day before, the accident might not have been prevented because of the limited sight distance at the curve. Because of the curve, the engineer did not see the landslide until the train was within 200 feet of it. In order for the train to have been stopped in that distance, its speed would have to have been no more than 10 mph. The end of the rain, the termination of the special track inspections, and the absence of special track instructions, all of which the engineer had encountered the night before, may have given the engineer of train No. 820 a false assurance that the track ahead was clear for normal operations.

The Safety Board concluded that the SR should revise its procedures for train orders related to weather conditions to prescribe conditions under which the train orders should be issued, and the specific actions which are to be taken by crewmembers so that the risk of operating hazards caused by weather will be minimized.

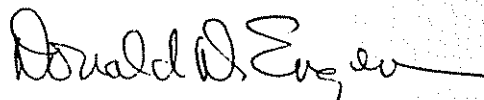
The Safety Board recognizes that many railroads have general precautionary operating rules similar to SR rule 1013. Rule 1013 will not be effective in adverse weather situations unless it is supplemented by specific instructions or train orders. All railroads should review and supplement as necessary their operating rules and practices to make them more effective in predictable albeit abnormal operating situations.

Therefore, the National Transportation Safety Board recommends that the Association of American Railroads:

Inform its members of the circumstances of the Amtrak derailment at Rockfish, Virginia, on April 3, 1983, and encourage them to review and revise as necessary their procedures for train orders related to weather conditions to prescribe conditions under which the train orders should be issued, and specific actions to be taken by crewmembers so that the risk of operating hazards caused by weather will be minimized. (Class II, Priority Action) (R-83-108)

Encourage its members to review and revise as necessary their operating rules and practices to make them more effective in predictable abnormal operating situations. (Class II, Priority Action) (R-83-109)

GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members concurred in these recommendations. BURNETT, Chairman, did not participate.


By: Jim Burnett
Chairman 