



INDEPENDENT  
TRANSPORT  
SAFETY AND  
RELIABILITY  
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: October - December 2008*



*ITSRR Quarterly Report Sixteen*

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

*Reporting Period:*  
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REGULATOR

30 January 2009

The Hon David Campbell MP  
Minister for Transport  
Level 35, Governor Macquarie Tower  
1 Farrer Place  
Sydney NSW 2000

Dear Minister

I am pleased to provide the sixteenth 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 October to 31 December 2008. The next report will reflect progress made in the quarter 1 January to 31 March 2009.

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 sixteenth Quarterly Report. It outlines progress made between 1 October and 31 December 2008.

### **Implementation Summary**

Further progress was made during the reporting period with three recommendations verified and closed. Two of these recommendations were the responsibility of RailCorp:

- Recommendations 1 and 20 are intended to ensure that RailCorp has effective procedures in place and staff are adequately trained to respond in the event of an incident or emergency.

On 30 June 2008 RailCorp re-submitted its claim for closure for Recommendations 1 and 20 together with supporting documentation.

ITSRR reviewed the documents provided and met with RailCorp corporate training personnel, conducted site visits and undertook interviews with operational staff including personnel from the Rail Management Centre (RMC), the security area of the RMC and staff who would respond to an incident site including the rail commander, electrical and infrastructure staff.

ITSRR found there had been improvement in the training and the knowledge amongst staff about RailCorp incident response arrangements since the first claim for closure put forward by RailCorp and is therefore satisfied that the intent of Recommendations 1 and 20 have been met (Recommendation 1 and 20).

The third recommendation closed was ITSRR's responsibility:

- Recommendation 30 requires that the rail safety regulator sets standards for the design, manufacture, testing and commissioning of rolling stock to ensure that it is fit for purpose.

This recommendation was satisfied with the introduction of the *Rail Safety Act 2008* and the NSW Rail Safety Regulations on 1 January 2009, which implement the National Model Rail Safety Regulations, including Item P of Schedule 1 which requires all transport operators to have a documented set of engineering standards and procedures, for the design, manufacture, testing and commissioning of rolling stock.

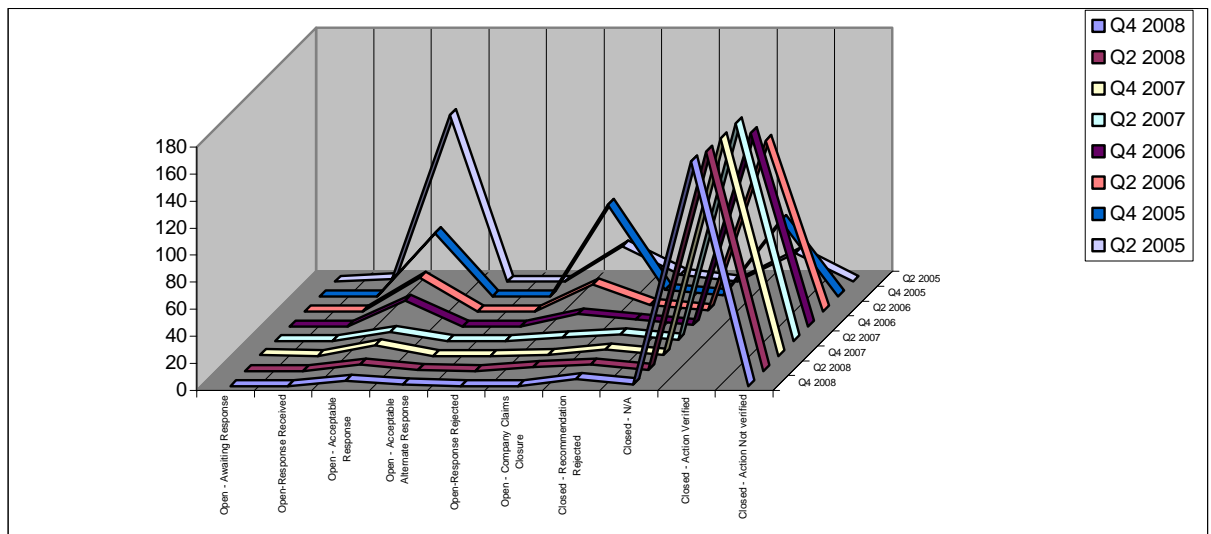
In addition, section 9 of the *Rail Safety Act 2008* places a general duty of safety on designers, manufacturers and suppliers to ensure that the thing is safe for the purposes for which it was designed, commissioned, manufactured, supplied, installed or erected (Recommendation 30).

