



## **REASSESSMENT OF THE RESPONSE TO RAIL SAFETY RECOMMENDATION R93-11**

### **Requirement that tank trucks carrying dangerous goods stop at all public crossings**

#### **Background**

On 05 August 1991, a tractor trailer loaded with petroleum crude oil collided with a CN freight train at Mile 172.25 on the Wainwright Subdivision near Kinsella, Alberta. The collision resulted in an explosion, fire, and four fatalities. The Board determined that the tractor trailer did not stop clear of the crossing for the approaching train although the flashing lights and bells were operating.

#### **Board Recommendation R93-11 (November 1993)**

In view of the occurrence record involving collisions with tank trucks carrying dangerous goods, the potential for a major disaster, and the time requirements for a heavy-vehicle operator to assess the situation when approaching railway crossings, the Board recommended that:

The Department of Transport coordinate with the appropriate provincial authorities to require that tank trucks placarded for the transport of dangerous goods stop at all public crossings before proceeding.

**TSB Recommendation R93-11**

#### **Transport Canada's response to Recommendation R93-11 (March 1994)**

Transport Canada's response references three studies by the U.S. National Transportation Safety Board, the U.S. Department of Transportation, and the U.S. Bureau of Motor Carrier Safety. These studies (based on U.S. experience) were inconclusive as to what actions to take regarding mandatory stops in the U.S. at railroad-highway crossings. In view of these reports, the Minister is reluctant to forward the Board's recommendation to the provinces without reviewing the Board's supporting material in the development of the recommendation.

Transport Canada (TC) officials requested that the Transportation Safety Board (TSB) provide copies of the analysis on this subject, quantitative data that substantiated the recommendation, and any other data that would explain to the provincial authorities the reasons for requesting that tank trucks, placarded for the transport of dangerous goods, to stop at all public crossings. It was explained to them that detailed information to the degree desired by TC does not exist. However, copies of the applicable TSB information were forwarded to the Director General Transportation of Dangerous Goods, TC, in June 1993.

In Nova Scotia, New Brunswick, Quebec and Ontario, vehicles must stop when a crossing warning device is activated or a train is plainly seen approaching the crossing. Alberta and

British Columbia have added that a school bus, a vehicle carrying explosive substances, and vehicles carrying flammable liquids or gas, whether loaded or empty shall stop at crossings not controlled by a traffic control signal. Manitoba's regulations add vehicles that carry passengers for compensation. Saskatchewan has further expanded their regulations to require vehicles transporting goods in an amount that requires the vehicle to be placarded, pursuant to the *Dangerous Goods Transportation Act*, to stop before proceeding over a level railway crossing. In addition, some petroleum trucking companies have their trucks marked to indicate that their trucks stop at all railway crossings or at all uncontrolled railway crossings.

#### **Board assessment of the response to Recommendation R93-11 (March 1994)**

TC's reluctance to address the issue of dangerous goods vehicles stopping at railway crossings, based on the U.S. reports, does not appear to be in accord with many of the provincial requirements or private companies' policies already in effect. TC has not directly addressed the Board's concern. Rather, they have requested additional analytical material to further assess the Board's rationale for issuing the recommendation. In the meantime, the potential for further crossing accidents involving dangerous goods does not appear to be being addressed by TC.

Therefore, the Board assesses the response to Recommendation R93-11 as **Unsatisfactory**.

#### **Board reassessment of the response to Recommendation R93-11 (April 2009)**

There does not appear to be any further action planned by the recommendation recipient and continued reassessment will not likely yield further results.

Therefore, the Status of the response to recommendation R93-11 is reassessed as **Dormant**.

#### **Transport Canada's response to Recommendation R93-11 (December 2010)**

All jurisdictions where federally-regulated railways operate, except for Ontario, Northwest Territories and Nova Scotia, have such requirements in their motor vehicle/highway traffic legislation. For more details, please see the following: in B.C., paragraphs 185(4)(c) and (d) of the Motor Vehicle Act; in Alberta, paragraphs 104(4)(b) and (c) of the Highway Traffic Act; in Saskatchewan, paragraph 209(7)(b) of the Traffic Safety Act; in Manitoba, paragraph 134(3)(c) of the Highway Traffic Act; in Quebec, Section 13 of the Highway Safety Code; in New Brunswick, subsection 184(1) of the Motor Vehicle Act, in Newfoundland and Labrador, Section 134 of the Highway Traffic Act, and in Yukon Territory, Section 171 of the Motor Vehicles Act.

#### **Board reassessment of the response to Recommendation R93-11 (May 2011)**

TC has ascertained the status in each jurisdiction and provided this information. The provincial/territorial authorities prescribe special considerations at unprotected crossings for vehicles carrying dangerous commodities in eight jurisdictions. In addition, there is a requirement for vehicles carrying certain dangerous commodities to stop unless the driver is assured by an automated signal that there is no train approaching.

Therefore, the Board reassesses the response to Recommendation R93-11 to be **Satisfactory in Part**.

