



## **Report 99-111**

**yard shunt and logging truck**

**collision**

**Kinleith**

**26 May 1999**

### **Abstract**

On Wednesday 26 May 1999, at approximately 0730 hours, a rake of empty log wagons was being propelled from the Kinleith railway yard into Carter Holt Harvey Limited's siding when the leading wagon hit the "bull-bars" of a logging truck parked foul of the running road. The remote control operator who was on the leading wagon jumped clear just prior to the collision but stumbled and fell against the wagon and was dragged for approximately 10 m before rolling clear. He received broken ribs and abrasions as a result of the accident. Causal factors were the positioning of the truck foul of the running road and the lack of adequate control of the shunt. Safety issues addressed in this report include the lack of a suitable integrated operational agreement for the site and the effectiveness of the current procedures, training, and compliance monitoring of shunting practices to ensure safe operation. Five safety recommendations were made to the operator.

The Transport Accident Investigation Commission is an independent Crown entity established to determine the circumstances and causes of accidents and incidents with a view to avoiding similar occurrences in the future. Accordingly it is inappropriate that reports should be used to assign fault or blame or determine liability, since neither the investigation nor the reporting process has been undertaken for that purpose.

The Commission may make recommendations to improve transport safety. The cost of implementing any recommendation must always be balanced against its benefits. Such analysis is a matter for the regulator and the industry.

These reports may be reprinted in whole or in part without charge, providing acknowledgement is made to the Transport Accident Investigation Commission.

Transport Accident Investigation Commission  
P O Box 10-323, Wellington, New Zealand  
Phone +64 4 473 3112 Fax +64 4 499 1510  
E-mail: [reports@taic.org.nz](mailto:reports@taic.org.nz) Web site: [www.taic.org.nz](http://www.taic.org.nz)

# Contents

<b>List of Abbreviations</b> .....	ii
<b>Data Summary</b> .....	iii
<b>1. Factual Information</b> .....	1
1.1 Narrative .....	1
1.2 Railway Operating Plan .....	4
1.3 Personnel .....	7
<b>2. Analysis</b> .....	7
<b>3. Findings</b> .....	9
<b>4. Safety Recommendations</b> .....	9

## Figures

<b>Figure 1</b>	Site layout .....	2
<b>Figure 2</b>	View line at 60 m from the point of impact .....	3

## List of Abbreviations

CHH	Carter Holt Harvey Limited
RCO	remote control operator
RO	rail operator
Tranz Rail	Tranz Rail Limited

# Rail Accident Report 99-111

## Data Summary

<b>Train type and number:</b>	Kinleith shunt
<b>Date and time:</b>	26 May 1999, 0730 hours
<b>Location:</b>	Carter Holt Harvey Limited (CHH) siding, Kinleith
<b>Type of occurrence:</b>	collision with logging truck
<b>Persons on board:</b>	Kinleith shunt crew: 1 logging truck crew: 1
<b>Injuries:</b>	Kinleith shunt: 1 serious logging truck: nil
<b>Damage:</b>	minor damage to logging truck
<b>Operator:</b>	Tranz Rail Limited (Tranz Rail)
<b>Investigator-in-Charge:</b>	R E Howe









