Waterfall rail accident recommendations

Closed subject to implementation of an approved program or plan

Reporting period: April 2017 – March 2018

Annual Report

safe railways for Australia

Office of the National Rail Safety Regulator

Copyright information

Introduction

On 10 March 2017, the Office of National Rail Safety Regulator (ONRSR) assumed responsibility for overseeing the implementation of the NSW Government's response to the recommendations contained within the *Final Report of the Special Commission of Inquiry into the Waterfall Rail Accident*.

This role was previously undertaken by the Independent Transport Safety Regulator (ITSR) under a service level agreement to the ONRSR.

This document is produced by ONRSR as part of its responsibility for monitoring implementation of the Waterfall rail accident recommendations.

It details the status of those recommendations classified as closed subject to implementation of an approved program or plan.

Background

The Special Commission of Inquiry (SCOI) into the Waterfall rail accident released its final report on 17 January 2005.

The report, titled the *Final Report of the Special Commission of Inquiry into the Waterfall Rail Accident*, made 177 recommendations (including 127 recommendations and 50 sub-elements).

The recommendations proposed in the SCOI report indicated actions to be taken by a number of organisations including RailCorp (now Sydney Trains), emergency services agencies, ITSR (now ONRSR), the Office of Transport Safety Investigations and other rail operators in NSW.

Following the publication of the 33rd quarterly report in April 2013, the Minister for Transport accepted ITSR's recommendation to change the frequency of public reporting from quarterly to annually given that the majority of recommendations were either closed or subject to a long term implementation plan.

This report is the fifth annual report covering the period from 1 April 2017 to 31 March 2018. It details the status of those recommendations classified as closed subject to implementation of an approved program or plan. Public reporting on an annual basis for these recommendations will continue until completion of their implementation. All reports are published on the ONRSR's website.

To enable ONRSR to keep abreast of progress on the recommendations closed subject to implementation of an approved program or plan, ONRSR requires Sydney Trains to provide regular updates.

Closed subject to implementation of an approved program or plan

ITSR developed a classification system to reflect the progress of recommendations through the various stages of implementation which is being maintained by ONRSR.

A classification of closed subject to implementation of an approved program or plan was established to acknowledge that implementation of some recommendations would take place over a prolonged period of time and require major capital expenditure.

ONRSR monitors progress of these recommendations through its compliance audit and inspection program to ensure implementation continues as agreed.

Changed organisational arrangements

Responsibility for the implementation of these recommendations was originally assigned to RailCorp. On 1 July 2013, as part of the NSW Government's major reform of rail services, RailCorp's functions were divided between Transport for NSW and two new agencies; Sydney Trains and NSW Trains.

As a result, Sydney Trains is responsible for the implementation of these remaining recommendations.

Recommendations

Classified as closed subject to implementation of an approved program or plan

Recommendation 4

The Rail Management Centre should be equipped by RailCorp with a transcriber system, or mimic board, or such other system as is necessary to enable identification of the precise location at any time of any train on the RailCorp network.

Recommendation 88

The RailCorp passenger containment policy must be abandoned. *(RailCorp: Implemented – containment policy abandoned).*

This recommendation will be finalised once Sydney Trains completes the rollout of its Internal Emergency Door Release (IEDR) retrofit program).

Recommendation 89

There must be a minimum of two independent methods of self-initiated emergency escape for passengers from all trains at all times.

Recommendation 90

All passenger trains must be fitted with an internal passenger emergency door release.

Recommendation 92

The internal passenger emergency door release should be fitted with a facility which prevents it from operating unless the train is stationary.

Recommendation 93

The operation of train doors should have an override facility whereby the train driver or the guard can override an internal passenger emergency door release system if the door release is interfered with when there is no emergency. There should be an alarm, together with an intercom, in the train guard's compartment so that, if a passenger attempts to initiate an emergency door release, there is an appropriate delay during which time an alarm sounds in the train guard's compartment and the guard can then, after first attempting to speak via the intercom to the person concerned, if necessary, override the door release, and make an appropriate announcement over the intercom system in the train.

Status of recommendations

Classified as closed subject to implementation of an approved program or plan

Status – Recommendation 4

This recommendation was closed subject to the implementation of an approved program or plan during the reporting period July to September 2006 based on RailCorp's (now Sydney Trains) staged implementation plan. In November 2008, the Rail Management Centre (RMC) had coverage (visibility) of 78.7% of train signals on the RailCorp network enabling the location at any time of any train operating within this area.

Various projects have progressively increased the area of coverage and specific details are included in previous reports.

As at 31 March 2018, the overall coverage of train signals on the Sydney Trains' network was 87.8%.

The completion of the Waterfall train location system extension works is scheduled to occur in 2020-21 taking coverage to 88.7%. Projected coverage of 90.5% is expected to be achieved by 2022-23 following completion of the Point Clare to Dora Creek project.

Sydney Trains advised that during the 2017-18 reporting period no projects have been undertaken that have increased coverage.

Status – Recommendations 88-90 and 92-93

These recommendations were closed subject to the implementation of an approved program or plan during the reporting period October to December 2006 (recommendation 88) and April to June 2007 (recommendations 89-93, 95, 98-101).

In 2006, RailCorp (now Sydney Trains) abandoned its passenger containment policy, following an extensive risk assessment that was overseen by ITSR, and agreed to install internal passenger emergency door release mechanisms. In-principle government funding was approved in 2006 for RailCorp's retrofit program to install internal emergency door releases (IEDRs) on CityRail trains and on all new rolling stock.

