Railway Accident Investigation Guidelines for Railway Network Owners, Railway Operators and Emergency Services Personnel

Edition 3: September 2009

we’re working for your safety
Railway Accident Investigation Guidelines for Railway Network Owners, Railway Operators and Emergency Services Personnel

Incorporating requirements of the Transport Safety Investigation Act 2003

Edition 3: September 2009

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General inquiries:
Telephone: 1800 020 616
FOREWORD

The first persons arriving at a railway accident site can render valuable assistance to minimise injury and loss of life, reduce property loss through damage, and prevent loss of clues and evidence that can identify the factors that contributed to the accident.

Often Police and Emergency Services and representatives of the Railway Network Owner and/or Railway Operator are the first trained personnel to arrive at railway accident sites. In addition, supervisory officers coordinate response and recovery from locations off-site. These guidelines have been prepared by the Australian Transport Safety Bureau (ATSB) to assist these people to understand better the essential procedures and the requirements of the Transport Safety Investigation Act 2003 (TSI Act).

The ATSB has jurisdiction to investigate rail accidents on the Defined Interstate Railway Network (DIRN). Before exercising its jurisdiction, the ATSB will assess each accident on the DIRN to determine whether or not it will conduct an investigation. The participation of other parties in the ATSB investigation will be to the extent necessary to enable all the underlying factors of a rail safety occurrence to be determined in accordance with the TSI Act.

In addition to general information relating to railway accident sites, a checklist has been included with this booklet to guide response personnel and supervisory officers. The checklist should assist personnel in undertaking the essential actions in an environment that can easily become disorganised.

As soon as possible after receiving a report of a rail safety occurrence, the ATSB will advise relevant parties whether or not the ATSB will investigate. If there is to be an investigation, the ATSB will liaise with other parties such as the designated accident site coordinator to ensure that evidence is effectively secured or recorded, pending an ATSB investigator’s arrival on site. The ATSB undertakes to allow restoration of railway operations as soon as possible once the accident site has been examined and evidence collected.
Role of the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory Agency. The Bureau is governed by a Commission and is entirely separate from State and Territory rail regulators, transport policy makers, and industry operators.

The ATSB’s function is to maintain and improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in:

- independent investigation of transport accidents and other safety occurrences;
- safety data recording, analysis and research; and
- fostering safety awareness, knowledge and action.

The ATSB conducts ‘no blame’ rail safety investigations in accordance with the *Transport Safety Investigation Act 2003* (TSI Act). The Bureau does not investigate for the purpose of taking administrative, regulatory or criminal action.

The ATSB has broad powers to investigate rail accidents and serious incidents on the Defined Interstate Rail Network (DIRN). The Bureau may also investigate intrastate rail accidents and serious incidents when requested by state or territory governments.

The *Transport Safety Investigation Act 2003* is available online at: [www.atsb.gov.au](http://www.atsb.gov.au)
Does the ATSB investigate all rail accidents on the DIRN?

The Bureau investigates selectively, as do many equivalent organisations overseas. The aim is to concentrate ATSB’s resources on those investigations considered most likely to enhance rail safety. Because many accidents are repetitive in nature, investigating these in any detail may not be justified, given the Bureau’s limited resources. In such cases, the ATSB will not necessarily attend the scene, conduct an in-depth investigation, or produce an extensive report.

When the ATSB investigates an accident or incident, investigators will seek to determine its circumstances, identify any safety issues, and encourage relevant safety action. The aim of all ATSB investigations is to prevent the occurrence of other accidents and incidents, rather than to assign blame or liability. This approach helps ensure the continued free flow of safety information for the purposes of improving safety in the future.

Reporting accidents and incidents

As required under the Transport Safety Investigation Regulations 2003 (TSI Regulations), train operating crew, rail and track owners and operators must report accidents and serious incidents (Immediately Reportable Matters) that occur on the DIRN as soon as practicable and by the quickest possible means. Noting that the regulatory responsibility for rail is with the states and the Northern Territory (NT), reports should be made to the relevant state or the NT authority in accordance with established procedures in the applicable jurisdiction (contact details for reporting rail incidents can be found at the end of this booklet). The ATSB is then informed by the relevant regulatory authority, so that it can determine whether or not an investigation is needed.

