



INDEPENDENT  
TRANSPORT  
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REGULATOR

*safe and reliable transport services for new south wales*



# IMPLEMENTATION OF THE NSW GOVERNMENT'S RESPONSE to the Final Report of the Special Commission of Inquiry into the Waterfall Accident

*Reporting Period: January - March 2007*



*ITSRR Quarterly Report Nine*

**IMPLEMENTATION OF THE  
NSW GOVERNMENT'S RESPONSE**  
to the Final Report of the Special Commission  
of Inquiry into the Waterfall Accident

*Reporting Period:*  
**January - March 2007**

Published by the Independent Transport Safety and Reliability Regulator  
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Report Nine

Reporting Period: January - March 2007

ISBN: 0 9756914 3 0



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SAFETY AND  
RELIABILITY  
REGULATOR

30 April 2007

The Hon John Watkins MP  
Deputy Premier and Minister for Transport  
Level 30, Governor Macquarie Tower  
1 Farrer Place  
Sydney NSW 2000

Dear Minister

I am pleased to provide the ninth Quarterly Report on the implementation of the Government's response to the recommendations contained within the Final Report of the Special Commission of Inquiry (SCOI) into the Waterfall Accident.

This Report reflects implementation progress from 1 January to 31 March 2007. The next report will reflect the progress made in the quarter 1 April to 30 June 2007.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Carolyn Walsh'.

Carolyn Walsh  
**Chief Executive**

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## ABBREVIATIONS

ALARP	As Low As Reasonably Practicable
ARA	Australasian Railway Association
ATP	Automatic Train Protection
ARTC	Australian Rail Track Corporation
CMC	Code Management Company
CRM	Crew Resource Management
D&A	Drug and Alcohol
ESA	Emergency Service Agencies
ITSRR	Independent Transport Safety and Reliability Regulator
MoU	Memorandum of Understanding
NROD	National Rail Occurrence Database
NRSAP	National Rail Safety Accreditation Package (also known as NAP or National Accreditation Package)
NTC	National Transport Commission
OH&S	Occupational Health and Safety
OTSI	Office of Transport Safety Investigations
PN	Pacific National Pty Ltd
RIC	Rail Infrastructure Corporation
RC	RailCorp
RMC	Rail Management Centre
RLAP	Rail Legislation Advisory Panel
RSRP	Rail Safety Regulators Panel
RSW	Rail Safety Workers
SCOI	Special Commission of Inquiry
SMS	Safety Management Systems
SMSEP	Safety Management Systems Expert Panel
TACE	Transport Agencies Chief Executives

## **EXECUTIVE SUMMARY**

The Special Commission of Inquiry (SCOI) into the Waterfall Rail Accident released its Final Report on 17 January 2005. In accordance with the Commission's recommendations, the NSW Government agreed that the Independent Transport Safety and Reliability Regulator (ITSRR) should report quarterly on implementation progress. This is the ninth Quarterly Report. It outlines progress made between 1 January and 31 March 2007.

### **Implementation Summary**

Further progress was made during the quarter with 1 recommendation nominated for closure by RailCorp and a further 8 verified and closed by ITSRR.

ITSRR verified and closed 8 (5%) recommendations (5 RailCorp and 3 ITSRR) in the following areas:

- Development of consistent rollingstock standards;
- Annual revision of train maintenance plans;
- Establishment of a comprehensive safety document management system for RailCorp;
- Standard communications procedures in network rules; and
- Quality control measures for medical examinations.

At the end of the reporting period, the cumulative implementation progress to date for all 177 recommendations (including 127 recommendations and 50 sub-elements) was as follows:

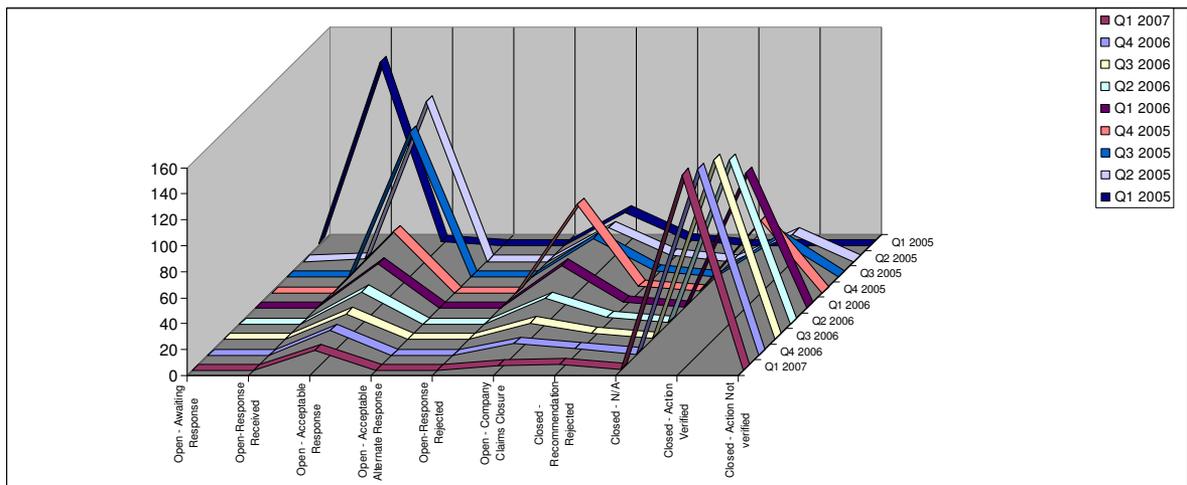
- 157 (89%) recommendations verified and closed<sup>1</sup>;
- 4 recommendations (2%) claimed for closure by RailCorp are being verified by ITSRR;

- 1 (0.5%) recommendation previously claimed for closure by agencies has been given a revised status - open-acceptable response;
- 1 (0.5%) recommendation (the introduction of national communications technical standards) will be implemented by 2010; and
- 14 (8%) recommendations referred to the National Transport Commission (NTC) have revised implementation timeframes based on advice from the NTC.

This brings the total number of recommendations currently closed or claimed by agencies to be closed (and being verified by ITSRR) to 161 or 91% of all recommendations.

The current status of all of the safety actions, compared to that in previous quarters, is summarised below:

**GRAPH 1: PROGRESSIVE STATUS OF ALL RECOMMENDATIONS BY QUARTER**



As time progresses, it is expected that the peak will shift along the x-axis until all recommendations are closed.