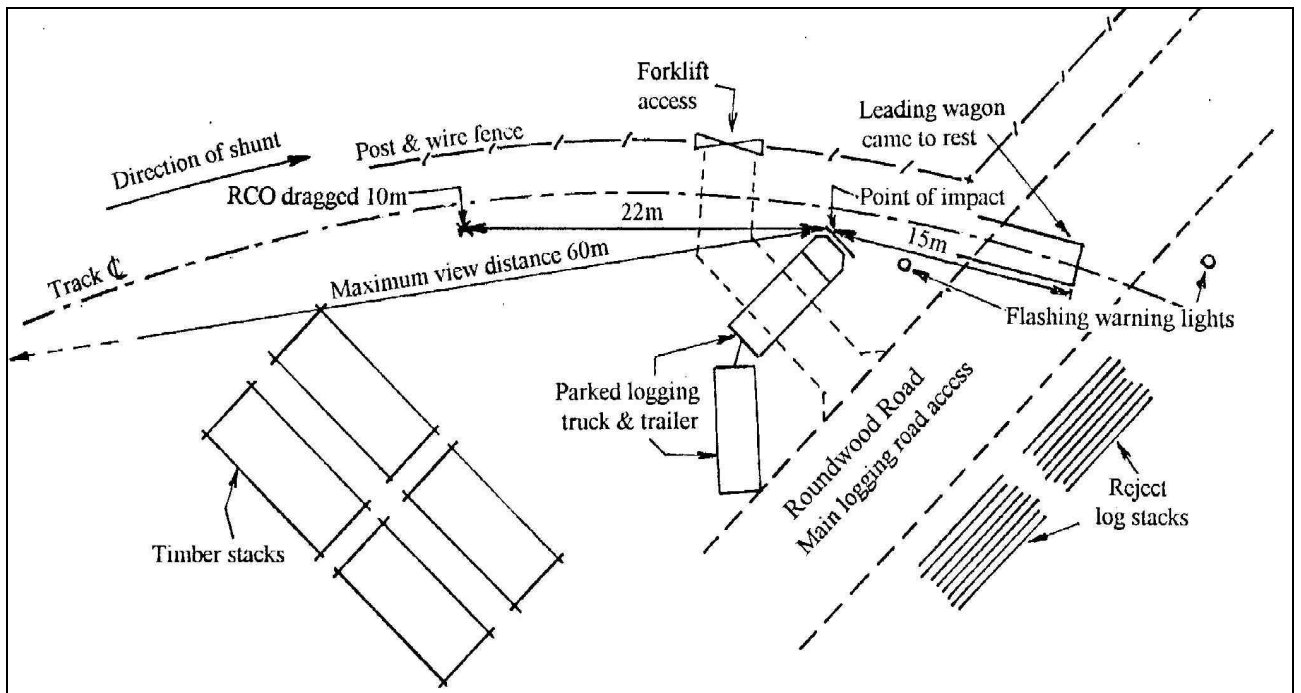
# 1. Factual Information

## 1.1 Narrative

- 1.1.1 On Wednesday 26 May 1999 a two-person shunt service was operating between the Kinleith railway yard and CHH log yard, picking up loaded log wagons from the log yard and conveying empty wagons to the log yard for loading. The shunt operated on a designated private siding complex owned by CHH which made a direct connection to the Kinleith railway yard. Parts of the siding were fenced off to allow only rail access but the majority of the track layout was open to common usage by road and rail.
- 1.1.2 At approximately 0630 hours a loaded log wagon rake was being prepared for shunting from the CHH log siding to the Kinleith rail yard when a brake hose burst half way along the rake. While the remote control operator (RCO) took the front half of the rake to the rail yard using a remote controlled DSG shunting locomotive, the rail operator (RO) remained with the rear half to replace the burst brake hose.
- 1.1.3 After the loaded log wagons had been placed in the Kinleith yard, the RCO coupled onto 11 empty log wagons and connected the brake hoses to propel them from the yard to CHH log loading sidings. The log loading sidings were one of a number of siding grids within the CHH complex, all linking up to a common siding access to the Kinleith railway yard.
- 1.1.4 At about 0725 hours the shunt left Kinleith yard for the mill. The RCO stated that he was controlling the shunt from a seated position on the right hand side of the deck of the leading wagon, adjacent to the second log cradle and some 5 m from the leading end. It was accepted practice by the shunting staff at Kinleith to ride on the deck of a wagon as they stated that it gave a better forward view. Because the RO was back repairing the brake hose at the CHH sidings, a second RO working in the railway yard operated the runaway turnout<sup>1</sup> which gave access to the running road servicing the CHH complex.
- 1.1.5 The RCO stated that he slowed the shunt as it negotiated the initial portion of the running road, which included Mill Road, a protected level crossing that serviced the CHH car park area. He then accelerated but limited the speed to allow for the possibility of forklifts crossing over the siding just short of the main logging road level crossing at Roundwood Road. The RCO understood the Roundwood Road crossing to be a protected crossing following the installation of the flashing lights and did not consider that he had to comply with Section 10.1 of Part 5 of the Rail Operating Code (see paragraph 1.2.8). Figure 1 is a diagrammatic layout of the site. In this area the running road was on a 250 m radius right hand curve with stacked timber on the inside of the curve limiting forward vision. The RCO stated that he sounded the locomotive warning device well before Roundwood Road level crossing.

