

**Guideline for the Reporting of
Notifiable Occurrences**
Occurrence Notification – Standard One (ON-S1)

June 2008

OCCURRENCE NOTIFICATION

Policy Type	Rail Safety Regulation
Process Category	8. Occurrence Notification
Sub-Process	8. Process Description

PURPOSE

To support uniform reporting of rail safety occurrences across Australia.

BACKGROUND

The State and Territory Rail Safety Regulators have agreed on a standard national approach on which occurrences and their definitions should be reported nationally.

It is necessary to refer to the specific requirements of each jurisdiction to confirm what occurrences are notifiable.

Each of the Rail Safety Regulators has implemented occurrence notification requirements in their respective legislation or published guidelines that are based on Standard ON-S1. The relevant State or Territory legislation and guidelines specifically define the manner and timing of occurrence notification requirements.

For clarification purposes and to assist understanding the definitions contained in this document are supplemented with example inclusions and exclusions. The examples used are not exhaustive but are only intended to clarify the type of occurrence and how it should be reported.

Document Structure

- **Terminology** defines the terminologies and data descriptor groupings used within the document.
- **Notification** provides guidance for the notification of rail safety occurrences to rail safety regulators. This Part provides more detail definitions of occurrences than those found in jurisdictional legislation in order to provide further clarity of the occurrences that do need to be notified to the regulator.

Appendix ‘A’ attached shows the occurrence data descriptors used in this document in tabulated form and reflects the information that will be recorded for each event.

CONTENTS

1. TERMINOLOGY AND DESCRIPTORS	7
1.1 Railway Operation	7
1.2 Railway Occurrence.....	7
1.3 Railway	7
1.4 Train.....	8
1.4.1 Passenger Train	8
1.4.2 Urban Passenger Train.....	8
1.4.3 Non-Urban Passenger Train.....	8
1.4.4 Tourist & Heritage Passenger Train	8
1.4.5 Tram.....	8
1.4.6 Freight Train.....	9
1.4.7 Track Maintenance Train.....	9
1.4.8 Other Train	9
1.5 Type of Traction	9
1.5.1 Electric	9
1.5.2 Diesel	9
1.5.3 Steam	9
1.5.4 Other Traction Type	9
1.6 Rolling Stock.....	10
1.7 Person Type.....	10
1.7.1 Railway Employee.....	10
1.7.2 Railway Staff.....	11
1.7.3 Contractor	11
1.7.4 Volunteer.....	11
1.7.5 Passenger.....	11
1.7.6 Trespasser	11
1.7.7 Public	12
1.8 Road Vehicle	12
1.8.1 Light Passenger Vehicles.....	13
1.8.2 Heavy Freight Vehicles	13
1.8.3 Dangerous Goods Vehicles.....	13
1.8.4 Buses.....	13
1.8.5 Motorcycles.....	13
1.8.6 Bicycles.....	13
1.8.7 Special Purpose Machinery.....	13

1.8.8	Other	13
1.9	Level Crossing.....	13
1.9.1	Crossing with Active Warning Devices	13
1.9.2	Crossing with Passive Warning Devices	14
1.9.3	Unprotected level crossing.....	14
1.10	Casualty.....	14
1.10.1	Fatality	14
1.10.2	Serious Personal Injury.....	14
1.10.3	Minor Personal Injury.....	15
1.11	Near Miss	15
1.12	Railway Premises	15
1.13	Track.....	15
1.13.1	Running Line.....	15
1.13.2	Yard	16
1.13.3	Running Line Occurrence	16
1.13.4	Yard Occurrence.....	16
1.14	Civil	16
1.15	Signal	16
1.16	Proceed Authority.....	16
1.17	Safeworking	17
1.18	Security	17
1.19	Railway Security Occurrence.....	17
1.20	Terrorism (act of)	17
1.21	Wrong Side Failure.....	17
1.22	Security Sensitive Goods	17
1.23	Dangerous Goods	17
2.	REPORTING REQUIREMENTS.....	18
2.1	Data Items Required for all Occurrences.....	19
2.1.1	Notifying Organisation	19
2.1.2	Infrastructure Manager	19
2.1.3	Rolling Stock Operator(s).....	19
2.1.4	Train Control Report Number/Code.....	19
2.1.5	Incident Number/Code.....	19
2.1.6	Location of Occurrence	20
2.1.7	Description of the Location.....	20
2.1.8	Line Section Identifier	20
2.1.9	Running Kilometerage.....	20