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:

- 172 (97%) recommendations verified and closed
- 1 recommendation open acceptable response (Recommendation 32)
- 1 recommendation open acceptable alternative response (Recommendation 43)
- 1 recommendation scheduled to be implemented by 2010 has slipped to 2012 (Recommendation 38)
- 2 recommendations referred to the NTC have interim target dates (Recommendations 36 & 37).

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 has progressed the peak has shifted along the x-axis as the recommendations are closed.

## Slippage

Recommendation 38 requires that: “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 NSW be able to communicate using the same technology”. This recommendation was scheduled for completion by 31 December 2010, with the full implementation of a new digital train radio system for the RailCorp fleet.

The complexity of the technical requirements of the project and its compatibility with other government radio requirements prolonged negotiations within Government in relation to the type of train radio system which should be procured. The Government has now approved funding for the roll-out of a digital train radio system for RailCorp.

However, this delayed RailCorp's tender process so the procurement of its digital train radio system (GSM-R), which in turn has meant the implementation schedule has slipped from December 2010 to December 2012.

Accordingly, this recommendation is reported as having slipped with a revised implementation date of 31 December 2012. Revised key milestones for this project are:

- Tender process closes – 25 February 2009
- Evaluation of tenders completed – March/April 2009
- Contract awarded – end of June 2009
- MetroNet communications system (analogue technology) decommissioned – November 2012
- GSM-R digital train radio system implemented – end of December 2012.

It should be noted that trains can already communicate with other trains operating on the rail network through network control in an emergency situation.

The existing communications system enables network control to send an emergency broadcast call to all passenger and freight trains in the immediate vicinity of the emergency. Train drivers cannot communicate directly to other train drivers without the call going through network control which is in line with national rail safety principles.

## **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 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 assigned indicative timeframes for each safety action and ITSRR reviewed the appropriateness of them to ensure the timeframes were feasible and that processes were 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 for outstanding recommendations and progress against the plan may be found in Appendix 3.

### **Classification System for Recommendations**

In order to provide a graduated view of progress against the Implementation Plan, ITSRR 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.

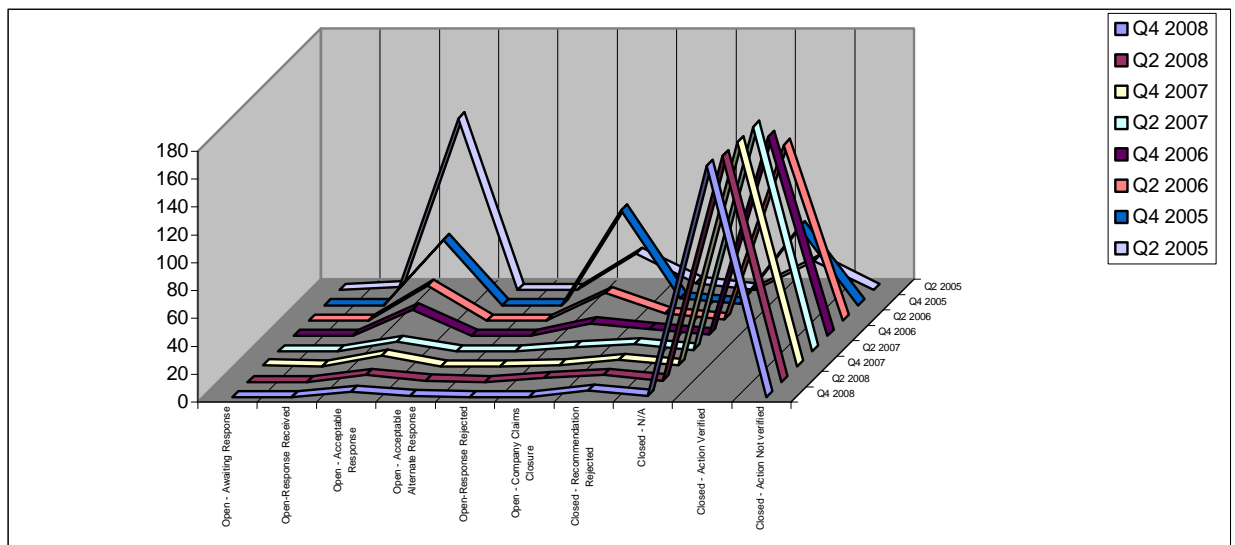
## SUMMARY OF PROGRESS

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 December 2008.

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. They require the provision of supporting emergency procedures and appropriate training in those procedures. Recommendations 2-19 and 21-28 are closed.