---

<sup>1</sup> The initial portion of the private siding connection from the railway yard to the mill site was on a down-hill gradient and to prevent wagons from being inadvertently shunted into the siding, it was protected by a turnout which was normally set so that any runaway wagons were directed into a yard backshunt.



**Figure 1**  
**Site layout (not to scale)**

- 1.1.6 The RCO stated that at some distance off he noted the rear of the logging trailer on the right hand side near the main logging road level crossing, but the truck cab was hidden by stacks of timber. He did not notice the cab until he was approximately 40 m away and saw that it was parked foul of the running road. From his position on the leading wagon the maximum view distance to the obstruction was approximately 60 m but the RCO stated that his attention was concentrated on a forklift access adjacent to the running road just short of the road level crossing. Figure 2 is a photograph showing the view line at 60 m from the point of impact and the forklift access on the left hand side.
- 1.1.7 The RCO stated that on seeing the obstruction he immediately assessed that there was going to be an impact, applied the emergency braking<sup>2</sup> switch and at the same time jumped from his position on the right hand side of the wagon deck. The RCO stated that the “whiplash” effect of braked wagons would result in jarring and he considered it would be safer to jump. He estimated that the speed of the rake at the time was approximately 15 km/h.
- 1.1.8 The RCO landed in a small track-side depression and was thrown back against the side of the moving wagon which knocked him to the ground. He became entangled with the underframe of the wagon and was dragged along on the ground for approximately 10 m before becoming clear. The RCO was unable to move following the accident and was later found to have broken ribs.

<sup>2</sup> The transmitter control box used by RCO’s had a “push to operate” (PTO) vigilance control which if released would automatically apply braking after a 3 second delay. In addition there was an emergency braking switch on the control box which applied emergency braking instantly.



**Figure 2**  
**View line at 60 m from the point of impact**

- 1.1.9 The truck driver was in the cab of the logging truck at the time. He said he was alerted by the activated flashing lights at Roundwood Road level crossing and looked around and saw the approaching shunt. He then realised that he had parked too close to the running road and tried to select reverse gear to back his truck but “the train was there too quickly”. Before he could reverse, the second stanchion of the leading wagon struck the front “bull bars” a glancing blow dislodging them. The collision occurred at about 0730 hours. The shunt came to a stop with the leading wagon on the adjacent level crossing, approximately 15 m beyond the point of impact and 47 m from where the RCO initially landed.
- 1.1.10 The truck driver had parked in a position to enable reject logs stacked adjacent to the logging access road to be loaded onto his truck. He stated that he took care to ensure that the rear end of the trailer unit was clear of the busy logging access road and in doing this had to manoeuvre the front of the truck close to the railway track. He considered that he had clearance, although he stated that from his driving position, which was diagonally remote from the track, this was hard to judge. He did not get out of his truck to check the clearance.
- 1.1.11 The truck driver stated that he normally worked in an area of the compound remote from the rail sidings and although he was aware of the “Railway Operating Plan” (see paragraph 1.2.1), he was unaware of any specific requirement relating to safe clearance distances from the track centre line. He stated that he did not hear any warning whistle from the shunt.
- 1.1.12 When the shunt stopped the truck and forklift drivers, who were both aware of the collision but unaware of the accident to the RCO, carried on loading logs as they awaited the arrival of the RCO, who they assumed was still in the locomotive. It was not until the forklift driver started loading the first bundle of logs after the accident that he was in a position to observe the injured RCO lying on the ground at which time he alerted emergency services.

1.1.13 The forklift driver stated that he did not usually load logs onto trucks that were that close to the railway line. He initially thought the truck was too close to the siding but on seeing the driver subsequently reposition his truck had assumed that he had taken the siding into consideration and had parked accordingly. He was not aware of any specific safety regulations with regard to the railway lines, other than using individual judgement to keep clear of rail traffic and “keeping an eye out for the trains”, and had not been briefed on the Railway Operating Plan. He noted that the flashing lights at Roundwood Road crossing were working but did not hear any whistle from the locomotive.