If reporting directly to the ATSB, call the toll-free number

1800 011 034
TSI Regulation 4.3 defines Immediately Reportable Matters in relation to rail vehicle operations or the DIRN. The relevant excerpts from Regulation 4.3 are:

1. The death of, or a serious injury to, a person on board the rail vehicle or in contact with the rail vehicle or anything attached to the rail vehicle or anything that has become detached from the rail vehicle;

2. A collision between the rail vehicle and one or more other rail vehicles, resulting in serious damage to any of the rail vehicles;

3. A collision between the rail vehicle and a person or vehicle at a level crossing, including a pedestrian crossing;

4. A collision between the rail vehicle and an obstruction that results in serious damage to, or destruction of, the rail vehicle or obstruction;

5. A running line derailment of the rail vehicle.

Note: The death of, or a serious injury to, a person does not include:

6. death or serious injury resulting from natural causes (except to a member of the locomotive crew); or

7. death or serious injury that is intentionally self-inflicted; or
8. death or serious injury that is intentionally caused by another person; or

9. death or serious injury suffered by a stowaway in a part of the rail vehicle that is not usually accessible to crew members or passengers after departure; or

10. death occurring more than 30 days after the occurrence that caused the death, unless the death was caused by an injury that required admission to hospital within 30 days after the occurrence.

What the ATSB needs to know

When you report the matter to the relevant state or territory rail safety authority you are only required to report the details sought by the state or territory authority. Separately, if you contact the ATSB, it may assist if you can provide the following:

(the absence of any of the following should not delay the accident report)

- the name and contact details of the person making the report;
- the role of the person making the report;
- the location where the reportable matter occurred;
- the day and local time when the reportable matter occurred;
- if any passengers have died or been seriously injured as a result of the reportable matter, how many;
- if any crew members have died or been seriously injured as a result of the reportable matter, how many;
- if any other persons have died or been seriously injured as a result of the reportable matter, how many;
- the nature of the reportable matter, including a brief description of the occurrence;
- details of the rail vehicle/s involved including train number/s; and
- the name of the railway operator/s of the rail vehicle/s;
- The contact details of the railway operator/s of the rail vehicle/s.
Investigation powers

Certain evidence collected during the course of an investigation is classed as restricted information, and the evidence held by the ATSB cannot be accessed for criminal proceedings. Given the public interest considerations, it is very unlikely that disclosure will be authorised for civil proceedings. Amongst other things, restricted information includes witness statements, communications with witnesses and medical information. Other documentary evidence may be classed as restricted information where a person has been required to produce the document under section 32 of the TSI Act.

Section 32 provides for sending information to an investigator or, alternatively, the requirement to attend before an investigator and provide information to them. Information provided to the ATSB in these circumstances cannot be used against the individual who provided it in criminal or civil proceedings. Therefore, under section 32, a person is not excused from answering a question or producing evidential material in response to a requirement on the grounds that the answer, or the production of the material, might tend to incriminate the person or make the person liable to a penalty.

Routinely the ATSB investigator will wish to:

• interview persons directly or indirectly involved with an accident or serious incident;
• copy, remove or retain relevant documentation and physical evidence for further examination and analysis;
• enter premises such as accident sites, buildings, vehicles etc to obtain evidence.

For the purpose of ensuring evidence is protected, the ATSB may issue a ‘Protection Order’ under the TSI Act for pieces of equipment or part or all of the accident site.

The ATSB seeks to conduct transport safety investigations in a cooperative manner, affording individuals the maximum protection for an open and frank exchange of information. Where the ATSB is exercising powers to search premises it will only do so where it is necessary and reasonable in the circumstances. The TSI Act will protect sensitive safety information.
WHAT TO DO:

Emergency Response

Ensure normal emergency response notifications are completed: police, fire (including HAZMAT), ambulance (000).