<sup>1</sup> including 5 that were rejected by the NSW Government and 1 which is no longer applicable

## Quarterly Progress

### Recommendations Verified and Closed

In the reporting period, ITSRR verified and closed 8 recommendations. Five of these were the responsibility of RailCorp. They were:

- Identification of an appropriate supervisory position responsible for certifying that train defects are rectified and the implementation of procedures to support this role (Recommendation 50);
- Annual revision of maintenance plans on all trains (Recommendation 52);  
and
- Establishment of a safety document management system that ensures the distribution of electronic versions of safety documentation to relevant staff and procedures so that all operational staff can access safety documentation at appropriate times (Recommendation 58, 59 & 61).

Three recommendations were the responsibility of ITSRR:

- All new rolling stock should be designed to be compatible with at least level 2 automatic train protection (Recommendation 33);
- Implementation of standard communications procedures in Network Rules including appropriate training by operators (Recommendation 39); and
- Inclusion of quality control guidance material for medical examinations in the revised National Standard for Health Assessment (Recommendation 57(d)).

## **Slippage**

During the reporting period, one recommendation was not implemented by the scheduled date. This recommendation concerns the creation of an appropriate position within RailCorp that has responsibility for ensuring each train driver's training needs are being met and any safety concerns are properly addressed (Recommendation 71). It was originally scheduled for implementation by 30 September 2006. RailCorp has adopted the concept of Team Leaders and created these positions in its establishment, however the filling of these positions has been delayed by ongoing negotiations and consultation with service unions. In ITSRR's view, the delay in implementing this recommendation does not pose immediate or significant safety risks to the NSW travelling public.

## **METHODOLOGY**

This section briefly outlines the processes ITSRR has instituted to develop and monitor the Implementation Plan for the Government's response to the SCOI Final Report into the Waterfall Rail Accident. Full details of these methods can be found in Appendix 2.

### **Implementation Plan**

ITSRR has reviewed the SCOI Final Report and determined the actions required to implement each recommendation (in line with the Government's response) and which company or agency has responsibility for that action. These expectations formed the basis for determining whether the response put forward by a company or agency is appropriate to meet the recommendation and/or satisfy the safety objective of the recommendation.

Responsible agencies have assigned indicative timeframes for each safety action and ITSRR has reviewed the appropriateness of them to ensure the timeframes are feasible and that processes are in place to adequately monitor progress as well as to give sufficient notice and justification to ITSRR for any changes to the implementation plan. Timeframes agreed with responsible companies or agencies have, to the greatest extent possible, been made realistic and achievable. Details of the Implementation Plan and progress against it may be found in Appendix 3.

### **Classification System for Recommendations**

In order to provide a graduated view of progress against the Implementation Plan, ITSRR has developed a classification system to indicate the relative status of each recommendation. The taxonomy for the Classification System has been drawn from accepted international practice. Appendix 1 includes tables and graphs of the current implementation status of recommendations.

## **Slippage**

In reporting slippage against the agreed timeframes in the Implementation Plan, ITSRR uses the following guide:

- If a claim for closure was expected by the conclusion of the reporting quarter but was not received then it is recorded as slippage;
- If a claim for closure is submitted to ITSRR by the end of the reporting quarter but the target date was earlier in the quarter, it will not be recorded as slippage; and
- If a revised target date for implementation was received from an agency but action will be completed within the original reporting quarter then it is not recorded as slippage. However in the event that the revised target date is not met, ITSRR will record the event as a slippage.

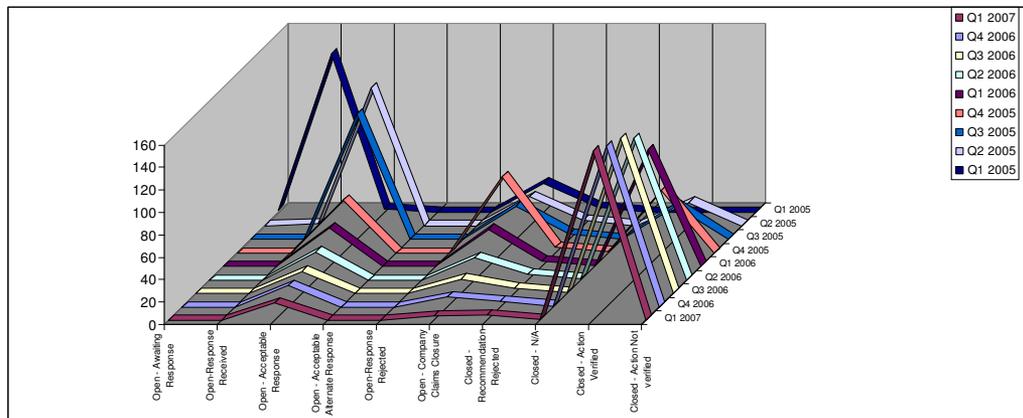
## SUMMARY OF PROGRESS

The SCOI was given the task of identifying the causes of the Waterfall accident and ways of preventing such accidents in the future. The Commission was also asked to examine what might lead to overall improvements in the safety management of rail operations in NSW. The SCOI Final Report grouped recommendations under 19 safety themes. These relate to both the causes of the accident and to suggested improvements in the overall management of safety on the NSW rail network.

In this Report, implementation progress is summarised against these 19 safety themes. It outlines progress in the reporting quarter, any slippage against agreed timeframes and any action taken by the responsible agency and/or ITSRR to address slippage. Recommendations closed out in earlier quarters are not covered in detail in this report. Previous quarterly reports are available on ITSRR's website [www.transportregulator.nsw.gov.au](http://www.transportregulator.nsw.gov.au) This approach provides the necessary transparency to ensure appropriate public scrutiny of progress made in implementing the Government's response to the SCOI Final Report.

The graph below illustrates the status of recommendations as at 31 March 2007. As time progresses it is expected that the peak will shift along the x-axis until all recommendations are closed.

GRAPH 1: PROGRESSIVE STATUS OF ALL RECOMMENDATIONS BY QUARTER



## **Emergency Response**

### **SCOI Final Report Recommendations 1-28**

These recommendations relate to the Commission's findings that emergency response procedures to the Waterfall Rail Accident were inadequate. They are intended to ensure that (in the event of a future rail accident) RailCorp has effective procedures in place that will enable it to locate the accident site, secure and isolate it, ensure safety at the site and facilitate access of emergency services.

The recommendations also aim to ensure that any such emergency response is coordinated between relevant parties and is timely. These recommendations require the provision of supporting emergency procedures and appropriate training in those procedures. Recommendations 2-19 and 21-28 are closed.