1.1.14 The level crossing was equipped with standard St. Andrews railway crossing signs. Approximately 8 months prior to the accident red warning lights which were automatically activated by approaching shunts had been fitted to the top of the St. Andrews standards.

1.1.15 Wagon ULA 1882 was a standard log wagon fitted with 4 log cradles and with the following dimensions:

length over headstocks	13 110 mm
bogie centres	10 060 mm
overall width	2870 mm
deck height	940 mm
cradle centres	3200 mm

The shunter’s footstep on the leading end of the wagon was on the right hand side.

1.1.16 Tranz Rail required the following side clearances from siding centre line:

Isolated obstructions up to 2 m long where a clear way is required for operating staff:	2.6 m
Obstructions on one side of the track only, and where staff can safely work on the other side:	2.3 m

These distances to be increased on the inside of curves.

## 1.2 Railway Operating Plan

1.2.1 The track was part of a private siding complex installed by New Zealand Railways during the initial development of the mill site to service the various processing plants that made up the mill. The operation of the siding was covered by a “Railway Operating Plan” agreement between Tranz Rail and CHH dated 20 February 1998.

1.2.2 The agreement referred to conditions relating to both the “sidings” (all railway track at areas used for loading and unloading of railway wagons) and “running roads” (all track between the Tranz Rail yard and the sidings). The accident occurred on a running road portion of the private siding. The agreement defined Tranz Rail as the designated operator for all the track.

1.2.3 Clauses relating to operating procedures included:

### 4.1 Running Roads

...

The Tranz Rail Shunting Service will have right of way on these portions of track.

### 4.5 Speed

The maximum speed for all train movements is 15 km/hr.

#### **4.7 Protected Level Crossings**

The Mill Road Level Crossing is protected by lights and bells. These warning devices will actuate automatically for trains entering the mill. For trains departing from the mill the device shall be activated by Tranz Rail personnel by the switch provided. Cancellation after clearance of the train shall be automatic.

#### **4.8 Unprotected Level Crossings**

It is the responsibility of those in charge of road vehicles to keep clear of rail vehicles at level crossings.

The maximum speed of train movements across unprotected level crossings shall not exceed walking pace.

Before moving a Shunting Service over these crossings Tranz Rail staff must protect the crossing in accordance with Tranz Rail "Rail Operating Code" instructions Section 5 – copy attached.

The installation of the warning lights to Roundwood Road level crossing was carried out subsequent to the date of the agreement and although warning bells were not installed, it was considered by the RCO on the day to be a protected crossing. Following the accident the Area Operating Manager at the time was asked the status of the crossing. He stated he was aware it was protected with flashing lights but did not know whether it was now a protected or unprotected crossing as defined by Tranz Rail. However, Tranz Rail's Corporate Manager, Quality and Safety advised on 16 November 1999 that Tranz Rail did not consider this to be a protected crossing. The Railway Operating Agreement had not been amended following the installation of the warning lights at Roundwood Road.

- 1.2.4 Section 5 of the Tranz Rail Operating Code dated 8 December 1997 (Issue No.3) relating to all level crossings included:

#### **10.0 Level Crossings**

There is a risk of collision with road vehicles when shunting over a level crossing. For this reason staff should not ride on the front of a locomotive or leading vehicle over level crossings unless the crossing has been protected . . . , or until it is seen that road vehicles are responding to automatic warning devices

. . .

- 1.2.5 Tranz Rail Operating Code, Section 5: Operating Instructions for Yard Shunting and Allied Staff, section 3.1.1, included:

#### **Riding on Wagons**

Riding is permitted in the following positions :-

-The purpose built riding position being the handbrake or footstep

Note: Don't ride with one foot resting on the buffer or brake equipment.

-On the deck of fully decked flat top wagons either empty or loaded with containers provided that sufficient area is available in the centre of the wagon.

Note: When boarding and alighting flat top wagon decks the movement must be stationary.

In all cases face the direction of travel and be prepared for any surges that occur.

