



**Coroners Court of Victoria
Dr Jane Hendtlass
Coroner
Date: 21 October 2013**

Coronial Investigation of twenty-six rail crossing deaths in Victoria, Australia



Definitions

ALCAM – Australian Level Crossing Assessment Model
ARO – Accredited Rail Operator
ATSB – Australian Transport Safety Bureau
CFF – Contributing Factors Framework
DTPLI – Department of Transport, Planning & Local Infrastructure
IA – Interface Agreement
MOU – Memorandum of Understanding
National Rail Safety Law – *Rail Safety National Law Act 2012 (SA)* and the *Rail Safety National Law Application Act 2013 (Vic)*
OCI – Office of the Chief Investigator
ONRSR – Office of the National Rail Safety Regulator
PTV – Public Transport Victoria
Rail Safety Act – *Rail Safety Act 2006 (Vic)*
RISSB – Rail Industry Safety Standards Board
Safety Director – Director, Transport Safety
SFAIRP – so far as is reasonably practicable
TIA – *Transport Integration Act 2010 (Vic)*
TSV – Transport Safety Victoria
VRCSSC – Victorian Rail Crossing Safety Steering Committee

Context

The coronial investigation into twenty-six rail level crossing deaths identified 25 recommendations, 11 of which named Transport Safety Victoria (TSV) as a responsible agency.

TSV administers the applicable Victorian legislation and regulates accredited rail operators (AROs) to ensure they meet their safety duties. Ensuring risks are managed so far as is reasonably practicable (SFAIRP) means TSV continually assesses whether accredited operators are meeting this legal standard. In a level crossing safety context, and considering the complexity associated with multiple responsible parties and a range of legacy issues, it provides a challenging environment in which to determine what is reasonably practicable, and how TSV can influence the associated parties in ensuring the accredited operators are meeting this evolving legal standard.

The Coroner's investigation has highlighted the importance of TSV's ability to influence safety outcomes and to provide technical expertise, including human factors and system safety advice for the continued improvement of level crossing safety in Victoria. TSV is currently transitioning to the Office of the National Rail Safety Regulator (ONRSR) and will continue to advocate for improved level crossing safety outcomes with all related parties.

TSV broadly accepts the recommendations of the Coroner and as summarised below will work with other parties to address the identified issues. Although some of the actions relate directly to the recommendations, other comments relate to TSV's ability to provide practical advice and subject matter expertise to stakeholders relating to level crossing safety matters. TSV has communicated this response with the ONRSR.

Current TSV Role & Responsibility

The Director, Transport Safety (Safety Director) is an independent statutory office supported by staff permanently seconded from the Department of Transport, Planning & Local Infrastructure (DTPLI) operating as TSV.

The Safety Director's statutory object is to independently seek the highest transport safety standards that are reasonably practicable consistent with the transport system's vision and objectives under the *Transport Integration Act 2010* (Vic) (TIA). This is achieved through administering bus, maritime and rail safety legislation that promotes positive transport safety outcomes in Victoria.

In the context of rail, the Safety Director has responsibility under the *Rail Safety Act 2006* (Vic) (RSA) for accrediting rail operators and ensuring AROs comply with the requirements of their accreditation and safety duties through the use of a range of compliance tools. As Victoria's transport safety regulator, TSV provides a level of independent assurance that duty-holders are meeting their legislative obligations. This in turn reduces the risk to governments and provides reassurance to the public who use the transport system.

The Safety Director performs functions and exercises powers conferred by legislation to ensure compliance by duty-holders with their safety duties. TSV, on behalf of the Safety Director, operates within a framework of principle-based legislation which imposes safety duties on the person who is best able to manage safety risks within the chain of responsibility for rail safety. The legislation places the primary responsibility for managing risks to safety on duty-holders (such as AROs), meaning that the onus is on them to demonstrate to TSV how they are ensuring safety through risk management processes and systems.

Functions of the Safety Director

The functions of the Safety Director are set out in section 173 the TIA. These functions are summarised below.

1. To perform any functions or duties conferred on the Director, Transport Safety by the RSA and *Rail Safety Regulations 2006* (Vic) (**RSR**), as well as various other pieces of legislation.
2. Make recommendations to the Minister with respect to legislation.
3. Advise and make recommendations to the Minister in respect of matters relating to transport safety in the State and related matters.
4. Investigate and report on transport safety matters.
5. Prepare codes of practice and guidelines.
6. Provide guidance and information on transport safety matters.
7. Promote education and training by devising courses, approving courses, facilitating access to courses, and initiating or promoting events such as conferences and forums and the publication of information relating to transport safety.
8. Conduct any education or training activity, and approve persons to provide education and training.
9. Collect information and data about, and commission and sponsor research into, transport safety matters.
10. Promote awareness in the transport industry and among the public about transport safety initiatives.
11. Develop policy in relation to the administration of transport regulation.

Future changes to regulatory responsibility

It is anticipated that in May 2014 the responsibility for regulation of rail safety in Victoria will be transferred from the Safety Director to the Office of the National Rail Safety Regulator (ONRSR). This means that most rail operators in Victoria will be subject to rail safety regulation under the National Rail Safety Law and the ONRSR will be responsible for monitoring the compliance of Victorian rail operators. The ONRSR will delegate a subset of the powers to the Safety Director, who will act as the ONRSR in Victoria. For completeness, we note that some local operators will be excluded from the National Scheme and will continue to be regulated under the Victorian RSA.