Accident notification to rail safety regulator or ATSB

- Report the accident to the relevant rail safety authority (contact details can be found at the end of the pamphlet), or if contact with authority cannot be established, to the ATSB on 1800 011 034.
- Provide the following information to ATSB, if known:
  - the name and contact details of the person making the report;
  - the role of the person making the report;
  - the location where the reportable matter occurred;
  - the day and local time when the reportable matter occurred;
  - if any passengers have died or been seriously injured as a result of the reportable matter, how many;
  - if any crew members have died or been seriously injured as a result of the reportable matter, how many;
  - if any other persons have died or been seriously injured as a result of the reportable matter, how many;
  - the nature of the reportable matter, including a brief description of the occurrence;
  - details of the rail vehicle/s involved including train number/s;
  - the name of the owner/s of the rail vehicle/s; and
  - the name and contact details of the operator/s of the rail vehicle/s;

At accident site

- Ensure the safety of persons, animals, and property (track owner is usually best placed to know hazards);
- Allow police and emergency services access to the site;
- Allow police, emergency services, and those persons that may be assisting a coroner to identify and remove deceased persons;
- DO NOT move transport vehicles or associated wreckage unless a dangerous situation makes it necessary to do so;
- If the site must be disturbed, then photograph, sketch, or record in some way the original state of evidence moved or altered. DO NOT try to restore items of evidence to its original state unless the ATSB asks you to do so;
- Ensure the protection of the environment from significant damage or pollution;
- Ensure the perimeter of the accident sites is determined and secured, including all scattered wreckage. Other evidence such as track marks, and other infrastructure equipment needs to be preserved;
- Ensure the management, coordination, and controlled access of the accident site;
- DO NOT release personal information, such as the names of the train crew or passengers, to the public or media;
- Ensure compliance with any Protection Order issued by ATSB;
- Prior to the arrival of ATSB investigators, record the observed status of perishable evidence:
  - security and isolation of locomotive and signalling data recorder information (usually in accordance with operator procedures);
  - signal indications and turnout positions at time of occurrence;
  - marks left on rails;
  - level crossing indications (was the active control operating or not at time of occurrence?);
  - weather conditions including wind direction and speed, temperature, cloud cover;
  - air brake equipment and gauge readings and apparent condition;
  - temperature of brakes, wheels and bearings, track;
  - the position of other trains on adjacent lines;
  - the position and registration number of motor vehicles in the vicinity of a level crossing;
• the location from which injured persons of the accident were assisted or deceased persons were removed
• the names, addresses, contact details (particularly telephone numbers), preliminary eyewitness statements, and intended movements of any witnesses

☐ Ensure that data recorders are isolated. Prevent valuable data from being lost (usually in accordance with rolling stock operator procedures);

☐ Ensure that data recorders are NOT moved or downloaded unless arranged by ATSB;

☐ Ensure that all secured evidence and other information is provided to ATSB investigators when they arrive on site;

☐ DO NOT commence a full or partial site recovery until agreed to by the ATSB;

Notes
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Accident site coordination and security

When attending an accident site it is important to distinguish between control of the site in accordance with the TSI Act and the ‘hands on’ function of site control. The TSI Act and Regulations provide the ATSB with the means to ensure the protection of evidence on and off site, even when the ATSB is not in attendance. The Memorandum of Understanding between the ATSB and the state and territory regulatory authorities acknowledge that the ‘hands on’ function of site control belongs, in the majority of circumstances, to the applicable rail infrastructure manager who will act in accordance with their accredited safety management system.

Once a site has been made safe by the emergency response agencies, and/or track manager, a means of controlling access is agreed. The practice of preventing persons from entering an accident site is based on common sense, respect for casualties, protection of valuable and important equipment and the preservation of evidence in order to establish the factors that contributed to the accident and to prevent unnecessary exposure to hazards.

Clear and concise communication between the ATSB and the site manager/controller prior to the arrival of the ATSB is vital. Where a Protection Order has been issued by the ATSB, the Protection Order conditions and permission must be followed by the site controller. Please regard the exchange of these forms as a routine function that will serve the interests of all parties. The importance of clear and concise communication between the ATSB and the site manager/controller cannot be over-emphasised.