1.2.6 Tranz Rail Operating Code, Section 5: Operating Instructions for Yard Shunting and Allied Staff, Remote Control Locomotives, Section 4.4 included:

Operators are required to work within the “range of vision”

Range of vision means being able to see down the track in the direction of travel while having the movement under control. The range of vision will be influenced by such conditions as the weather, buildings, grade, propelling, time of day etc.

The Operator is required to take up a position with adequate range of vision in the area being shunted at all times. Keeping the “range of vision” may require significant movement on the part of the Operator.

It is the responsibility of the Operator to ensure that operations are always protected and carried out safely. While travelling through yards, the operator or second person must ride on or precede the leading vehicle.

While shunting, the Operator’s position will be determined by the need to maintain adequate “range of vision”, especially shunting dead end roads, into and out of sidings, approaching road level crossings and areas of common territory.

The range of vision requirement may be shared by the Operator’s second person (where provided) when instructed to assist during shunting operations.

The Operator must sound the locomotive whistle approaching all level crossings, entering or pulling out of a siding/freight shed, or where other operating staff are not aware of your movements . . .

Tranz Rail advised that this instruction “primarily related to the ‘man on the ground’ maintaining an adequate range of vision when operating the locomotive in Remote Control mode and not riding on the unit.”

1.2.7 General code requirements for care in shunting included:

**1.7 Propelling**

When propelling rakes of vehicles, staff must signal the movement from a position at or near the head of the rake in the direction of travel from which a clear view of the intended route can be obtained.

**1.10 Maximum Speed of All Movements on All Lines other than Main Lines and Industrial Lines**

The maximum speed of all movements on other than Main Lines and industrial Lines must NOT exceed 25 km/h. The speed of the movement must be so regulated that it can be stopped in the clear distance seen ahead.

This also applies when signals are displaying a normal speed indication on a crossing loop.

Further speed restrictions may apply at various locations – see Local Instructions.

1.2.8 Tranz Rail advised they considered the following code section relating to level crossings was applicable to the accident:

**10.1 Protection of Level Crossings**

At level crossings where automatic alarms are not provided or are inoperative the speed of shunting movements approaching and onto the level crossing must be regulated to less than walking pace being prepared to stop.

Where there is an unrestricted view and it can be clearly seen that there is not road traffic at or approaching the crossing concerned the movement can proceed at walking pace with the Shunter in Charge calling it onto the crossing.

If road traffic is approaching then before the shunting movement proceeds over the level crossing shunting staff must first stop the road traffic; by day – holding up one hand, or by night – displaying a white light in such a manner that it will warn road users to stop. The shunting movement can then be called onto the level crossing.

Whenever a shunting movement follows a train over a level crossing there is a risk of collision with road vehicles which may have been waiting for the train to pass. In such cases special care must be taken by the shunting staff to avoid accidents.

The relevance of section 10.1 is discussed in paragraph 2.3.

### **1.3 Personnel**

- 1.3.1 The RCO had 15 years railway experience starting as a shunter and then qualifying as a second grade and then a first grade locomotive engineer. Three years prior to the accident his position had been made redundant and he had elected to take up the position of RCO at Kinleith. He held a current operating certificate for the duties concerned as well as a current locomotive engineer certificate.
- 1.3.2 The RO had 14 years experience with railways, all based at Kinleith and all involved with shunting operations. He held a current operating certificate for the duties concerned.
- 1.3.3 The truck driver owned a truck logging business and was under contract to a processing contractor working in the CHH complex. His contract involved the removal of reject logs from the processing plant. He had 10 years experience in carting logs and held a current licence for the duties concerned. Although he stated that he was aware of the “code of conduct” within the Kinleith Mill he could not recall any specific instructions with regard to rail safety requirements. He commented that when loading logs it was common practice for log stackers to pass over the line all the time.
- 1.3.4 The forklift driver had more than 5 years loading experience at Kinleith and held a current licence for the equipment he was operating.

