

Log R-456

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: December 22, 1983

Forwarded to:

Mr. W. F. Thompson  
Executive Vice President for Operations  
Burlington Northern Railroad Company  
9401 Indiana Creek Parkway  
Overland Park, Kansas 66210

SAFETY RECOMMENDATION(S)

R-83-101

About 3:55 a.m., c.s.t., on April 13, 1983, Burlington Northern Railroad Company (BN) freight train 64TT085 (64T85) (Extra 5086 West), while moving about 47 mph, struck the rear of standing BN freight train 43JJ005 (43J05) (Extra 5089 West) at Pacific Junction, Iowa. Four locomotive units and eight cars of train 64T85 and the caboose and seven cars of train 43J05 were derailed. The accident occurred about 2 miles within the yard limits at Pacific Junction. There was no flag protection provided by the standing train, and none was required by BN operating rules. There was no fire, and no hazardous materials were involved. The engineer of train 64T85 was killed, and the head brakeman, conductor, and rear brakeman were injured. The engineer, head brakeman, conductor, and rear brakeman of train 43J05 were injured. Damage was estimated to be \$972,000. <sup>1/</sup>

Train 43J05 and train 64T85 were operated over the BN's Denver Region, Nebraska Division, first subdivision. At the time of the accident, the BN was moving a heavy volume of coal traffic from coal mines in Wyoming to Oklahoma. Between 6 a.m. on April 12 and 6 p.m. on April 13, 12 trains moved north (timetable direction west) from Napier, Missouri, to Pacific Junction. There were no trains operated south between Pacific Junction and Napier during the same time. Train 43J05 and train 64T85 were trains of empty gondolas en route to Wyoming. Trains are operated between St. Joseph, Missouri, and Napier by the signal aspects of a centralized traffic control (CTC) system, timetable, and train orders. From Napier, trains operate over 77 miles of nonautomatic block signal (non-ABS) system territory to Pacific Junction.

The BN operating rules adequately provide for the safe movement of trains in non-ABS territory. On entering the nonsignaled territory at Napier, trains must be separated by not less than 10 minutes (rules 91 and 91A). The two trains involved in the collision were operating about 50 minutes apart at Napier. Each had proper running orders and the same slow orders. Thereafter, safety of operations was dependent upon the crews. Since the volume of traffic was unusually heavy between Napier and Pacific Junction, the BN management should have provided additional guidance to traincrews that would have improved the safety of train operations. One medium that was available to improve

<sup>1/</sup> For more detailed information read Railroad Accident Report—"Rear End Collision Of Two Burlington Northern Railroad Company Freight Trains, Pacific Junction, Iowa, April 13, 1983" (NTSB/RAR-83/09).

safety of operations over the first subdivision was the radio. The Atchison, Topeka and Santa Fe (ATSF) radio set on the lead locomotive unit of train 64T85 did not have provisions for a BN radio frequency, but a crewmember removed a BN radio set from the second locomotive unit and transferred it to the lead ATSF unit so radio communications would be available from that unit. The engineer of train 64T85 voluntarily radioed the train order signal aspect at Hamburg to the conductor on the caboose. This is a good practice, even when it is not required by operating rules. If there had been a company requirement for crewmembers of one train to communicate by radio their respective locations with crewmembers of other trains in circumstances such as those involving the trains closing up at Pacific Junction, safety would not have been dependent exclusively on the operating crews voluntarily advising each other of their locations. The conductor of train 43J05 gave no indication in his statement that he would have contacted the crew of train 64T85 to inform that train of his location except that he became alarmed because of train 64T85's closing speed. An attempt to contact train 64T85 when its headlight first became visible might have alerted its crew to the need to reduce speed and stop.

BN management does not consider the use of radio communications essential to safe operations, but rather that it is a convenience. Specific BN radio procedures requiring use of radios by standing and advancing trains to enhance the safety of operations might have prevented this accident.

Therefore, the National Transportation Safety Board recommends that the Burlington Northern Railroad Company:

Establish train operating procedures requiring the use of the radio to exchange information between trains on, entering, or departing main track routes. (Class II, Priority Action) (R-83-101)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility ". . . to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations, and the Board would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS and BURSLEY, Members, concurred in this recommendation. ENGEN, Member, did not participate.

By: Jim Burnett  
Chairman