In particular, the ATSB regards the preservation of perishable evidence at an accident site as a matter of prime importance. This evidence should not be interfered with except in extraordinary circumstances such as rendering assistance to persons, animals or making a site safe. Perishable evidence includes data recorder information, signalling equipment and position at time of accident, marks left on track and surrounds, wreckage location and so on. Should it be absolutely necessary to alter the state of vital / perishable evidence, then every effort should be made to record as accurately as possible the original position of this evidence at the time of the accident. Unless necessary for the preservation of life, or for safety
purposes, wreckage should be left in situ to allow investigators to examine and methodically remove evidence.

Emergency services personnel are often the first at the accident scene. In this instance, they will be the initial site controllers / managers until their work is complete. During this period the following steps should be taken in order to preserve and record evidence. With their permission:

1. Determine the perimeter of the accident site, all scattered wreckage, and any perishable evidence.
2. In conjunction with other emergency services personnel, manage access to the defined site.
3. Record as much perishable evidence as possible. If the site must be disturbed, before doing so, try to photograph, video, sketch, or record the original state of evidence moved or altered. DO NOT try to restore items of evidence to its original state unless the ATSB asks you to do so.
4. Record as much perishable evidence as possible, for example:
   - signal indications and turnout positions at the time of the occurrence;
   - marks left on rails;
   - level crossing indications (active control operating or not at time of occurrence?);
   - weather conditions including wind direction and speed, temperature, cloud cover;
   - air brake equipment and gauges readings and apparent condition;
   - temperature of brakes, wheels and bearings, and track;
   - the position of other trains on adjacent lines;
   - the position and registration number of motor vehicles in the vicinity of a level crossing.
5. Carefully record, as soon as possible, the positions from which injured persons of the accident were assisted or deceased persons were removed.
6. Take photographs or sketches beforehand if anything (eg, removal of deceased persons, the weather) is likely to obliterate or alter any marks on the track or on wreckage.

7. Secure the site and any of the transport vehicle’s equipment against loss or further damage.

8. Record the names, addresses, contact details particularly telephone numbers, and intended movements of any witnesses.

Make sure that the individual concerned is aware that the information is being collected for a transport safety investigation and that it will be passed on to the ATSB for this purpose. Seek their consent if possible.

The names and addresses of witnesses should be noted and the list passed on to the ATSB on their arrival at the accident site. Preliminary eyewitness statements detailing first reactions can be of great value to investigators. Such statements will generally be untainted by reflection, rumour, or exposure to the news media.

**Event and data recorders**

Event and data recorders provide vital, but perishable, evidence of the moments leading up to the accident. Event and data recorders may be fitted to:

- locomotive systems;
- signalling equipment;
- train control centres.

They may also take the form of:

- security monitoring (CCTV);
- on-board passenger security monitoring (CCTV);
- level crossing circuitry data;
- wheel and bearing track-side monitors;
- in-motion wagon weighing.

Unless arranged by the ATSB, event and data recorders MUST NOT be disturbed or downloaded unless there is a danger of loss. However, every effort must be made to isolate or prevent valuable data from being lost after the accident.
Recovery of the site

The ATSB is very conscious of the need to restore the track and resume services as quickly as possible after a rail accident. ATSB investigators, however, have a duty to ensure that any accident they attend is investigated thoroughly. In any accident the ATSB must be satisfied that the evidence collected is as complete as possible.

Soon after the ATSB receives notification of a rail accident the track owner and train operator will be advised if the ATSB requires control of the site. Although a ‘Protection Order’ may be issued under the TSI Act for pieces of equipment, or part or the entire accident site, permission under the Protection Order may allow site recovery. This will be assessed on a case-by-case basis. To expedite the recovery process, the ATSB may release sections of the site as the investigation progresses. If any fatalities have resulted from a rail accident, the ATSB will coordinate with the relevant coroner regarding the release of wreckage etc.

If the ATSB needs all or part of the wreckage for off-site examination, the ATSB will work with the track owner or train operator to arrange for recovery.

Coordinating with police inquiries

Where the accident investigation involves police inquiries (e.g., for the information of the coroner or a criminal investigation), the ATSB will assist where possible, within the constraints of the TSI Act. However, it must be remembered that the ATSB investigation and any police investigation are entirely separate. The ATSB does not investigate for the purpose of apportioning blame or determining liability.