2.1.10	Date of Occurrence.....	20
2.1.11	Time of Occurrence.....	20
2.1.12	Notification Category.....	20
2.1.13	Occurrence Classification.....	20
2.1.14	Description of Occurrence.....	20
2.1.15	Description of Causes/Contributing Factors.....	21
2.1.16	Likely Involvement of External Parties.....	21
2.2	Data Items Required for all Personal and Property Consequence.....	21
2.2.1	Personal Consequence.....	21
2.2.2	Person Type.....	21
2.2.3	Personal Consequence.....	21
2.2.4	Person's Gender.....	21
2.2.5	Person's Age.....	21
2.2.6	Property Damage/Consequence.....	22
2.2.7	Drug and Alcohol Testing of Rail Safety Workers (Employees).....	22
2.2.8	Type of Test Performed.....	22
2.2.9	Reason for Test.....	22
2.2.10	Time of Test.....	22
2.2.11	Test Results.....	22
2.3	Data Items Required for Specific Occurrences.....	22
2.3.1	Train Description.....	22
2.3.2	Train Type.....	22
2.3.3	Train Identification.....	22
2.3.4	Traction Type.....	23
2.3.5	Rolling Stock Class.....	23
2.3.6	Level Crossings.....	23
2.3.7	Level Crossing Identifier.....	23
2.3.8	Level Crossing Control Type.....	23
2.3.9	Road Vehicle Type.....	23
2.3.10	SPAD/Proceed Authority Exceedence Over-run.....	23
2.3.11	Infrastructure Features.....	23
2.3.12	Signal Number.....	23
2.3.13	Perway Switch/Points Number.....	23
2.3.14	Dangerous Goods Type.....	24
3.	OCCURRENCE CATEGORIES AND DEFINITIONS.....	25
3.1	Derailment.....	26
3.2	Collision.....	26

3.3	Level Crossing Occurrence.....	27
3.4	Signal Passed at Danger.....	28
3.4.1	Action Taken by Train Driver.....	28
3.5	Proceed Authority Exceeded.....	29
3.5.1	Action Taken by Train Driver.....	29
3.6	Signalling and other Proceed Authority Systems Irregularity	29
3.7	Slip, Trip or Fall	31
3.8	Load Irregularity.....	31
3.9	Dangerous Goods	32
3.10	Safeworking Rule or Procedure Breach.....	32
3.11	Track and Civil Infrastructure Irregularity.....	33
3.12	Rolling Stock Irregularity	34
3.13	Electrical Infrastructure Irregularity	35
3.14	Fire.....	35
3.15	Explosion	36
3.16	Suspected Suicide or Attempted Suicide	36
3.17	Alcohol or Drugs Irregularity.....	36
3.18	Train Warning and Enforcement Systems Irregularity.....	36
3.19	Communications System Failure.....	37
3.20	Railway Network Security	38
3.21	Runaway	38
4.	Appendix A – Rail Safety Occurrence Reference Chart.....	39

1. TERMINOLOGY AND DESCRIPTORS

1.1 Railway Operation

Inclusive term used to describe all activities of a railway related to the performance of its rail transportation business. In the model national Rail Safety Bill is defined as meaning

- a) the construction of a railway, railway tracks and associated track structures or rolling stock;*
- b) the management, commissioning, maintenance, repair, modification, installation, operation or decommissioning of rail infrastructure;*
- c) the commissioning, maintenance, repair, modification or decommissioning of rolling stock;*
- d) the operation or movement, or causing the operation or movement by any means, of rolling stock on a railway (including for the purposes of construction or restoration of rail infrastructure);*
- e) the movement, or causing the movement, of rolling stock for the purposes of operating a railway service.*

1.2 Railway Occurrence

Any accident or incident involving a train or rolling stock whether in motion or not, or other event on railway premises affecting the safety of persons, property or railway operations.

Includes:

- Collision, derailment, fire, explosion, act of God, or other event; and
- Slips, trips and falls on trains or railway infrastructure.

Excludes:

- Occurrences in repair shops, not involving a train in motion.
- Occurrences in railway offices not directly affecting the safe operation or movement of trains.

1.3 Railway

A guided system designed for the movement of rolling stock, which has the capability of transporting passengers, freight or both on a railway track, together with its infrastructure, and associated sidings, and rolling stock.