However, at that time, the retrofit program did not require the fitting of a crew override facility as per recommendation 93.

The risk assessment did not support the use of emergency windows for passenger escape as this may decrease the crashworthiness of the train and possibly pose a higher risk to passengers. ITSR accepted this finding from RailCorp's risk assessment.

Following an incident on the Harbour Bridge in 2007, RailCorp revised its position on the internal emergency door release mechanism and decided to fit a crew override facility as per recommendation 93, to prevent passengers from exiting the train in unsafe circumstances.

This facility will enable the crew to make a judgement on the situation and override the unlocking of the doors after speaking with the passenger via the Help Point and reviewing the closed-circuit television images. This additional mechanism required further funding, which was approved in November 2009.

RailCorp's two independent methods of self-initiated emergency egress for passengers are via the external doors and through the inter-car doors into the next carriage. Government funding was provided to implement a staged program from 2010 to the end of 2013 to fit internal emergency door release mechanisms to all new trains and to retrofit existing CityRail trains (that is, Millennium, OSCARS & Hunter trains). This program is being monitored by ITSR.

The new Waratah train fleet is fitted with IEDRs.

RailCorp commenced an IEDR trial program in the first quarter of 2010. Issues were identified with hardware integration. Between May and June 2010, RailCorp ran successful in-service trials of a Millennium train retrofitted with a prototype IEDR system. The trial successfully demonstrated the design concept. RailCorp had then advised that the retrofit program for the Millennium, OSCAR and Hunter train fleets would commence by the end of 2010 and completed by the end of 2013. Unfortunately this did not occur.

The rollout of RailCorp's retrofit program expected to commence in the first quarter of 2011 did not occur, resulting in the program being delayed. In February 2011, RailCorp advised ITSR that the retrofit program for the Millennium, OSCAR and Hunter train fleets would commence in March 2013 and be completed by the end of 2015.

In March 2012, the design phase of implementation of the IEDR on the Millennium train and the verification of the software and system was completed. Final Safety Integrity Level (SIL) certification for the Millennium train sets was achieved in September 2014, following the completion of static and dynamic testing; and design work. SIL certification is a recognised International approach used to measure performance required for a safety instrumented function and includes both hardware and software aspects.

At the end of November 2014, all 35 of Sydney Trains' Millennium sets were fitted with IEDRs and commissioned into passenger service.

In December 2015 as planned, the IEDR system had been installed on all 55 of Sydney Trains' OSCAR train sets and all 7 Hunter Rail Cars. Due to a software issue associated with the door override function, the IEDR system on these fleets was isolated. Sydney Trains in consultation with its contractor has since rectified this issue and conducted successful on-train testing in July 2016.

At the end of September 2016, all of Sydney Trains' Hunter Rail Cars fitted with IEDRs were commissioned into passenger service.

Sydney Trains also expected to commission its OSCAR IEDR fitted train sets into passenger service during September 2016. This was delayed due to the necessity to frequently amalgamate and divide its OSCAR train sets between 8 car and 4 car passenger services; as well as ensuring that there is system compatibility between commissioned and non-commissioned sets. This process involves a four stage commissioning procedure requiring the verification of appropriate safety documentation prior to implementation into passenger service.

The first two stages had been completed for the OSCAR train sets. However, due to a number of IEDR alarm faults identified during the third stage of commissioning, Sydney Trains reverted the commissioning process back to stage 2 to enable these issues to be rectified. Subject to successful on-train testing, Sydney Trains expects to commission the OSCAR IEDR fitted train sets into passenger service at the end of 2018 or early 2019 (originally December 2015).

Status classification system

This table describes the system used by ONRSR to classify the progress of Waterfall rail accident recommendations through the various stages of implementation. This classification system is based on accepted international practice and is a continuation of the system established by ITSR.

Status		Definition
Open	Await response	This status is automatically assigned to an accepted recommendation. Affected parties will be asked to submit their response for implementing the recommendation to ONRSR.
Open	Response received	ONRSR has received a response from an affected party and this response is under review by ONRSR. It has not yet been accepted by ONRSR.
Open	Acceptable response	ONRSR agrees that the planned action, when completed, meets the recommendation.
Open	Acceptable alternative response	ONRSR agrees that alternative action, when completed, satisfies the objective of the recommendation.
Open	Response rejected by ONRSR	ONRSR does not agree that the planned or alternate action meets the recommendation. The company or agency is advised of the rejection and requested to provide a revised response.
Open	Company claims closure	The company or agency claims that the planned or alternate action has been completed. The action has not yet been verified by ONRSR. ONRSR has not yet agreed that the item is closed.
Closed	Recommendation rejected	ONRSR has determined through further analysis and review that the recommendation is not appropriate (i.e. will not achieve the desired safety outcomes) and has rejected the recommendation. It is therefore closed.
Closed	No longer applicable	The recommendation has been overtaken by events and action is no longer required. For example, a new technology has eliminated the reason for the recommendation, it has been superseded by other recommendations issued, or the operator affected has gone out of business.
Closed	Action verified	Completion of the planned or alternate action has been verified by ONRSR through a compliance inspection or audit.

Closed	Action not verified	ONRSR accepts that the planned or alternate action has been completed following a review of documentation submitted. Field verification is not necessary.
Closed	Subject to the implementation of the approved program or plan	A long term implementation plan has been approved. ONRSR will monitor reported progress against the plan to ensure compliance with delivery schedule.