



Office of the Chief Investigator
Transport and Marine Safety Investigations

Rail Safety Investigation

No 2008 / 01

Brief Report

Level Crossing Collision between a
B-Double Truck and a
Pacific National Freight Train
Red Cliffs (near Mildura)
16 January 2008



Scope and Reporting

The Chief Investigator

The Chief Investigator, Transport and Marine Safety Investigations is a statutory position established on 1 August 2006 under Part V of the *Transport Act 1983*.

The objective of the position is to improve public transport and marine safety by independently investigating public transport and marine safety matters.

The primary focus of an investigation is to determine what factors caused the incident, rather than apportion blame for the incident, and to identify issues that may require review, monitoring or further consideration. In conducting investigations, the Chief Investigator will apply the principles of 'just culture' and use a methodology based on systemic investigation models.

The Chief Investigator is required to report the results of investigations to the Minister for Public Transport and / or the Minister for Roads and Ports. However, before submitting the results of an investigation to the Minister, the Chief Investigator must consult in accordance with section 85A of the *Transport Act 1983*.

The Chief Investigator is not subject to the direction or control of the Minister(s) in performing or exercising his or her functions or powers, but the Minister may direct the Chief Investigator to investigate a public transport safety matter or a marine safety matter.

Issuing of a Brief Report

In those cases where an investigation is curtailed or a full investigation report is not considered warranted, the Chief Investigator may issue a Brief Report.

A Brief Report will typically include the particulars of the event, a description of the incident, a summary of pertinent investigation information and key findings and, as applicable, a description of identified safety issues and recommended safety actions.

Occurrence Details
Date: Wednesday, 16 January 2008 Time: 0830
Location ‘Passive’ level crossing № 2459 over the Millewa Road (Red Cliffs – Meringur Road), at 593.351 km from Melbourne (about 16 rail km south of Mildura railway station).
Trip / route details Pacific National freight train № 9141 from Appleton Dock (Melbourne) to Merbein (north of Mildura). The B-Double road rig was hauling wine from the nearby Lindeman’s Winery to Tanunda near Nuriootpa, South Australia via Lignum Avenue, the Calder Highway, Millewa Road, and the Sturt Highway.
Incident outcomes Neither member of the locomotive crew nor the truck driver was injured.
Vehicle details <u>Train</u> The train comprised XR class locomotives 553 (Lead) and 550 (Trail) hauling 31 wagons for 1508 tonnes and 651 metres long. <u>Truck</u> Standard-length (25 metres) B-double tanker with 2005 Kenworth K104 prime mover equipped with standard-height sleeper cab.
Vehicle operator Pacific National Pty Ltd.
Infrastructure manager V/Line Passenger Pty Ltd.
Environmental details Daylight. Weather conditions; clear, dry.
Other information Nil

Circumstances**Background / context**

Pacific National freight trains are normally the only rail traffic to traverse this level crossing. These trains usually pass this location heading towards Mildura around mid-morning each day, Tuesday to Friday, and early morning on a Monday. In the opposite direction (towards Melbourne) they pass over the level crossing in the early evening Monday to Thursday and Sunday. There are thus two train movements across this level crossing each day, Tuesday to Friday, but only one such train on each Monday and Sunday. There are no train movements on Saturdays.

Track speed through this section was normally 80 km/h but this had been reduced by Temporary Speed Reduction to 60 km/h due to track geometry and sleeper condition.

At the location of the incident the adjacent Calder Highway runs parallel to the railway with a screen of trees between the two.

On this occasion, the freight train was running 23 hours late at time of collision, and was thus passing the Red Cliffs location close to its normal running time.

Sequence of events

At around 0830 as train 9141 approached the Millewa Road level crossing, the Guard second person (aboard the locomotive) noticed a B-Double tanker truck turning right out of Lignum Avenue which serves the Lindemans winery, and head north on the Calder Highway. He attempted to sight the truck through the trees as it headed parallel to the train on the adjacent highway to see if its left-hand turn indicator was flashing for an intended left turn into Millewa Road. He was unable to ascertain this but the crew soon noticed the truck turn into Millewa Road and proceed across the level crossing in their path.