During the quarter ITSRR continued verification of Recommendations 1 and 20. A major disruption to the RailCorp network occurred during the reporting period that caused significant delays and necessitated the evacuation of passengers from stranded trains. It was therefore determined that the verification of both recommendations by ITSRR will now include additional field inspections and a review of this incident. During the next quarter ITSRR will establish whether RailCorp has implemented the requirements of Recommendations 1 and 20 in light of these further activities.

## **Design and Procurement of Rollingstock**

### **SCOI Final Report Recommendations 29-30**

The Commission recommended that all railway operators should have a quality assurance program in place for the design and construction of rollingstock and that the rail safety regulator should set standards for the design, manufacture, testing and commissioning of rollingstock to ensure that it is fit for purpose. Recommendation 29 is closed and the National Transport Commission (NTC) continues to work on recommendation 30 and is expected to report progress in April 2007.

## **Driver Safety Systems**

### **SCOI Final Report Recommendations 31-33**

These recommendations are intended to minimise the risk of an accident in the event of train driver incapacitation by requiring the fitting of two independent engineering defences to all trains. In the longer term the SCOI recommended the introduction of Automatic Train Protection (ATP). The Government supports this in principle; however, its application on an industry-wide basis needs to be determined. ATP systems are more advanced technologies which can automatically override a driver if a train is behaving in an unauthorised way in relation to network constraints. Recommendation 31 (that there be two independent engineering defences to driver incapacitation in the short term, until ATP is put in place) is closed.

Recommendation 33 (that all new rolling stock be designed to be compatible with at least level 2 automatic train protection) was verified and closed by ITSRR during the reporting period.

ITSRR has previously noted that there is no single and internationally agreed definition of “level 2” automatic train protection (ATP). However, ITSRR has reviewed the Commission’s report to establish the intention of the recommendation and this is set out in ITSRR’s publication “Driver Safety Systems and Automatic Train Protection Information Paper”.

In April 2005, the NSW Minister for Transport referred this recommendation to the National Transport Commission (NTC) for consideration in the development of potential national regulations in relation to rolling stock. The NTC is undertaking an impact assessment of the proposal which the NTC advises will be completed by April 2007. In the meantime, however, ITSRR has verified that:

- RailCorp's Train Performance Standard for the Rolling Stock Public Private Partnership provides capacity for the inclusion of appropriate automatic train protection and control technology. This means that the new rolling stock being purchased by RailCorp will be designed to be compatible with any such technology; and
- The Australasian Railway Association (ARA) has advised that it will be incorporating ATP specifications into the development of national rolling stock standards through the Rail Industry Standards Board (RISSB). The RISSB will consult ITSRR during the development of these standards.

It is important to note that the closure of this recommendation does not imply that automatic train protection will be introduced to all rail networks in NSW, but rather that new rolling stock, in general, will be designed to be compatible with any such systems once introduced.

## **Risk Assessment and Risk Control Procedures**

### **SCOI Final Report Recommendation 34**

Recommendation 34 and its sub-elements seek to make the rail network safer by ensuring that RailCorp has in place processes to systematically identify and assess risks on the network and put appropriate control measures in place to reduce or eliminate circumstances which might result in an accident. This recommendation and its sub-elements are closed.

## **Data Loggers**

### **SCOI Final Report Recommendations 36-37**

Data loggers record information on a train's operations; including, for example, speed during a journey. During any accident or incident investigation effective use of data loggers can provide investigators with information to help them understand the causes of accidents or incidents on the rail network. Data loggers can also assist rail operators to monitor safety performance. The NTC

continues work on these recommendations and is expected to report progress in April 2007.

## **Communications**

### **SCOI Final Report Recommendations 38- 46**

These recommendations address two important issues. First, that standardised communications protocols should be in use on the NSW rail network so that rail employees use clear and well understood language when communicating with each other. This is particularly important in emergency situations. Second, the compatibility and inter-operability of communications equipment (radios for example), so that in an emergency drivers, signalers, train controllers and other relevant personnel (with different types of communications equipment) are able to talk to each other. Recommendations 40 – 42 and 44 - 46 are closed.

During the quarter ITSRR closed Recommendation 39 which is aimed at ensuring that standard communications procedures are implemented throughout the rail network so that all staff describe the same subject matter in an identical way. Through ITSRR's audit and compliance program it was established that in NSW both RailCorp and the Australian Rail Track Corporation (ARTC) have in place common Communication Protocols that must be followed by their own operations staff and by track maintainers. This means that Communication Protocols are standardised on the NSW network.

As reported last quarter, the NTC will advise the outcome of the impact assessment to determine the appropriateness of developing a national regulation for communication systems/protocols in April 2007. This would effectively "mandate" such protocols across the national network (Recommendation 43).

## **Train Maintenance**

### **SCOI Final Report Recommendations 47-53**

The purpose of these recommendations is to ensure there are minimum standards and inspections in place for RailCorp trains entering service and adequate maintenance plans and systems in place to record and rectify train defects, as well as certification of work by an appropriately qualified individual. Recommendations 47-49 and 51 are closed.

During the reporting period the following recommendations were closed:

- Inspections by ITSRR verified that RailCorp has implemented a system for managing the reporting and rectification of train defects (Recommendation 50).
- Desktop and field verification conducted by ITSRR established that a system is in place to regularly review maintenance plans on all trains annually (Recommendation 52).

ITSRR continued verification of Recommendation 53 which is aimed at ensuring trains are inspected at the time of stabling so as to ensure sufficient opportunity for fault rectification prior to next entering into service.

During the quarter ITSRR analysed the results of internal audits conducted by RailCorp to assess the effectiveness of these systems and also requested additional information which will be reviewed in the next quarter (Recommendation 53).

## **Alcohol and Drug Testing**

### **SCOI Final Report Recommendations 54-56**

These recommendations are intended to ensure random drug and alcohol (D&A) testing continue and that testing is made mandatory following an incident. The *Rail Safety Act 2002* and supporting D&A testing regulations and

guidelines require accredited operators to have a D&A program in place. They also enable operators to conduct post-incident D&A testing, but do not explicitly require such testing. These recommendations are closed.

## **Periodic Medical Examinations**

### **SCOI Final Report Recommendations 57(a)-(j)**

This recommendation is directed at minimising the risk of incapacitation of a train driver through more stringent standards for periodic medical examinations for railway safety critical workers. The majority of safety actions required for this recommendation have been implemented, verified and closed through the adoption of the National Standard for Health Assessment of Rail Safety Workers. Sub-elements (a) – (c) and (e) – (j) of this recommendation are closed.