## **2. Analysis**

- 2.1 Allowing for the over-all width of the log cradle plus the additional side throw as the wagon negotiated the 250 m radius curve, the distance from the track centre line to the outside edge of the second cradle at the point of impact was 1480 mm. Because the leading cradle (which cleared the logging truck bull-bars) was positioned close to the wagon bogie, the distance from track centre line to the outside edge of this cradle was 1439 mm. The logging truck was therefore parked with its bull-bars between these two limits. The required distance from track centre line for safe rail operation was 2600 mm as access for shunting was required on both sides.
- 2.2 The shunt came to rest approximately 42 m from the point where the RCO responded to seeing the obstruction. Based on a number of braking tests carried out during previous Commission investigations involving DSG shunting services, it was found an average deceleration of 0.7 m/sec<sup>2</sup> was typical, with  $\pm 0.2$  m/sec<sup>2</sup> tolerance based on local conditions and variations in braking efficiency. The siding was on a downgrade and the rake was coupled and fully braked. In the circumstances a figure of 0.6 m/sec<sup>2</sup> is considered appropriate indicating a speed of about 25 km/h prior to braking. It is likely that the shunt speed was in excess of the 15 km/h maximum required by the Railway Operating Plan.

- 2.3 Tranz Rail's contention that Roundwood Road was an unprotected level crossing on the day of the accident and that Code 10.1 (see paragraph 1.2.8) applied, was not shared by the operating staff concerned. The installation of flashing lights activated by the approach of trains could practically fit the description "automatic alarms", particularly since the term "flashing lights and bell" (not "flashing lights and alarms") is used to describe crossings equipped with visual and audible protection. Whatever status Roundwood Road crossing had it should have been clearly defined in the Railway Operating Plan to ensure appropriate procedures were applied to its use. In the event the speed of the shunt was not regulated to "less than walking pace being prepared to stop" approaching the level crossing as staff concerned considered the crossing to be protected.
- 2.4 The RCO lost approximately 23 m of the maximum view distance that was available to him before he observed the truck parked foul of the running road. At a shunt speed of 25 km/h this equates to about 3 seconds, which could have been accounted for by the RCO's attention being focused on the fork-lift access where problems were known to exist. Taking account of the need to be alert for the activities of integrated operations within the mill site plus a normal reaction time, the RCO did not control the shunt movement within his "range of vision". Tranz Rail's Code made reference to the various parameters that could influence an adequate "range of vision" but did not define "adequate" in this context.
- 2.5 The "range of vision" could have been extended with the use of a suitably positioned second person but in this case the RO had been left behind at the mill to attend to a broken hose.
- 2.6 Both the truck driver and the forklift driver stated that they did not hear the locomotive whistle prior to the shunt arriving at Roundwood Road level crossing but both noted the crossing warning lights operating. It was possible that the RCO did not sound the warning device prior to the level crossing, contrary to Tranz Rail Code requirements.
- 2.7 The RCO's position on the deck of the leading wagon conformed with the current Tranz Rail Operating Instructions. He could not take up a position on the front of the leading vehicle (refer to paragraph 1.2.4). The previous Tranz Rail Operating Instructions for Yard Shunting and Allied Staff in effect until 1996 stated, under Personal Safety, "Never ride on the deck of a flat top wagon". Riding on the deck of a wagon 940 mm above rail level would afford a better view ahead than on the shunter's footstep close to rail level but would not provide for safe egress from the wagon in the event of an emergency. Tranz Rail's Operating Instructions stipulated that "when boarding and alighting flat top wagon decks the movement must be stationary" a safety precaution that was impractical to achieve under the type of situation which occurred on 26 May 1999 at Kinleith.
- 2.8 Tranz Rail's statement that Section 4.4 of the Code is "primarily related to the 'man on the ground' maintaining an adequate range of vision when operating the locomotive in Remote Control mode and not riding on the unit" is not explained in Section 4.4 of the Code and highlights the concern expressed in this report regarding the effectiveness of procedures. This concern is reflected in the safety recommendations in Section 4.
- 2.9 The accident was initiated by a logging truck parking too close to the running road. Although close to the Roundwood Road level crossing, the accident did not occur as a result of any operational or functional abnormality associated with the level crossing itself.
- 2.10 The workplace operating plan for the Kinleith industrial complex, where both rail and road traffic are an integral part of the operation, did not provide for all the safety measures required for a controlled integrated operation. This issue was raised by the commission in 1995 as a result of an investigation of an accident at Kings Wharf, Wellington, (Railway Occurrence Report 95-110 and safety recommendation 040/95).



