NO. 93-104

TRAIN B21 FREIGHT SERVICE

COLLISION WITH PEDESTRIAN

2 KM SOUTH OF TAUMARUNUI

22 MAY 1993

ABSTRACT

As the southbound express freight train from Westfield to Wellington rounded a bend near Taumarunui at dusk, the driver sighted a pedestrian on the tracks. The pedestrian lost his life when he was struck by the train.

TRANSPORT ACCIDENT INVESTIGATION COMMISSION

RAIL ACCIDENT REPORT NO. 93-104

T rain Number and Type:	B21 Express Freight
Locomotive:	EF 30128
Location:	North Island Main Trunk, 396 km, near Taumarunui
Type of Occurrence:	Pedestrian struck by train
Date and Time:	22 May 1993, 1800 hours *
Persons on Board:	Crew: 1
Injuries:	Crew: Nil Other: 1 fatal
Nature of Damage:	Nil
Information Sources:	Transport Accident Investigation Commission field investigation
Investigator in Charge:	Mr W J D Guest

* All times in this report are NZST (UTC + 12 hours)

1. NARRATIVE

1.1 New Zealand Rail Limited's express freight train B21, consisting of two Class EF electric locomotives and "58 crossing total" wagons* with a gross weight of 837 tonnes passed southwards through Taumarunui at approximately 1800 hours on the evening of Saturday 26 May 1993. As it left Taumarunui its speed steadied at 87 km/hr.

1.2 The line through Taumarunui Station was straight and level. To the south the line had two easy curves before a three kilometre long straight with an upwards gradient (1 in 440 easing to 1 in 733).

1.3 The train headlight was illuminated but it was on dip because the main road runs right beside the railway in this area and on high beam the headlight had the potential to dazzle motorists.

1.4 After rounding the second of the two easy curves and entering the straight, the driver noticed a person on the track ahead of him. He immediately turned the headlight to high beam, shut off the throttle, and applied the brakes to "emergency stop". The application of "emergency stop" automatically caused the locomotive's headlights to flash intermittently. The driver could not recall whether or not he sounded the horn, but remembers being preoccupied with the brake application and with watching the pedestrian.

1.5 The driver estimated that the pedestrian was only 100 m in front of the train when he first saw him, and it was not possible for him to stop the train in such a distance. The pedestrian did not clear the track before being struck and fatally injured.

1.6 The driver brought the train to a halt about 500 m further on by his estimate. He then contacted train control. The controller notified Police and ambulance, who responded immediately.

1.7 The leading locomotive carried an event recorder. An analysis of the log showed:

(a) The train throttle was initially in position 2.

(b) Within two seconds the throttle was closed (position "0").

(c) The train was brought to a stop approximately 608 m after the point of the first application of the brakes. This took 41 seconds to accomplish.

(d) The train took between 4 and 4.5 seconds to cover the first 100 m.

1.8 The event recorder was intended to record air brake pressures, but on this occasion the pressure readings appeared to be faulty. When the recorder was checked after the accident, it was found to be inoperative. Despite the faulty pressure readings at the time of the accident, the data did record the application of the brakes at the same time as the throttle was closed. The brakes worked normally and were not affected by the faulty recorder.

1.9 The event recorder logged the data every second, and the calculations therefore carried a margin of error arising from changes in the speed in any second. Nevertheless, the errors were not large enough to affect the accuracy of the description of events.

1.10 The event recorder data and calculations confirmed the driver's estimation of the speed, and the distance taken to stop the train.

1.11 The event recorder did not monitor the operation of the headlights or of the horn.

1.12 The Police advised that the pedestrian was wearing a dark green "Swanndri" jacket. It seems probable that the hood of the jacket was up and this could explain why the pedestrian did not seem to hear the train, or to show awareness of the headlight until too late. The pedestrian lived in a house near the track, and may have been using the railway track as a short cut.

1.13 As the train took no more than 4.5 seconds to cover 100 m, the distance at which the driver estimated he first saw the pedestrian, and this time was reduced by the reaction times of both the driver and the pedestrian, the pedestrian would have been left with no time to jump clear. The locomotive was 2.4 m wide, and the pedestrian was initially walking along the middle of the track. For him to escape would have taken a leap or dive of 1.2 m to have reached safety.

1.14 The accident occurred at 396 km NIMT (i.e. 396 km from Wellington on the North Island Main Trunk.)

2. FINDINGS

2.1 The train was being operated normally prior to the accident.

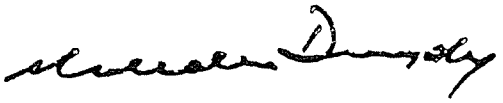
2.2 Although the locomotive event recorder was subsequently found to be faulty, there was no mechanical fault on the train which caused or contributed to the accident.

2.3 The locomotive driver reacted promptly when he saw the pedestrian.

2.4 The locomotive driver may or may not have sounded the locomotive horn after he first sighted the pedestrian on the tracks.

2.5 Because of the short time available between the locomotive driver sighting the pedestrian and the locomotive colliding with him, there was nothing the driver could have done to prevent the accident.

* "Crossing total" is an equivalent measure of length used by New Zealand Rail to gauge the size of trains against crossing loops. "58 crossing total" means that the train length was equivalent to fifty-eight 7.5 m long wagons. If the wagons were long bogie units, such as container wagons, then the number of wagons would have been much less than 58.



9 August 1993

M F Dunphy
Chief Commissioner