During the quarter Recommendation 57 (d) was closed. The NTC has now advised that the quality control guidance material will be included in the revised National Health Assessment Standard to ensure medical examinations are suitable for the size and nature of the rail organisation. The Standard is due to be published in 2009 and has been included in the 2008/09 NTC Work Plan.

## **Safety Document Control**

### **SCOI Final Report Recommendations 58-64**

Effective document control, particularly document control of safety information, is a critical element of a rail operator's safety management system. Employers and employees must be confident that the safety information they are operating under is current and accurate. Recommendations 60 and 62-64 are closed.

During the reporting period ITSRR verified and closed Recommendations 58, 59 and 61. Through verification activities including field and desktop reviews ITSRR established that RailCorp has developed and is implementing a comprehensive safety document management system that provides for the

distribution of safety documentation to relevant staff, preferably by electronic means, and in particular that operational staff have access to this documentation at their workplace. ITSRR will continue to monitor implementation through its regulatory and compliance activities (Recommendations 58, 59 & 61).

## **Train Driver and Guard Training**

### **SCOI Final Report Recommendations 65 - 71**

It is important that train drivers and train guards are adequately trained in the performance of their duties. This issue was also raised by the SCOI into the Glenbrook accident. Of particular interest for training is the appropriate use of simulators, encouragement of teamwork, and the development of training based on a needs analysis. Recommendations 65-70 are closed.

During the quarter the target date for Recommendation 71 was revised. This recommendation concerns the creation of an appropriate position within RailCorp that has responsibility for ensuring each train driver's training needs are being met and any safety concerns are properly addressed.

This recommendation was originally scheduled for implementation by 30 September 2006. RailCorp has adopted the concept of Team Leaders and created these positions in its establishment, however delays have occurred due to ongoing negotiations and consultation with service unions which has taken longer than anticipated in filling these positions (Recommendation 71).

## **Rail Accident Investigation**

### **SCOI Final Report Recommendations 72 - 82**

The SCOI Final Report promulgated "just culture" investigations (ie, those aimed at determining all the factors contributing to an accident, including systemic factors rather than attempting to allocate blame or liability), as more likely to contribute to improved safety outcomes in the longer term. Recommendations 72 -74 and 82 concern the powers of, and relationship

between, the NSW Office of Transport Safety Investigations (OTSI) and the Australian Transport Safety Bureau (ATSB). All of these recommendations are closed.

## **Safety Culture**

### **SCOI Final Report Recommendations 83 - 84**

It is accepted safety practice that a positive safety culture works in tandem with a safety management system to deliver safe operations. The safety culture recommendations require a plan from RailCorp and a subsequent review by ITSRR. All of these recommendations are closed.

## **Occupational Health and Safety**

### **SCOI Final Report Recommendations 85 - 87**

Recommendations 85-87 articulated the SCOI's concern that RailCorp's approach to safety management was overly focused on occupational health and safety (OHS). By this it meant that RailCorp primarily sought to implement risk control measures for risks of relatively low consequence, but high frequency, to the detriment of more significant risks of relatively high consequence, but low frequency. The SCOI recommended integration of OHS management into RailCorp's overall safety management system, so that broader public safety concerns, such as derailments or collisions, would receive greater attention. All of these recommendations are closed.

## **Passenger Safety**

### **SCOI Final Report Recommendations 88-101**

These recommendations address emergency egress and access (ie, ways in which passengers can escape from trains in an emergency and the way emergency services and other rescuers can get into trains), emergency evacuation procedures and associated training and standards, as well as the adequacy of penalties for misuse of emergency and other safety related equipment. Recommendations 88, 94, 96 and 97 are closed.

As reported in the previous quarter the NTC advised that it would complete its impact assessment for the development of a national regulation for access and egress by April 2007.

## **Corporate Governance**

### **SCOI Final Report Recommendations 102- 109**

These recommendations introduce requirements for formal qualifications in system safety management for managers who report to the CEO of RailCorp. They also require development of safety accountability statements and reporting lines for all management positions and the introduction of independent external and internal audit processes to be managed by the RailCorp Board. All of these recommendations have been closed in previous quarters.

## **Safety Reform**

### **SCOI Final Report Recommendation 110(a)-(e)**

This recommendation sought to create a position of Safety Reform Program Director to manage the safety reform program being undertaken by RailCorp and detailed various aspects of the duties that should be undertaken by this position. All of these recommendations are closed.

## **Safety Regulation**

### **SCOI Final Report Recommendations 111-120**

These recommendations addressed the role of ITSRR in relation to safety regulation, the governance of ITSRR and the need for more explicit guidelines from ITSRR. All of these recommendations are closed.

## **Integrated Safety Management**

### **SCOI Final Report Recommendations 121- 124**

These recommendations advocated that a regulation be promulgated specifying the requirements of a safety management system (SMS) (Recommendation 121) and the steps RailCorp needs to take to ensure that its SMS is integrated (Recommendation 122 – 124). All of these recommendations are closed.

## Summary

The public reporting process associated with the Quarterly Reports on the implementation progress of the NSW Government's response to the Waterfall rail accident enforces the importance of continuing to improve rail safety in NSW. Since the Waterfall rail accident, 161 (91%) recommendations have been either verified and closed (89%) or claimed for closure by agencies and are under verification (2%).

ITSRR will continue to report on progress towards full implementation of the NSW Government's response to the SCOI into the Waterfall Accident. Once recommendations have been closed, ITSRR will continue to monitor implementation through its audit and inspection program.