The intent of Recommendation 1 is to ensure that staff working in the Rail Management Centre (RMC) have received training to enable them to quickly and accurately assess an emergency situation and obtain accurate and reliable information which can be conveyed to emergency response personnel to facilitate a timely and effective response. Recommendation 20 requires all RailCorp's operational rail staff to be trained in the emergency action checklist relevant to their position.

On 30 June 2008 RailCorp wrote to ITSRR with formal advice of its resubmission of the claim for closure for recommendations 1 & 20 and a suite of supporting documentation.

ITSRR reviewed the documents provided and met with RailCorp corporate training personnel, conducted site visits and undertook interviews with operational staff including personnel from the RMC, the security area of the RMC and staff who would respond to an incident site including the rail commander, electrical and infrastructure staff.

ITSRR found there had been improvement in the training and the knowledge amongst staff about RailCorp incident response arrangements since the first claim for closure put forward by RailCorp in 2006.

During the verification process ITSRR identified issues associated with training, document clarity, consistency of recording/capturing information and coordination between different work areas that have an emergency response role. These issues have been formally communicated to RailCorp and will continue to be monitored through ITSRR's targeted regulatory compliance activities.

ITSRR is therefore satisfied that the intent of Recommendations 1 and 20 have been met, and accordingly closed Recommendations 1 and 20.

## **Design and Procurement of Rolling stock**

### **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 rolling stock (Recommendation 29) and that the rail safety regulator should set standards for the design, manufacture, testing and commissioning of rolling stock to ensure that it is fit for purpose (Recommendation 30). Recommendation 29 is closed.

On 25 November 2008, the NSW Parliament passed the *Rail Safety Bill 2008* and as a result, the *Rail Safety Act 2008* commenced on 1 January 2009. The NSW Rail Safety Regulations, which also commenced on this date, implement the National Model Rail Safety Regulations, including Item P of Schedule 1 requiring all transport operators to have a documented set of engineering standards and procedures, for the design, manufacture, testing and commissioning of rolling stock.

In addition, section 9 of the *Rail Safety Act 2008* places a general duty of safety on designers, manufacturers and suppliers to ensure that the thing is safe for the purposes for which it was designed, commissioned, manufactured,

supplied, installed or erected. The inclusion of this duty will place an overarching requirement to ensure that new rolling stock is fit for purpose.

Accordingly, the introduction of the *Rail Safety Act 2008* and supporting Regulations have satisfied the requirements set out in Recommendation 30 that the rail safety regulator should set standards for the design, manufacture, testing and commissioning of rolling stock to ensure that it is fit for purpose. On this basis, Recommendation 30 is now closed.

## **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. Recommendations 31 and 33 are closed.

Recommendation 32 requires a detailed analysis of options for improved ATP systems for the NSW network to determine if the recommendation is feasible and how it could be implemented in a rail vehicle.

RailCorp prepared a business case outlining an implementation strategy and funding requirements. The business case addressed the costs and benefits of introducing ATP based on its successful trial in early 2008. RailCorp will develop a comprehensive range of financial modelling options.

As reported in the previous quarter, RailCorp's Board has approved funding for RailCorp to progress the design and planning phase of the ATP program in parallel with the consideration of the business case to ensure that RailCorp stands ready to progress should the Government decide to proceed with the introduction of ATP on RailCorp's network.

Once these processes have been completed a submission will be put to Cabinet for a Government decision to approve funding for the introduction of ATP. The interim target date for this recommendation is 30 June 2009 (Recommendation 32).

## **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 previously advised that it would incorporate development of these regulations into its 2008-09 work program. The interim target date for these recommendations is 30 June 2009 (Recommendations 36 and 37).

## **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, signallers, train controllers and other relevant personnel (with different types of communications equipment) are able to talk to each other. Recommendations 39 - 42 and 44 - 46 are closed.

Recommendation 38 requires that: “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 NSW be able to communicate using the same technology”.

The National Standing Committee of Transport endorsed the Australasian Railway Association (ARA) working with operators and regulators, including RailCorp, ARTC and ITSRR, to develop a national approach on communications systems. Through this working group ITSRR, in consultation with the ARA, is working to ensure that functionality and compatibility requirements are included in the national standard.

The second part of this recommendation is for ITSRR to ensure that RailCorp and ARTC have radio functionality and compatibility for next generation technology requirements in line with national agreements from the working group.

This recommendation was scheduled for completion by 31 December 2010, with the full implementation of a new digital train radio system for the RailCorp fleet.

The complexity of the technical requirements of the project and its compatibility with other government radio requirements has prolonged negotiations within government in relation to the type of train radio system which should be procured. The Government has now approved funding for the roll-out of a digital train radio system for RailCorp.

