



Derailment of Train 5WX2 near Winton, Victoria 31 July 2008

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Released in accordance
with section 25 of the
Transport Safety Investigation Act 2003

INFRA - 08247

Abstract

At approximately 2030¹ on 31 July 2008, freight train 5WX2 derailed near Winton, Vic. Thirteen freight wagons were derailed and about 720 metres of track were damaged. There were no injuries.

The investigation is continuing.

FACTUAL INFORMATION

The information contained in this preliminary report is derived from the initial investigation of the occurrence. Readers are cautioned that it is possible that new evidence may become available that alters the circumstances as depicted in the report.

Location

Winton is located near Benalla, approximately 180 km north-east of Melbourne and 550 km south-west of Sydney. The derailment occurred about 10 km north-east of Benalla on the main Melbourne to Sydney rail line, which is part of the Defined Interstate Rail Network (DIRN). This section of track consists of a single standard gauge track running parallel to the intrastate broad gauge track.

The track at the Winton derailment site is continuously welded rail secured to timber sleepers and supported on ballast. The track is owned by the Australian Rail Track Corporation (ARTC) and track maintenance has been contracted to Works Infrastructure.

Train information

Freight train 5WX2 was owned and operated by Pacific National and consisted of three locomotives (NR1, AN11 and NR28) hauling 44 loaded freight wagons. The train originated at Port Kembla (NSW) and was travelling to Port Augusta (SA). It was mainly carrying steel products, except for four hopper style wagons at the rear of the train which were carrying sugar. The train was 810 m long and weighed about 3500 tonnes. The maximum allowable speed for train 5WX2 was 80 km/h.

The occurrence

Shortly before 2030 on Thursday 31 July 2008, train 5WX2 had passed through Glenrowan and was travelling towards Benalla. About 10 kilometres north-east of Benalla, while travelling at about 80 km/h, the train drivers noticed a high reading on the brake pipe airflow meter indicating that brake pipe air was exhausting to the atmosphere and the train brakes would begin to apply. Train 5WX2 came to a stop and the driver contacted the ARTC train controller to advise that train 5WX2 had stopped due to a loss of brake pipe pressure.

The drivers walked back to investigate the cause of the brake application and discovered that only 30 of the 44 wagons were coupled behind the locomotives, two of which (29th & 30th) were derailed. A significant portion of track behind the train had been destroyed and 11 of the remaining 14 wagons were also derailed. The drivers again contacted the ARTC train controller and advised that train 5WX2 had derailed and a significant portion of track had been destroyed.

1 The 24-hour clock is used in this report to describe the local time of day, Eastern Standard Time (EST).

Post occurrence

Investigators and recovery crews progressively arrived on site from early morning on Friday 1 August 2008 and examined the site throughout the remainder of the day. As the examination continued, the Australian Transport Safety Bureau (ATSB) progressively released the site to allow recovery works to begin when heavy machinery arrived on site later that morning. Similarly, the ATSB released the undamaged front portion of the train, which continued its journey towards Melbourne when relief drivers arrived later that day.

Heavy lift cranes arrived on site during the afternoon. Access to the derailed rolling stock was hampered by wet weather and difficult terrain. However, recovery crews were able to move derailed wagons away from the track, thereby allowing clear access for track restoration works to continue.

The track was reopened for traffic at about 2150 on Sunday 3 August 2008 and the damaged rolling stock progressively recovered from the track side over the following weeks.

Site information

Investigators examined and photographed the derailment site. Initial observations indicated that a wheel had rolled over the rail head at about the 205.350 track kilometre point².

The evidence suggests the following as the most likely derailment sequence:

- One of the right-hand wheels from a wagon carrying coiled steel climbed and travelled over the top of the rail to the right-hand side of the track.
- As train 5WX2 continued towards Benalla, the derailed wheels impacted with the timber sleepers. The sleepers ultimately failed to maintain track gauge which allowed further wagons to derail.
- The train parted behind the 30th wagon as the following wagons began to jack-knife. Wagons continued to derail and jack-knife as the rear

portion of the train collided with the rapidly slowing derailed wagons.

- After the first wheel derailed, the train continued for about 720 m before coming to a stop.
- Only three wagons at the rear of the train remained on the rails. A total of 13 freight wagons were derailed.

The investigation is continuing and will include an examination of the following:

- track condition and maintenance records
- rolling stock condition and maintenance records
- recorded locomotive data and driver actions
- an analysis of the dynamic behaviour of the rolling stock and its interaction with the track.

Figure 1: Derailed wagon carrying coiled steel



² Track kilometre points are referenced from a point located at Spencer Street Station, Melbourne (0.000 km).