## APPENDIX 1 – TABLES AND GRAPHS

This table lists the recommendations for which each agency is responsible:

TABLE 1: RECOMMENDATIONS BY RESPONSIBLE AGENCY

RESPONSIBLE AGENCY	RECOMMENDATIONS FROM SCOI FINAL REPORT	NUMBER OF RECOMMENDATIONS INCLUDING SUB-ELEMENTS
RailCorp	1-8, 10-14, 16-20, 22, 25-27, 32, 34(a) – (h), 40, 47-53, 56, 58-62, 65-71, 83(a)-(n), 85-88, 96, 102-110(a)-(e), 122(a)-(f(i-xii)), 123,	103
Emergency Services Agencies	15, 97	2
Emergency Services Agencies & RailCorp	9, 21, 23, 24, 28	5
ITSRR	29, 30, 31, 33, 36-39, 41-46, 54-55, 57(a)-(i), 63-64, 75-80, 84, 89-95, 98-101, 113-117, 119-121, 124-125(a)-(b), 126	57
OTSI	72, 73, 74, 81, 82	5
Not assigned	35, 111, 112, 118, 127	5
TOTAL	127	177

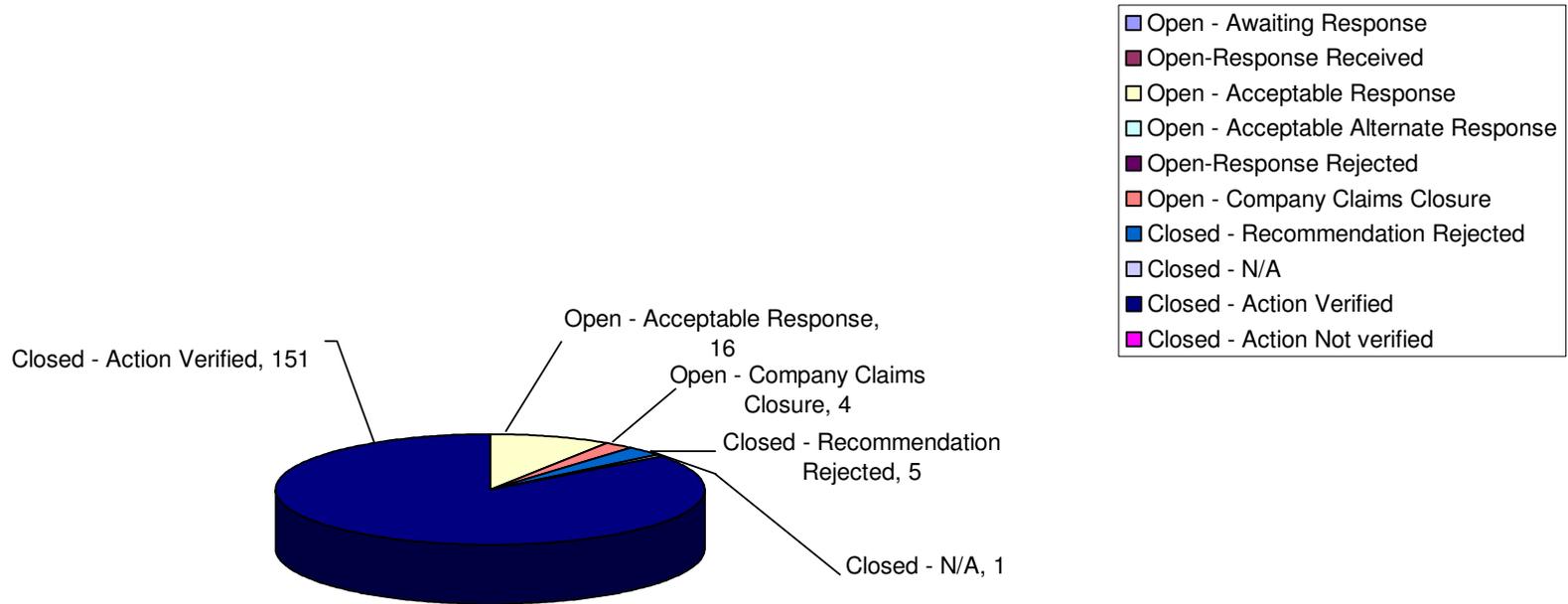
At the end of the first quarter 2007, the status of the 177 Recommendations including sub-elements of the SCOI Final Report is detailed in the following table:

TABLE 2: STATUS OF RECOMMENDATIONS INCLUDING SUB-ELEMENTS AS AT 31 MARCH 2007

Operator	Open - Awaiting Response	Open-Response Received	Open - Acceptable Response	Open - Acceptable Alternate Response	Open-Response Rejected	Open - Company Claims Closure	Closed - Recommendation Rejected	Closed - N/A	Closed - Action Verified	Closed - Action Not verified	Total
Not Assigned							5				5
RailCorp			1			4			98		103
Independent Transport Safety & Reliability Regulator			15						42		57
Office of Transport Safety Investigation			0					1	4		5
NSW Emergency Services			0						2		2
RailCorp/ NSW Emergency Services			0			0			5		5
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>151</b>	<b>0</b>	<b>177</b>

The graph below illustrates the recommendations according to their respective status.

**GRAPH 2: CURRENT STATUS OF AGGREGATE RECOMMENDATIONS INCLUDING SUB-ELEMENTS AS AT 31 MARCH 2007.**



In the SCOI Final Report recommendations were listed against specific themes or topics relating to the causal factors associated with the Waterfall Rail Accident. The following table presents the status of recommendations by these themes:

TABLE 3: STATUS OF RECOMMENDATIONS BY THEME AS AT 31 MARCH 2007

Theme	Open - Awaiting Response	Open - Response Received	Open - Acceptable Response	Open - Acceptable Alternative Response	Open - Response Rejected by ITSRR	Open - Company Claims Closure	Closed Recommendation Rejected	Closed - No Longer Applicable	Closed Action Verified	Closed - Action Not Verified	Total
Emergency response 1-28	0	0	0	0	0	2	0	0	26	0	28
Procurement & design of rolling stock 29-30	0	0	1	0	0	0	0	0	1	0	2
Driver safety systems 31-33	0	0	1	0	0	0	0	0	2	0	3
Risk assessment and control procedures 34-35	0	0	0	0	0	0	1	0	8	0	9
Data loggers 36-37	0	0	2	0	0	0	0	0	0	0	2
Communications 38-46	0	0	2	0	0	0	0	0	7	0	9
Train Maintenance 47-53	0	0	0	0	0	1	0	0	6	0	7
Alcohol and Drug Testing 54-56	0	0	0	0	0	0	0	0	3	0	3
Periodic Medical Examinations 57	0	0	0	0	0	0	0	0	9	0	9
Safety Document Control 58-64	0	0	0	0	0	0	0	0	7	0	7
Train Driver and Guard Training 65-71	0	0	0	0	0	1	0	0	6	0	7
Rail Accident Investigation 72-82	0	0	0	0	0	0	0	1	10	0	11
Safety Culture 83-84	0	0	0	0	0	0	0	0	15	0	15
OH&S 85-87	0	0	0	0	0	0	0	0	3	0	3
Passenger safety 88-101	0	0	10	0	0	0	0	0	4	0	14
Corporate Governance 102-109	0	0	0	0	0	0	0	0	8	0	8
Safety Reform 110	0	0	0	0	0	0	0	0	5	0	5
Safety Regulation 111-120	0	0	0	0	0	0	3	0	7	0	10
Integrated Safety Management 121-124	0	0	0	0	0	0	0	0	21	0	21
Implementation of Recommendations 125-127	0	0	0	0	0	0	1	0	3	0	4

## **APPENDIX 2 – METHODOLOGY**

This section outlines the processes which ITSRR has instituted to develop and monitor the Implementation Plan for the Government's response to the SCOI Final Report into the Waterfall Rail Accident.