### **Transport Canada's response to Recommendation R93-11 (December 2011)**

TC advised that no further action is planned.

### **Board reassessment of the response to Recommendation R93-11 (February 2012)**

TC has provided TSB with data indicating the extent to which each Province or Territory has addressed the deficiency in their respective traffic legislation. As of January 2012, 8 of 11 jurisdictions where federally regulated railways operate address this issue in their legislation. TC will not be pursuing this issue further.

Therefore, the Board reassesses the response to Recommendation R93-11 to remain as **Satisfactory in Part**.

Although no further action is planned to be taken by Transport Canada, the TSB is pursuing this issue with the provinces of Ontario and Nova Scotia.

### **Transport Canada's response to Recommendation R93-11 (November 2012)**

The Province of Ontario did not respond to the TSB letter. The Province of Nova Scotia responded with the suggestion that this issue be approached from a federal level to harmonize the legislation of the provinces.

### **Board reassessment of the response to Recommendation R93-11 (March 2013)**

Until these two provinces address this issue, the Board maintains the response to Recommendation R93-11 to remain as **Satisfactory in Part**.

### **Transport Canada's response to Recommendation R93-11 (February 2014)**

No new information was provided by Transport Canada. TSB sent a letter to the Canadian Council of Motor Transport Administrators (CCMTA) requesting its view on this railway crossing safety issue, and is awaiting a response.

### **Board reassessment of the response to Recommendation R93-11 (April 2014)**

Until the provinces of Ontario and Nova Scotia address the issue, the Board maintains the response to Recommendation R93-11 to remain **Satisfactory in Part**.

### **Response from the Province of Nova Scotia to Recommendation R93-11 (September 2014)**

In a letter response to the TSB, Nova Scotia indicated that it has investigated the concerns and raised what it believes to be serious concerns over the correctness of the proposed solution. Nova Scotia identified a lack of national consistency in rules governing the requirements for trucks hauling dangerous goods to stop before proceeding across at-grade railway crossings. Provincial and territorial legislation treats this matter in a substantially inconsistent way. Other concerns and recommendations identified by Nova Scotia include:

- The proposed solution may be an unsafe or incomplete solution and has failed to address concerns raised.
- Under all conditions, trucks fully loaded with dangerous goods coming to a stop at an at-grade railway crossing may not be able to clear the tracks before an approaching train arrives. This view is supported in the study document produced by Transport Canada and called “Warning Times at Rail-Highway Crossings”.
- At-grade crossing design and site distances are an important part of any solution. Consideration should be given to ensuring compliance with the Canadian Railway-Roadway Grade Crossings Standards. If at-grade design deficiencies exist, these should be fixed as an essential part of any solution. To fix one part of a problem without fixing another has the appearance of being piecemeal.
- Trucks loaded with dangerous goods and stopped on the highway are a rear end collision hazard.
- Under existing legislation, truckers operating in multiple jurisdictions will be subject to different rules. If a single best solution exists, one rule should be able to be written to cover off the needs of everyone; this can then be applied across the country.
- As a result of 2014 changes to the TDG [Transportation of Dangerous Goods] Regulations, permissive placarding is now enabled. This may make cross-country differences in legislation more disjointed. Clarification with respect to which dangerous goods loads would trigger a need for trucks to stop may be required.

Nova Scotia has again reviewed the issues surrounding trucks hauling dangerous goods across at-grade railway crossings. The latest findings are that the earlier work seems sound. There is no indication that any of the fundamental concerns raised have been addressed. Therefore, this analysis continues to form the foundation of Nova Scotia’s current position, namely, that it does not support introducing legislation to require trucks hauling dangerous goods to come to a stop before crossing at-grade rail way crossings.

To simply ask Nova Scotia and Ontario to solve the problem without first properly acknowledging and addressing the safety concerns raised may not be the best approach. Nova Scotia remains open to developing a nationally acceptable solution to this issue and recognizes that the TSB’s input is essential to reviewing its position.

### **Board reassessment of the response to Recommendation R93-11 (March 2015)**

TSB conducted a statistical review of crossing accidents involving heavy trucks that occurred from 1995 to 2013. The Province of Nova Scotia had no accidents at passive crossings involving these types of trucks. For provinces with at least 500 passive crossings, only the province of Manitoba had fewer heavy truck crossing accidents than the province of Ontario. The crossing accident statistics generally indicate the rate of heavy truck accidents has not been greater for provinces that do not require tank trucks transporting dangerous goods to stop at all public crossings before proceeding.

The Board acknowledges the work done by Transport Canada in coordinating with the appropriate provincial authorities to provide the relevant information. In consideration of the

new *Grade Crossings Regulations* and new Grade Crossings Standards which will improve railway safety at crossings for all vehicles, and given that there is no significant difference in crossing accident rates for heavy trucks whether or not the truck is required to stop, the Board considers the residual risk to be low.

The response to the recommendation is therefore considered to be **Fully Satisfactory**.

**Next TSB action**

This deficiency file is **Closed**.