Once TSV begins to deliver services on behalf of the ONRSR, the ONRSR will own the rail safety data currently collected by TSV, and therefore it will be the responsibility of the ONRSR to establish relationships with various stakeholders. The ONRSR will also become responsible for providing advice to the Minister for Public Transport in respect of matters relating to rail safety, including level crossings.

There are also a number of opportunities to be gained with the transition to the ONRSR, which include:

- better access to national data;
- better access to national expertise;
- opportunities for consistency in involvement with RISSB; and
- consistent application of rail safety decisions across intrastate operators.

TSV will discuss with the ONRSR the ongoing issues associated with level crossings in Victoria and seek to ensure there is clarity regarding roles and responsibilities going forward. This will include:

- ongoing relationship between the ONRSR/TSV and other Victorian Government entities (i.e. the Victorian Rail Crossing Safety Steering Committee (VRCSSC), PTV, Office of the Chief Investigator (OCI));
- the sharing, analysing and reporting of rail safety data;
- the ongoing promotion, education and training relating to transport safety;
- the ongoing national use of the contributing factors framework (CFF); and
- identified limitations in legislation, and in this case the limited authority for the Regulator to enforce Safety Interface Agreements for level crossings.

Actions for TSV

Recommendation 1:

That Transport Safety Victoria, Public Transport Victoria, and VicRoads adopt a systematic approach to collecting routine detailed human factors information about level crossing collisions.

TSV Action:

The collection of human factors information has historically been performed by ATSB and the infrastructure managers.

TSV will liaise with PTV and VicRoads in relation to the future collection of human factors information for level crossing collisions, noting that they are only two participants amongst a larger group which is part of the National Database Project, and therefore have no power to enforce a particular outcome.

Recommendation 2:

That Transport Safety Victoria and VicRoads investigate and implement new level crossing infrastructure which is designed to alert road vehicle drivers to an approaching train who are unresponsive to the current suite of level crossing warning signs.

TSV Comment:

This is not for TSV to action or implement but TSV will work with the other parties who are investigating new technologies.

Recommendation 3:

That Transport Safety Victoria and VicRoads commit themselves to joint sophisticated human factors research and innovative technology to determine how best to alert drivers who will otherwise not notice an approaching train in the context of current level crossing warnings.

TSV Action:

TSV will discuss this further with the ONRSR and RISBB as research of this kind needs to be nationally coordinated but some research in this area is being undertaken through the Australian Research Council but is at an early stage of development.

Recommendation 8:

That Transport Safety Victoria and Public Transport Victoria investigate the way in which directed sounds from horns and sirens can be used to increase the conspicuity of locomotives in regional areas and increase the likelihood of road vehicle drivers' awareness of an approaching train.

TSV Action:

TSV will discuss this further with RISSB as standards are their area of responsibility and a draft standard for Audible Warning Devices already exists.

Recommendation 9:

That Transport Safety Victoria, Public Transport Victoria and VicRoads extend their development and evaluation of new level crossing countermeasures with specific reference to the countermeasure's capacity to alert road vehicle drivers to the presence of an approaching train.

TSV Comment:

See response to Recommendation 2 above.

Recommendation 12:

That Transport Safety Victoria, Public Transport Victoria and VicRoads establish formal cooperative arrangements in relation to sharing of information required for to predictive risk assessment of level crossings, prioritisation of level crossing upgrades and development of innovative train warning systems.

TSV Comment:

The VRCSSC is the centre for the sharing of such information in Victoria. ALCAM is currently used to generate the upgrade program.

Recommendation 13

That Transport Safety Victoria cooperate with the National Rail Safety Regulator in establishing a system for undertaking and analysing the results of root cause analyses for fatal level crossing collisions to better inform improvements in level crossing infrastructure and level crossing safety.

TSV Comment:

This is the responsibility of ATSB rather than the regulators but the regulators have developed a tool for doing this (CFF) and this is being used for this purpose.

Recommendation 14:

That Transport Safety Victoria and Public Transport Victoria improve the accuracy, content and relevance of data used in predictive risk analysis used to inform decisions about upgrading of level crossings in Victoria.

TSV Comment:

This recommendation is not for TSV to action as it is not consistent with our role so PTV and Victrack will be responding to this.

Recommendation 15:

That the Australian Transport Safety Bureau, through the Transport Safety Victoria, continues to apply the systematic analysis procedures in their analysis of fatal rail incidents.

TSV Comment:

This is not for TSV to respond to as it is outside our area of responsibility but we would be happy to cooperate with the ATSB with such work.

Recommendation 16:

That Transport Safety Victoria continues to maintain and improve a comprehensive reliable data base of all level crossing incidents that occur in Victoria.

TSV Comment:

The ONRSR will be taking over responsibility for incident collection and analysis from May 2014 and this will not be the responsibility of TSV going forward.

Recommendation 17:

That Victrack, VicRoads, Transport Safety Victoria and rail operators cooperate with each other to implement innovative in-vehicle warning systems as the next stage of warning road vehicle drivers who fail to respond to existing level crossing paraphernalia that a train is approaching.

TSV Comment:

This is not for TSV to respond to as it is outside our area of responsibility but we would be happy to cooperate with the Victorian rail operators with such work.