### **Implementation Plan**

ITSRR has reviewed the SCOI Final Report and determined action required to implement each recommendation in line with the Government's response and which company or agency has responsibility for that action. These expectations then formed the basis for determining whether the response put forward by a company or agency is appropriate to meet the recommendation and/or satisfy the safety objective of the recommendation. Responsible agencies have assigned indicative timeframes for each safety action and ITSRR will review the appropriateness of each. Timeframes agreed with responsible companies or agencies have, to the greatest extent possible, been made realistic and achievable. Details of the Implementation Plan and progress against it may be found in Appendix 3 at page 49.

### **Classification System for Recommendations**

In order to provide a graduated view of progress against the Implementation Plan, ITSRR has developed a classification system to indicate the relative status of each recommendation. The taxonomy for the Classification System has been drawn from accepted international practice and is listed in Table 4 at page 34 below.

The process for assigning status to a recommendation is as follows:

Step 1            The Government's response to the SCOI Final Report determined which recommendations were accepted. ITSRR has articulated its expectations in regards to all remaining recommendations.

- Step 2 All accepted recommendations are assigned the status "Open - Await Response". These recommendations are then referred by ITSRR to the relevant company or agency to prepare a response to the recommendation(s) and submit it to ITSRR.
- Step 3 ITSRR reviews the response and determines whether it is acceptable or not. If it is acceptable then the status of the recommendation is assigned either "Open - Acceptable Response" or "Open - Acceptable Alternative Response". A recommendation would be assigned an "Open - Acceptable Alternative Response" status when the intent of a recommendation will be met but will be implemented by alternative means. If the response is not acceptable then the recommendation is assigned the status of "Open - Response Rejected". In this case, the company or agency is informed of the decision and requested to re-submit a revised response taking into account ITSRR's concerns. This process continues until the response to the recommendation is accepted by ITSRR.
- Step 4 ITSRR monitors progress of all accepted responses to ensure a company or agency is meeting agreed implementation timeframes. This is done through both desktop reviews of reports received by agencies and in-field inspections to verify progress claimed.
- Step 5 Once a company or agency has completed a required action it will submit to ITSRR a claim for closure of the recommendation. This application indicates that the company or agency believes it has completed the required action. The status of the recommendation is changed to "Open – Company Claims Closure".
- Step 6 In most cases, ITSRR will verify closure through an in field compliance inspection or audit. Once verification has taken

place the recommendation status is changed to indicate it is "Closed - Verified".

This process will continue until all recommendations are closed.

TABLE 4: TAXONOMY FOR CLASSIFICATION SYSTEM

	<b>STATUS</b>	<b>DEFINITION</b>
1.	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 ITSRR.
2.	Open – Response Received	ITSRR has received a response from an affected party and this response is under review by ITSRR. It has not yet been accepted by ITSRR.
3.	Open – Acceptable Response	ITSRR agrees that the planned action, when completed, meets the recommendation.
4.	Open – Acceptable Alternative Response	ITSRR agrees that alternative action, when completed, satisfies the objective of the recommendation.
5.	Open – Response Rejected by ITSRR	ITSRR 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.
6.	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 ITSRR. ITSRR has not yet agreed that the item is closed.
7.	Closed – Recommendation Rejected	ITSRR 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.
8.	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.

9.	Closed – Action Verified	Completion of the planned or alternate action has been verified by ITSRR through a compliance inspection or audit.
10.	Closed – Action Not Verified	ITSRR accepts that the planned or alternate action has been completed following a review of documentation submitted. Field verification is not necessary.

## **RailCorp & Other Rail Operators**

The SCOI Final Report primarily focused on RailCorp and actions required by it to improve safety as a consequence of the Waterfall Rail Accident. In quarterly reports therefore, ITSRR will report on recommendations specific to RailCorp. However, some recommendations from the Final Report may also be relevant to other rail operators in NSW. In light of this, ITSRR has reviewed the recommendations and identified where other rail operators may also be required to improve safety operations.

Where recommendations have applicability to the wider rail industry, ITSRR will report on progress of its own actions to ensure other operators also meet the intent of SCOI recommendations and on any general areas of concern about implementation issues across the industry. Progress on specific safety actions by other rail operators will not be reported upon in ITSRR quarterly reports.

## **ITSRR**

ITSRR is also responsible for implementing recommendations from the SCOI Final Report. These quarterly reports will assess progress made by ITSRR on those recommendations. The same methodology as outlined above will be used to assess the implementation status of recommendations for which ITSRR is responsible. ITSRR has established an internal process between Divisions which allows for an independent assessment of whether

recommendations are being implemented according to the Implementation Plan and to ensure status reports accurately reflect progress against the Plan. The Chief Executive must sign off on all completed actions before a recommendation is closed.

## **Other Agencies**

ITSRR has held meetings with the Office of Emergency Services and the Office of Transport Safety Investigation (OTSI) to review and discuss the implementation and reporting of recommendations under their responsibility. Review of responses from these agencies will also follow the process outlined above and will be reported quarterly. ITSRR has agreed to timeframes and actions with each of these agencies.