### **3. Findings**

Findings and safety recommendations are listed in order of development and not in order of priority.

- 3.1 All staff were appropriately certified for the duties concerned.
- 3.2 The speed of the shunt was in excess of 15 km/h, contrary to the Railway Operating Plan for the complex.
- 3.3 The RCO did not control the shunt within his range of vision as required by the Tranz Rail Operating Code.
- 3.4 The logging truck was parked too close to the running line and encroached on Tranz Rail clearance requirements.
- 3.5 There was no indication in the Railway Operating Plan for the complex of the minimum side clearance distances to be maintained from the track centre line to ensure safe operation.
- 3.6 The provision in the current Tranz Rail Code permitting shunting staff to take up a position on a wagon deck in certain circumstances has the potential to conflict with safety requirements.

### **4. Safety Recommendations**

- 4.1 On 29 November 1999 it was recommended to the managing director of Tranz Rail Limited that he:
  - 4.1.1 Liaise with CHH and incorporate procedures in the "Railway Operating Plan" which control CHH operations (and its subsidiaries) adjacent to the rail tracks to ensure safe integrated operations (064/99); and
  - 4.1.2 Take steps to ensure propelling movements are carried out from a safe position to control movements by line of sight, including the use of a second man when line of sight is restricted (065/99); and
  - 4.1.3 Reinforce the training and increase the compliance monitoring of RCO's to ensure they are positioned and operate in such a manner that a combination of:
    - "range of vision"
    - normal operating distractions
    - shunting speedmaintain an acceptable factor of safety with respect to possible collision (066/99); and
  - 4.1.4 Amend existing code instructions and training procedures for the operation of remote control locomotives to ensure they include a definition of what constitutes "adequate" when describing "range of vision" with particular regard to speed and the need to stop in a distance related to the clear distance seen ahead. (067/99)
  - 4.1.5 Reassess the desirability of permitting shunting staff to ride on the deck of certain wagons, and in particular for RCO's to control shunt movements from such a position (068/99).
- 4.2 Safety recommendation 066/99 is similar to safety recommendation 043/99 made with respect to Railway Occurrence 99-107 at Southdown on 10 May 1999, although the latter did not relate to a propelling movement.

4.3 Safety recommendation 067/99 is similar in principle to safety recommendation 044/99 made with respect to Railway Occurrence 99-107 at Southdown on 10 May 1999, although the latter did not relate to a propelling movement.

NB. THE FOLLOWING RESPONSE WAS NOT PUBLISHED IN THE PRINTED REPORT

4.4 On 23 December 1999 the managing director of Tranz Rail responded as follows:

4.4.1 **064/99**

New operating plans for Carter Holt Harvey Pulp and Paper and Carter Holt Harvey Forests at Kinleith were introduced during September 1999.

**065/99**

Tranz Rail do not accept this recommendation as it is considered the Remote Control Operator (RCO) was appropriately positioned to control the movement by line of sight but did not have the movement under sufficient control. Tranz Rail will focus on maintaining control of shunting movements during staff briefings and Safety Observations.

**066/99**

Tranz Rail has changed the Safety Observation Process specifying a minimum of three formal observations within a two year period at no more than eight month intervals.

Training in the new procedures has been completed for Managers and implemented at Supervisory level.

All instructions in the Rail Operating Code relating to the movement of shunts in Terminals are being reviewed as detailed in our response to Safety Recommendations 067/99 and 068/99 below.

**067/99 and 068/99**

Tranz Rail is reviewing Section 5 of the Rail Operating Code with the intention of rewording and reorganising all procedures relating to the movement of shunts (remote control or otherwise) in Terminals as we can see that the relevant information is contained in a number of sub-sections and would be better understood if all associated instructions were grouped together.

This review is planned for completion during the first half of next year.

Approved for publication 1 December 1999

Hon. W P Jeffries  
**Chief Commissioner**