Transportation Safety Board of Canada | Bureau de la sécurité des transports du Canada

REASSESSMENT OF THE RESPONSE FROM TRANSPORT CANADA TO RAIL SAFETY RECOMMENDATION R96-12

RISK ASSOCIATED WITH OPERATING CABOOSELESS TRAINS WITHOUT AN ILLUMINATED REAR MARKER

Background

At approximately 0440 eastern daylight time on 28 October 1994, Canadian National (CN) freight train No. 386-3M-27 (train 386), travelling eastward on the south main track of CN's Halton Subdivision, collided with the rear of stationary CN freight train No. 448-3A-27 (train 448) at Mile 5.8 in Etobicoke, Ontario.

Two empty hopper cars at the rear of train 448 and the front wheels of the lead locomotive of train 386 derailed. There were no injuries. In this situation, train 448 did not have a red flashing marker light installed at the rear of the train.

In November 1990, TC had revoked clause 1.1 of order No. R-41300 which provided for the running of trains without cabooses provided the train was equipped with an end of train information system, with a rear train braking feature, and a red flashing marker light operated by an automatic light sensitive cell.

CN indicated that if restricted speed requirements had been properly applied, there would not have been a collision. Although the crew member at the controls did not abide by the provisions of "restricted speed", had there been a light on the rear of the train ahead, it may have offered the visual stimulus to the operating crew member to reduce speed and perhaps avert the collision.

The Board concluded its investigation and released report R94T0334 on 29 July 1996.

Board Recommendation R96-12 (29 July 1996)

The risk of rear-end train collisions has not so much to do with the frequency of such occurrences (indeed, they are rare), but also with the potential consequences. Given that tank cars carrying loads of even the most explosive or toxic dangerous goods are permitted to be marshalled at and close to the end of non-illuminated cabooseless trains, the consequences of a rear-end collision could be catastrophic for the operating crew of the following train and the public in proximity to the track. Measures to reduce the risk of rear-end collisions are therefore all the more important. The Board therefore recommends that:

Canada

The Department of Transport reassess the risk associated with operating cabooseless trains without an illuminated rear marker.

R96-12

Response to R96-12 (23 October 1996)

TC stated that this accident would not have occurred had the movement been operated at a reduced speed and prepared to stop within half the range of vision of equipment.

TC further indicated that the new generation of sense and braking units (SBUs) are equipped with both a light and a reflector. However, TC stated that illuminated rear markers are primarily intended to define the tail end of a train for the purposes of a number of rules applications, and not to prevent an occurrence of this nature. In view of the fact that the lack of lighted rear markers was not identified as a cause of this accident and given that the new technology is moving towards a dual system, Transport Canada did not see the necessity to further review the issue of lighted rear markers at that time.

Board Assessment of the Response to R96-12 (27 November 1996)

TC indicated that the cause of this accident was not attributed to the lack of an illuminated rear marker. Further, they indicated that illuminated rear markers are primarily intended to define the rear of a train for a number of rule applications, and not necessarily to prevent an occurrence of this nature. Consequently, TC did not see the necessity to further review the need for illuminated markers.

As stated in the Board's investigation report, "the question was whether the rear ends of trains are sufficiently conspicuous." An informal follow-up with TC with respect to newer SBU's having both a light and a reflector revealed that while this type of SBU was available, TC staff was not aware of when the railways planned to use them.

TC's response is worrisome in that it reflects a narrow approach to rail safety. TC appears to be limiting its considerations to those of "cause". Since the cause statement focuses on the crew's "operation of the train at a speed far in excess of the prescribed maximum limit", TC appears to be unwilling to consider safety deficiencies that are not specifically causal. Therefore, the reply was assessed as **Unsatisfactory**.

Next TSB Action (27 November 1996)

The Board followed up with TC to determine what further action would be implemented.

This file was assigned an **Active** status**.**

Board Assessment of the Response to R96-12 (22 December 2005)

The use of illuminated markers had become the industry standard for international operating requirements, however, no such norm was applied to domestic operation. As such, TC's original response was reassessed as **Satisfactory in Part**.

Next TSB Action (22 December 2005)

The Board followed up with TC to determine what further action would be implemented.

This file was assigned an **Active** status.

Response to R96-12 (28 July 2006)

Although TC had no update to provide at this time, the recommendation remains open. However, both major railways in Canada have provided staff with the information on use of the newer technology of end of train devices. The newer devices are equipped with a highly visible marker (HVM), presently used on all international trains and almost all domestic freight trains as well. Both railways indicate their plans to replace end of train devices that are not so equipped with the new HVM technology, and both railways have so far achieved over 90 percent replacement.

Board Reassessment of the Response to R96-12 (25 August 2006)

As action underway by industry will significantly reduce the identified risk, the action taken is considered **Fully Satisfactory**.

Next TSB Action (25 August 2006)

The railways have provided information that indicates to staff that the action taken will significantly reduce the risk. There is no further action required.

This file is assigned an **Inactive** status.