### APPENDIX 3 – IMPLEMENTATION PLAN: OUTSTANDING RECOMMENDATIONS

NB: This table lists only the recommendations which were closed in the last quarter, or remain to be implemented. Those recommendations closed in previous quarters do not appear. A complete list of all recommendations is contained in the First Report, on ITSRR's website at: <http://www.transportregulator.nsw.gov.au>

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
1. Staff at the Rail Management Centre (RMC) should receive training from RailCorp to enable them to quickly and accurately assess that an emergency has occurred and to provide precise and reliable information to emergency response personnel about the location of the emergency, the available access to the site and the resources necessary.	Supported and being implemented.	RailCorp to provide: a) Evidence of Development of Training Program that addresses issues identified in the SCOI. (Includes Development Process, Training Aids / Curriculum). b) Evidence of Appropriate Assessment Competency. (Delivery of course by appropriately qualified trainers.) c) Evidence of process to ensure the training of new staff and the Refresher training of existing staff. d) Review process built-in, to take into account relevance and changes.	RailCorp	Open	Agency Claims Closure	31/03/2006

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
20. All operational rail staff should be trained by RailCorp in the action check list relevant to each.	Supported.	That a joint or jointly developed plan is produced by the Agencies. The details of the plan are to include, amongst other things: immediate response, site management and recovery processes. Also requires the development of: - Comprehensive Incident Management Plans/Procedures.- Development of Network Incident Management plan with RailCorp (Track Manager).- Training Issues to ensure that staff can implement.- Development / Implementation of checklists- Distribution of the checklists and alignment with the staff training and emergency exercises. To ensure that training requirements met under Recommendation 3 namely, RailCorp to provide: a) Evidence of Development of Training Program that addresses issues (includes Development Process, Training Aids / Curriculum); b) Evidence of Appropriate Assessment Competency. Delivery of course by appropriately qualified trainers; c) Evidence of process to ensure the training of new staff	RailCorp	Open	Agency Claims Closure	30/06/2006

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
		<p>and the Refresher training of existing staff; d) Review process built-in, to take into account relevance and changes; e) Evidence of Training of Skills assessment; f) Evidence of responsibilities in PD; g) Evidence of responsibilities reflected in plan. To ensure that staff can implement emergency procedures in respect of Recommendations: 11 (use by all emergency response personnel of a uniform incident command system); 12 (appointment of a rail emergency management co-ordinator at the RMC, and an on-site rail commander); 13 (Site Controller to have complete control of the site &amp; the Rail Commander must report to this position ); 14 (Incident Command System has clearly identified roles and that a joint or jointly developed plan is produced by the Agencies); 16 (rail commander should provide support and assistance to the site controller and emergency services personnel); 17 (The rail commander should have complete authority to direct and control all response personnel</p>				

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
		from rail organisations); 19 (The RailCorp emergency response plan should include action checklists of the steps that each employee is required to take, and the order for specific employees to follow in case of emergency.				
30. The rail safety regulator should set standards for the design, manufacture, testing and commissioning of rolling stock to ensure that the rolling stock is fit for its purpose.	Supported in principle and being implemented through other means. ITSRR will introduce regulations including for rolling stock that set out the expectations (or performance outcomes) required of industry. The regulations will be developed on a national basis, through the National Transport Commission process, to ensure consistent application across the Australian rail industry. Notwithstanding the expectation that industry will develop and maintain appropriate safety standards, ITSRR will retain the power to mandate such standards if the industry clearly fails to deliver satisfactory safety outcomes.	ITSRR will refer matter to NTC for development of National Regulation. In the interim, ITSRR will require operators, through the accreditation process to meet existing industry standards for rolling stock acquisition, including AS4292, rolling stock units, Train Operating Conditions and Industry technical codes.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
<p>32. RailCorp should progressively implement, within a reasonable time, level 2 automatic train protection with the features identified in chapter 8 of this report.</p>	<p>Requires further detailed review. The Government supports the implementation of additional train protection systems. Implementation of level 2 ATP as detailed in the recommendation would involve the replacement of all line-side signalling on the RailCorp network with on-train control systems. In addition every intra and interstate train accessing the network would also need to be equipped with level 2 ATP technology. RailCorp has already retained consultants to undertake evaluation and risk assessment regarding implementation of additional automatic train protection systems on the RailCorp network. RailCorp will work with the Australian Rail Track Corporation (which operates the interstate network) to develop, in conjunction with ITSRR and interstate rail regulators, a national standard for an automatic train protection system. RailCorp will also undertake a comprehensive review which will include a risk</p>	<p>A detailed technical review of available options. This is to be a project lead by RailCorp. The major outcome of the project is to be a business case for Government concerning ATP.</p>	<p>RailCorp</p>	<p>Open</p>	<p>Acceptable Response</p>	<p>*30/09/2006</p>

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
	assessment, technical feasibility and cost benefit analysis of introducing level 1 ATP as well as level 2 ATP, as recommended by the Commission. Consistent with recommendation 34 any future options will need to be assessed by independent verification of acceptable risk.					
33. All new rolling stock should be designed to be compatible with at least level 2 automatic train protection discussed in chapter 7 of this report. Risk assessment and risk control procedures.	Requires further detailed review. See R 32.	Recommendation incorporated into review that will be undertaken in response to Recommendation 32. ITSRR will refer matter to NTC for the development of regulation/standards for rolling stock.	Independent Transport Safety & Reliability Regulator	Closed	Alternate Response	30/04/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
36. The ITSRR should impose a standard in relation to the collection and use of data from data loggers.	Supported in principle for implementation through other means. ITSRR will introduce regulations including for data loggers that set out the expectations (or performance outcomes) required of industry. The regulations will be developed on a national basis, through the National Transport Commission process, to ensure consistent application across the Australian rail industry. Notwithstanding the expectation that industry will develop and maintain appropriate safety standards, ITSRR will retain the power to mandate such standards if the industry clearly fails to deliver satisfactory safety outcomes.	ITSRR will refer matter to NTC for development of National Regulation In the interim, ITSRR will review existing standards set in access agreements to ensure adequate standards for collection and use of data.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/06/2007
37. The standard in relation to the collection and use of data from data loggers should provide that such information must be accessed in the circumstances of any accident or incident and can be accessed to monitor driver performance generally.	Supported in principle for implementation through other means. (See R 36) Information from data loggers can be accessed to monitor for any incident or accident and can be accessed to monitor a driver's performance generally.	ITSRR will refer matter to NTC for development of National Regulation ITSRR will adopt National Regulation In the interim, ITSRR will seek from RailCorp proposals to improve the monitoring of driver performance (especially for training purposes)	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/06/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
<p>38. There must be compatibility of communications systems throughout the rail network. It is essential that all train drivers, train controllers, signallers, train guards and supervisors of trackside work gangs in New South Wales be able to communicate using the same technology.</p>	<p>Supported and being implemented. The National Standing Committee of Transport endorsed the Australasian Railway Association working with operators and regulators, including RailCorp and ITSRR, to develop a national approach on communications systems, which has agreed minimum functionality requirements for train radio systems. RailCorp plans to implement a digital train radio system. An objective of this system is for it to be interoperable with existing analogue radio systems. Because of the technical complexities associated with achieving inter-operability, this has been a longer-term initiative and the first stage of its implementation will commence in 2005.</p>	<p>ITSRR to ensure functionality and compatibility requirements included in national standard, currently under development by the Australasian Railway Association. ITSRR to ensure RailCorp/ARTC Radio Functionality for next generation technology compatibility requirements.</p>	<p>Independent Transport Safety &amp; Reliability Regulator</p>	<p>Open</p>	<p>Acceptable Response</p>	<p>31/12/2010</p>