However, this delayed RailCorp's tender process for the procurement of its digital train radio system (GSM-R), which in turn has meant the implementation schedule has slipped from December 2010 to December 2012.

Accordingly, this recommendation is reported as having slipped with a revised implementation date of 31 December 2012. Revised key milestones for this project are:

- Tender process closes – 25 February 2009
- Evaluation of tenders completed – March/April 2009
- Contract awarded – end of June 2009
- MetroNet communications system (analogue technology) decommissioned – November 2012
- GSM-R digital train radio system implemented – end of December 2012.

It should be noted that trains can already communicate with other trains operating on the rail network through network control in an emergency situation. The existing communications system enables network control to send an emergency broadcast call to all passenger and freight trains in the immediate vicinity of the emergency. Train drivers cannot communicate directly to other train drivers without the call going through network control which is in line with national rail safety principles.

Recommendation 43 concerns the mandating of communication terminology, protocols and procedures through regulations. As reported previously the outcome of an impact assessment conducted by the NTC concluded that it is not appropriate to mandate these protocols and procedures through the use of national regulations. Consequently, the matters were referred to the ARA for inclusion in the development of national standards by its subsidiary the Rail Industry Safety and Standards Board (RISSB).

As previously reported, the ARA confirmed that RISSB would include development of communication protocols in its Australian Network Rules and

Procedures (ANRP). RISSB has since indicated it has gained the agreement of all major access providers (network infrastructure managers) to implement the new rules and procedures through their rail access agreements with operators thereby making them mandatory.

Compliance with the new ANRP will be monitored by the industry through regular audit programs as stated in each accredited Access Provider's Safety Management System. It is also envisaged regulators will play a role through accreditation monitoring and audit.

For this reason, ITSRR believes that these arrangements represent an acceptable alternative response to recommendation 43.

On 15 December 2008 the ARA advised that Stage 1 of the ANRP is nearing completion and RISSB proposes to consider the draft "Work on Track" rules and procedures during March 2009.

The previous revised interim date of October/November 2008 was not met due to the large number of comments received by RISSB from interested parties on the draft National Rule Book.

Based on this advice a revised interim target date of March 2010 has been set to allow consideration of the comments, the approval and sign off by the ARA Board to take place.

It is important to reiterate that while these discussions are occurring at a national level, standard communications terminology, protocols and procedures are already in place in NSW through the NSW Network Rules. To ensure consistent application of these rules ITSRR targets compliance with them through its audit and inspection program.

NSW has also mandated processes for amending NSW Network Rules – including communications terminology, protocols and procedures – to ensure consistency throughout NSW (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 47-53 are closed.

## **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 train drivers through more stringent standards for periodic medical examinations for rail safety workers. The recommendations have been implemented, verified and closed through the adoption of the National Standard for Health Assessment of Rail Safety Workers. This recommendation and its sub-elements are closed.

It was previously reported that recommendation 57 (d) (that ITSRR develop standards for periodic medical examinations which include the requirement that all such medical examinations must be reviewed on behalf of the employer by an occupational physician) was closed on advice from the NTC that this recommendation would be addressed as part of its maintenance program established for the National Health Assessment Standard.

The NTC did not accept adoption of this recommendation as stated by the SCOI, but proposed that quality control guidance material be developed as part of the maintenance program and included in future editions of the Standard. ITSRR accepted the NTC's position and recorded it as an acceptable alternative response to the recommendation.

The NTC subsequently advised that the Standard would be reviewed during 2008-2009 and the proposal to include quality control measures in the standard would be incorporated into the review, but their adoption would be dependent upon the outcome of an impact assessment.

As previously reported, the NTC advised that the review of the standard has been deferred and will be reconsidered for inclusion in the 2009-2010 NTC work program.

Consequently, the recommendation remains closed, however, in the interests of transparency, ITSRR will report on the outcome of the review with respect to 57 (d).

## **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. All of these recommendations are now closed.

## **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. All of these recommendations have previously been closed.

## **Rail Accident Investigation**

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

The SCOI Final Report promulgated “just culture” investigations (i.e. 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 (i.e. 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. All of these recommendations have previously been closed.

## **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 (Recommendations 122 – 124). All of these recommendations are closed.

## **Summary**

Public reporting of progress in implementing the NSW Government's response to the Special Commission of Inquiry (SCOI) into the Waterfall Rail Accident has played an important role in the overall process of driving improvements to rail safety in NSW. These include a range of practical improvements to rail safety systems which are helping to reduce the likelihood of accidents in the future.