If early evidence suggests the accident was the result of a serious criminal act, the police would normally direct the investigation and the ATSB would not investigate.

Dealing with the media

The media expect to be provided with accurate and timely information. The ATSB realise the media have deadlines to meet and will seek, with the police and site coordinator, to provide access to an accident site as soon as it is practicable, consistent with safety and the on-site investigation.
The ATSB lead investigator will coordinate any contact with the media. Media questions must be answered in factual terms, without speculation. Further information relevant to the ATSB investigation will be released by the ATSB (telephone 1800 020 616). Questions relating to the ATSB investigation should be directed to this number.

Only the ATSB may authorise the release of factual information about the ATSB’s investigation. Other organisations should confine their comments to the conduct of their own work and follow the advice of their own media departments.

The ATSB will not release to the public or media personal information such as the names of the train crew or passengers. The coroner will decide if/when to release the names of deceased persons and the police generally act on their behalf.

Investigation reports

In accordance with the TSI Act, a final report will be released to the public as soon as it becomes available.

The ATSB facilitates safety action by communicating the identified safety issues to the relevant organisations throughout the course of an investigation. The ATSB encourages proactive safety action and will acknowledge such action in its investigation reports. Formal safety recommendations are normally issued when other attempts to facilitate safety action have been unsuccessful, and the risk level is considered by the ATSB to be either critical or significant. The ATSB has no legislative power to enforce its safety recommendations, but it can require a detailed response which may be made public, regarding the implementation of recommendations.

In accordance with the TSI Act a final report is not admissible as evidence in any civil or criminal proceedings except to a coronial inquiry.

Conclusion

Your cooperation is appreciated in the event that you or your organisation is either first on the scene of an accident or appointed site coordinator. This booklet has attempted to outline the essential procedures under the Transport Safety Investigation Act 2003 whereby you can provide valuable assistance to the Australian Safety Transport Bureau and the investigation of the accident.
## Contact details for reporting rail accidents

### New South Wales
- **Office of Transport Safety Investigations**
  - P.O. Box A2616, Sydney South NSW 1235
  - Phone No.: 1800 677 766
  - Email: Transport.Safety@otsi.nsw.gov.au

### Northern Territory
- **Department of Infrastructure, Planning and Environment - Rail Safety Unit**
  - GPO Box 2520, Darwin NT 0801
  - Phone No.: 08 8924 7209
  - Email: railsafety@nt.gov.au

### Queensland
- **Queensland Transport, Rail Safety Unit**
  - PO Box 673, Fortitude Valley, QLD 4006
  - Phone No.: 07 3253 4160
  - Email: rsau@transport.qld.gov.au

### South Australia
- **Department for Transport, Energy and Infrastructure - Rail Safety**
  - PO Box 1, Walkerville SA 5081
  - Phone No.: 08 8343 2146
  - Email: rail@transport.sa.gov.au

### Tasmania
- **Department of Infrastructure, Energy and Resources - Rail Safety Unit**
  - GPO Box 936, Hobart Tasmania 7001
  - Phone No.: 03 6233 4982
  - Email: rail.safety@dier.tas.gov.au

### Victoria
- **Chief Investigator, Transport and Marine Safety Investigations**
  - PO Box 2797, Melbourne VIC 3001
  - Phone No.: 03 9095 4275
  - Email: chief.investigator@transport.vic.gov.au

### Western Australia
- **Department for Planning and Infrastructure, Office of Rail Safety**
  - GPO Box C102, Perth WA 6839
  - Phone No.: 08 9216 8405
  - Email: railsafety@dpi.wa.gov.au
Rail, Marine and Aviation Accident Notification

Telephone ATSB (toll-free, 24 hours):
1800 011 034

Australian Transport Safety Bureau
PO Box 967, Civic Square ACT 2608
Australia
1800 020 616
www.atsb.gov.au

The ATSB is Australia's prime agency for independent 'no blame' transport safety investigations. The Bureau's investigations seek to identify safety issues and encourage safety action to reduce the risk of future accidents and incidents.