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
39. Communications procedures must be standardised throughout the rail network, so that all railway employees describe the same subject matter in an identical way.	Supported. RailCorp Network Procedures contain standardised communications procedures, which are in place across the NSW network. ITSRR will introduce regulations including for communications that set out the expectations (or performance outcomes) required of industry. The regulations will be developed on a national basis, through the National Transport Commission process, to ensure consistent application across the Australian rail industry.	ITSRR to ensure that standard communications procedures are included in Network rules. ITSRR to ensure that appropriate Training is provided by operator including: a) Evidence of Development of Training Program that addresses issues. (Includes Development Process, Training Aids / Curriculum.) b) Evidence of Appropriate Assessment Competency. (Delivery of course by appropriately qualified trainers.) c) Evidence of process to ensure the training of new staff and the Refresher training of existing staff. d) Review process built-in, to take into account relevance and changes. ITSRR will refer matter to the NTC for development of National regulations.	Independent Transport Safety & Reliability Regulator	Closed		31/01/2007
43. Communications protocols and procedures should be standardised. and mandated by regulations making them a condition of accreditation.	Supported. As for R 39.	ITSRR will refer matter to NTC for development of National Regulation ITSRR will adopt National Regulation. In the interim, ITSRR will enforce compliance with the current protocols through its accreditation, audit and compliance activities.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	30/06/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
50. All reported train defects should be certified by a person in a supervisory position in RailCorp as having been rectified.	Supported and being implemented. a supervisory position in RailCorp as having been rectified.	RailCorp to have identified an appropriate position to sign off train defects that have been rectified. RailCorp to have implemented procedures to support and implement process.	RailCorp	Closed		30/09/2006
52. Maintenance plans on all trains should be revised annually.	Supported in principle for further review. All maintenance plans are being reviewed. RailCorp will incorporate this recommendation in that review.	All plans reviewed. Process to ensure regular / appropriate reviews take place	RailCorp	Closed		30/06/2006
53. Train inspections should be carried out at the time of stabling RailCorp trains, as well as a part of train preparation prior to entering service.	Supported in principle for further review. RailCorp is reviewing procedures and resources to rectify defects. RailCorp provides time for drivers of stabling trains to report any noted defect.	A document risk assessment and/or business case by RailCorp, detailing how train integrity on entering into service is to be managed.	RailCorp	Open	Agency Claims Closure	31/10/2005
57d) all such medical examinations must be reviewed on behalf of the employer by an occupational physician.	Supported. ITSRR will submit this recommendation to the National Transport Commission (NTC) for consideration as part of the National Standard.	ITSRR will submit recommendation to NTC for consideration in context of current standard	Independent Transport Safety & Reliability Regulator	Closed	Alternate Response	30/06/2007
58. RailCorp should establish a comprehensive safety document management system	Supported.	RailCorp Safety Document Management System to be Implemented which incorporates recommendation 59-62.	RailCorp	Closed		#31/10/2005

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
59. The safety document management system should provide for the distribution of electronic versions of safety documentation to relevant staff.	Supported and being implemented.	RailCorp Safety Document Management System provides for the distribution of electronic versions of safety documentation to relevant staff.	RailCorp	Closed		#31/10/2005
61. RailCorp should provide access to electronic versions of safety documentation for all operational staff at their workplace.	Supported in principle for further review. RailCorp is reviewing options for providing all staff with the best and appropriate means of accessing safety documentation, including by electronic means.	The Rail Safety Document Management System ensures the distribution of electronic versions of safety documentation to relevant staff. Procedures in place so that all operational staff can access safety documentation at appropriate times.	RailCorp	Closed		#30/06/2006
71. The position of team leader should be created by RailCorp to be responsible for a group of approximately 30 train drivers, with responsibility to ensure that each train driver's training needs are being met and that any safety concerns of train drivers are being properly addressed. The team leaders are to have direct access to the Chief Executive of RailCorp if any safety concerns they have are not addressed	Supported in principle for further review. RailCorp is reviewing the current supervisory structure of train crewing in light of this recommendation.	Creation of appropriate position to carry out functions outlined in Rec 71.	RailCorp	Open	Agency Claims Closure	+TBA

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
89. There must be a minimum of two independent methods of self-initiated emergency escape for passengers from all trains at all times.	Requires further detailed review, subject to the risk assessment referred to in R88.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
90. All passenger trains must be fitted with an internal passenger emergency door release.	Requires further detailed review. See R 89.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
91. All passenger trains operating in New South Wales must be fitted with external emergency door releases which do not require any special key or other equipment to operate.	Supported and being implemented. RailCorp has commenced a modification program to ensure all external emergency door releases do not require special keys or other equipment to operate.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
92. The internal passenger emergency door release should be fitted with a facility which prevents it from operating unless the train is stationary.	Requires further detailed review. See R 89.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
93. The operation of the 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	Requires further detailed review. See R 89.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
over the intercom system in the train.						
95. All passenger trains operating in New South Wales must have the external emergency door release clearly marked with the words 'Emergency Door Release'.	Supported and being implemented.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
98. All trains should have windows available through which passengers can escape.	Requires further detailed review. See R 89.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
99. All new rail cars must have appropriate signage and lighting identifying escape routes in the case of emergency.	Supported.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
100. All new rolling stock must be designed with an area of the roof through which emergency services personnel can access a rail car without encountering wiring or other equipment. That access point must be clearly marked with words such as "emergency services cut here".	Requires further detailed review. See R 89.	ITSRR has undertaken an initial review and recommended options for a standard. ITSRR to develop principles for an appropriate standard incorporating review findings and refer matter to NTC for development of a national standard. ITSRR to ensure operators comply with standard.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/04/2007
101. ITSRR should initiate and/or participate in the development of a national standard for crashworthiness of all passenger trains.	Supported.	ITSRR will refer matter NTC for development of National Regulation. ITSRR will adopt National Regulation. In the interim ITSRR will ensure compliance with existing industry standards through its accreditation process.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	*30/09/2007