A total of 172 (97% of the total) recommendations contained in the NSW Government's response to the SCOI into the Waterfall Accident are now closed.

ITSRR will continue to report quarterly on progress towards full implementation of the NSW Government's response to the SCOI into the Waterfall Accident. ITSRR will continue to monitor the implementation of closed Waterfall recommendations 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

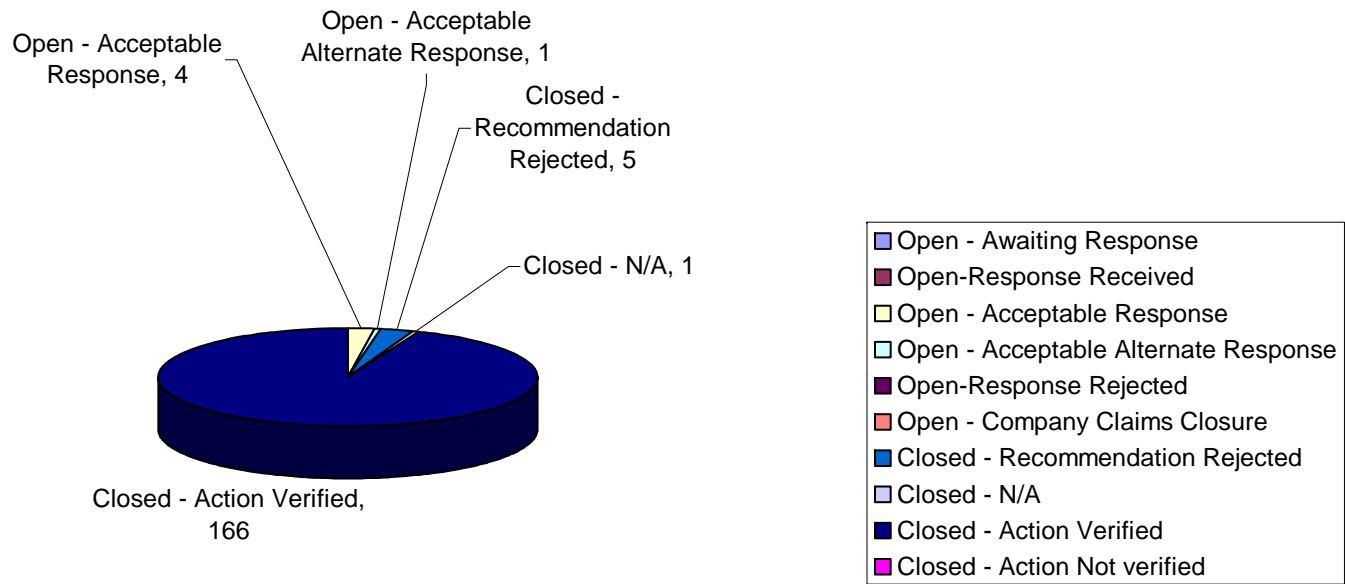
At the end of the fourth quarter 2008, the status of the 177 Recommendations including sub-elements of the SCOI Final Report is detailed in the following table:

TABLE 2: STATUS OF RECOMMENDATIONS INCLUDING SUB-ELEMENTS AS AT 31 DECEMBER 2008

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			0			102		103
Independent Transport Safety & Reliability Regulator	0		3	1					53		57
Office of Transport Safety Investigations			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>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>166</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 DECEMBER 2008.**



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 DECEMBER 2008

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	0	0	0	28	0	28
Procurement & design of rolling stock 29-30	0	0	0	0	0	0	0	0	2	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	1	1	0	0	0	0	7	0	9
Train Maintenance 47-53	0	0	0	0	0	0	0	0	7	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	0	0	0	7	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	0	0	0	0	0	0	14	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 for outstanding issues and progress against it may be found in Appendix 3 on page 46.

### **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 on page 33.

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	Closed		30/06/2008

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	RailCorp	Closed		30/06/2008

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
		<p>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; 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</p>				

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
		site controller and emergency services personnel); 17 (The rail commander should have complete authority to direct and control all response personnel 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,	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	Closed		* 31/12/2008

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
	<p>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.</p>					

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 inter-state 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</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>* 30/06/2009</p>

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
	<p>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 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.</p>					

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	* 30/06/2009

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
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	* 30/06/2009
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.	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	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.	Independent Transport Safety & Reliability Regulator	Open	Acceptable Response	+ 31/12/2012

Recommendation	Government Response	ITSRR Expectation	Agency	Status	ITSRR Assessment	Target Date
	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 interoperability, this has been a longer-term initiative and the first stage of its implementation will commence in 2005.					
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 Alternate Response	* 31/03/2010