RAILWAY OCCURRENCE REPORT

DERAILMENT

CANADIAN NATIONAL
CN FREIGHT TRAIN NO. 418-19
MILE 23.0, DUNDAS SUBDIVISION
BRANTFORD YARD TRACKS
BRANTFORD, ONTARIO
20 AUGUST 1995

REPORT NUMBER R95T0262

Railway Occurrence Report

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Mile 23.0, Dundas Subdivision
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Summary

At approximately 0915 eastern daylight time on 20 August 1995, the crew on Canadian National (CN) freight train No. 418-19 (train 418), while in the process of setting off 26 cars in Brantford Yard, derailed three loaded tank cars containing butane, UN 1075. All three cars remained upright and there was no release of product. The residents of nine nearby homes were evacuated as a safety precaution while the contents of one of the derailed cars was being transshipped. There were no injuries.

Ce rapport est également disponible en français.

Other Factual Information

The train crew operating train 418 en route from Sarnia, Ontario, to Hamilton, Ontario, was required to set off 26 cars on yard tracks at Brantford, Ontario.

While setting off 17 of the 26 cars onto track BA-36, the movement was shoved westward until clear of the fouling point at the east end. However, in the process, the two leading cars, PROX 29382 and TRUX 772, were pushed beyond the end of the track and derailed. The remaining 9 cars of the 26 cars were coupled onto 7 cars already standing on track BA-34 and were then shoved westward. However, in the process, the leading wheels of the leading car, PROX 98995, were shoved beyond the end of the track and also derailed. The derailed cars were noticed by the crew members of another assignment about six hours later.

The train crew consisted of a locomotive engineer and a conductor both of whom were fully qualified for their respective positions.

The crew on this tour of duty encountered fully occupied tracks where the cars were normally set off. The conductor obtained information for alternate tracks and their capacities from a train movement clerk located in Hamilton: track BA-34, 1,341 feet in length, and track BA-36, 1,146 feet in length. He then calculated the number of cars each would hold and instructed the locomotive engineer to shove westward, counted the cars as they passed him going into each track. He did not inform the locomotive engineer to stop the movement into either track until the cars were well clear of the fouling point at the east end of the tracks. The set-off onto track BA-36 totalled approximately 1,164 feet; the set-off onto track BA-34 totalled approximately 615 feet. When coupled to the seven cars already on track BA-34, the total length of cars on this track was approximately 250 feet less than track capacity.

The conductor did not ride the point car when switching on the yard tracks; he was positioned on the ground near the east switch.

Rerailing of the three tank cars commenced at approximately 1300, 20 August 1995. Cars PROX 98995 and TRUX 772 were rerailed without incident, using rerailers. Car PROX 29382 was about 30 feet beyond the end of track BA-36 and, when it was being pulled eastward toward the track, the wheels sank into the ground. As the car then had to be lifted before rerailing continued, it was decided to unload the contents. The consignor's emergency response team from Sarnia responded to handle the transshipping. Transport Canada personnel issued the necessary permit and Brantford City officials were advised that transshipping was scheduled for the following morning.

Nearby residents were contacted by the Brantford City Police and were evacuated from their homes for approximately six hours on 21 August 1995 as a safety precaution during transshipping. The local

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[1] All times are eastern daylight time (Coordinated Universal Time (UTC) minus four hours) unless otherwise stated.

Emergency Measures Organization coordinated the evacuation, handled public information and had a standby plan in place to also evacuate a nearby hospital, if necessary.

Transshipping from car PROX 29382 to car PROX 81902 was completed without incident.

Analysis

The conductor overestimated the number of cars that could be set off onto track BA-36. From his location during the set off, he was unable to see to the west end of the track and therefore did not take any action to stop the movement before the cars derailed.

Track BA-34 was of a sufficient length to hold the balance of the cars being set off if the movement had been stopped just clear of the fouling point at the east end of the track.

It would have been prudent for the conductor to ride the point of the movement when setting cars off on other than the normal set-off tracks.

The professional actions of the local Emergency Measures Organization and the consignor's emergency response team reduced the risk of a potential incident while transshipping procedures were being carried out.

Findings

1. The conductor incorrectly calculated the number of cars that track BA-36 was capable of holding.

2. The conductor did not ride the leading car of the movement when the cars were being shoved into tracks BA-36 and BA-34, nor was he in a position to alert the locomotive engineer to stop the movement before the cars derailed.

3. Emergency response procedures were executed in a timely and professional fashion with no undue risk to nearby residents.

Causes and Contributing Factors

The derailment was as a result of the conductor not being properly positioned to control the movement when the cars were being shoved into the yard tracks.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board, consisting of Chairperson, John W. Stants, and members Zita Brunet and Maurice Harquail, authorized the release of this report on 07 March 1996.