The driver had sounded the locomotive warning horn at the 'whistle board' and commenced sounding it again when he observed the truck making its left-turn into Millewa Road.

The locomotive collided with the rearward end of the second trailer of the B-Double, detaching it from its turntable assembly (5th wheel) and rotating it through approximately 160 degrees to deposit it close to the train and perpendicular to it.

The Guard second person was thrown from his seat on the Lead locomotive but neither crew member was injured. When the train came to a halt the driver placed an emergency radio call to Control (train control).

Summary Investigation Information and Findings**Personnel**

The driver and Guard second person (train Guard qualified for locomotive duties) were qualified to operate the train on the route taken.

The truck driver was correctly licensed and his log book was in order.

Vehicle(s) and equipment

The rail and road vehicles were authorised to operate on the respective rail and road infrastructure.

There were no faults identified with the either vehicle that may have contributed to the incident occurrence.

Infrastructure

The level crossing had Give Way signs for westbound traffic (the direction travelled by the truck) and Stop signs for eastbound traffic (the latter due to the proximity of the intersection with the Calder Highway). The distance between the edge of the Calder Highway and the Give Way line for the railway crossing was 23 metres.

An ALCAM level crossing assessment was completed on 7 August 2007.

Operations

There were no matters identified with regard to the operation of the train.

Identified Safety Issues

Level crossing environment – remedying non-conformances

An Australian Level Crossing Assessment Model (ALCAM) level crossing Field Survey exposed a number of anomalies with the relevant Australian Standard for railway level crossing traffic control devices. These relate to presentation and / or location of signage as well as condition of road pavement markings. Vegetation overgrowth within the rail reserve (restricting the sighting of on-coming trains) is also noted. All of these anomalies remained at the time of the level crossing collision.

Despite having undergone the above-mentioned ALCAM assessment, this level crossing remained deficient in several aspects of its warning signage and road pavement markings as existed at the time of the incident. Visual cues provided by signage and pavement markings are designed to provide the motorist or vehicle operator with appropriate advice of the status of a level crossing, thus any degradation of these instructive cues diminishes the vehicle drivers' notification regarding the hazard ahead. An assessment process that identifies design or application deficiencies in any system (for example, warning signage at a railway level crossing) is likewise diminished if such deficiencies — once identified — remain extant.

Since 2005 the Public Transport Division of the Department of Infrastructure has been working on the implementation of a project to inform relevant authorities of the results of ALCAM Field Surveys. This program was completed in February 2008 with the development of the ALCAM 'Issues' website which provides relevant road and rail authorities with notification of issues identified at ALCAM Field Surveys. This initiative is expected to address the issue of the timely dissemination of ALCAM Field Survey information to relevant authorities and responsible agencies, and the tracking and recording of progress toward resolution of identified problems.

It is considered unlikely that the identified non-conformances would have contributed to the incident. Additionally, although trackside vegetation had matured since the Field Survey, this would not have obstructed the view along the track of any motorist or vehicle operator who stopped as required at the railway crossing halt line.

Decision to Curtail Investigation

In this instance the Chief Investigator does not consider further investigation into the Red Cliffs level crossing incident to be warranted. A number of recent level crossing collisions throughout Victoria have either been investigated or examined by the Chief Investigator. These occurrences are quite similar in circumstance and appear to indicate a general lack of awareness by motorists and other vehicle operators of their approach to railway level crossings and of the inherent danger posed thereat. In a number of instances, examination has found evidence of non-conformance to Australian Standards in either or both of the location and presentation of road pavement markings and / or advisory or warning signage. The Red Cliffs incident is one such instance.

Recommendations to address the level crossing non-conformances have been made to relevant authorities as a result of an investigation in 2007 into a level crossing fatality on the Mornington Peninsula. It is also noted that motorist behaviour has been addressed by the Minister for Public Transport, the media and police.