Includes:

- A system of transport employing parallel rails or monorail which provides support and guidance for vehicles carried on flanged wheels such as:
- A heavy railway, or light railway with a track gauge equal to or greater than 600 mm;
- A monorail;
- An inclined railway;
- A tramway;
- A railway within a marshalling yard or a passenger or freight terminal;
- A private siding; and
- A railway of a kind prescribed by jurisdictional legislation.

Excludes:

- A railway in a mine which is predominantly underground and used in connection with the performance of mining operations;
- A slipway; or
- A railway used only to guide a crane;
- An aerial cable operated system;
- A railway of a kind prescribed by jurisdictional legislation to be excluded.

1.4 Train

One or more units of rolling stock coupled together, at least one of which is a locomotive or other self-propelled unit that is designed to run on a railway.

Includes:

- Single locomotive;
- Tram;
- Track machine.

1.4.1 Passenger Train

A train that is primarily designed and used for carrying passengers, whether or not it is carrying passengers at the time.

Passenger Train types are defined as follows.

1.4.2 Urban Passenger Train

A passenger train that primarily travels within designated metropolitan areas.

Includes:

- Commuter trains.

Excludes:

- Long distance passenger trains (Refer Section 1.4.3); and
- Inter-city passenger trains. (Refer Section 1.4.3)
- Tourist and Heritage Passenger Trains. (Refer Section 1.4.4)

1.4.3 Non-Urban Passenger Train

A passenger train that travels outside designated metropolitan areas.

Excludes:

- Tourist and Heritage Passenger Trains. (Refer Section 1.4.4)

1.4.4 Tourist & Heritage Passenger Train

All tourist and heritage passenger trains.

Includes:

- Tourist and heritage trams.

1.4.5 Tram

A specific type of passenger train.

Includes:

- Light rail.

1.4.6 Freight Train

A train that is designed and used for carrying freight, such as coal and minerals, grain, fuel, livestock and containers, whether or not it is carrying freight at the time.

Includes:

- Trains operated in conjunction with maintenance activities (e.g. ballast train etc).

Excludes:

- Track maintenance machines, road-rail vehicles / inspection vehicles etc.

1.4.7 Track Maintenance Train

A special type of train that is designed and used for track inspection and maintenance work.

Includes:

- Track machine.
- Hi-rail (road/rail vehicle) / inspection vehicle.
- Track maintenance trains operated by Tourist and Heritage railways.

Excludes:

- Ballast train. (Refer Section 1.4.6)

1.4.8 Other Train

Any type of train not described in one of the above sub-categories.

Includes:

- Locomotive(s) operated on running lines without a passenger or freight consist (running light engine only);
- Monorail; and
- Inclined Railway.

1.5 Type of Traction

The type of power unit providing motive power to a train.

Types of Traction are defined as follows

1.5.1 Electric

Excludes:

- Diesel electric.

1.5.2 Diesel

Includes:

- Diesel hydraulic; and
- Diesel electric.

1.5.3 Steam

1.5.4 Other Traction Type

Any type of traction that does not fit one of the above categories.

1.6 Rolling Stock

A railway vehicle, whether or not self propelled, that operates on or uses a railway track.

Includes:

- Locomotive;
- Carriage;
- Rail car;
- Rail motor;
- Light rail vehicle;
- Tram car;
- Light inspection vehicle;
- Self propelled infrastructure maintenance vehicle;
- Track machine;
- Hi-rail, (road/rail vehicle), when operating on a railway track;
- Trolley;
- Wagon;
- Monorail vehicle; and
- Freight vehicle.

Excludes:

- A vehicle designed to operate both on or off a railway track when the vehicle is not operating on a railway track.

1.7 Person Type

A description of individuals involved in a rail safety occurrence in terms of their relationship to the railway at the time of the occurrence.

Note: Person Type is distinct from Occurrence Type. For example, in the case of suspected suicide where the victim trespasses onto railway premises, the Occurrence Type is *Suspected Suicide* whereas Person Type is *Trespasser*.

Person types are defined as follows.

1.7.1 Railway Employee

A person (whether full or part time) who works for or at the direction of the railway organisation.

Includes:

- Contractor;
- Contract worker;
- Subcontract worker;
- Volunteer (unpaid worker);
- Permanent employee;
- Temporary employee;
- A person supplied by an employment agency to carry out work for a railway operation;
- Trainee;
- Apprentice; or

- People undertaking tasks such as but not limited to driver, driver's assistant, guard, shunting staff, examiner, station staff, on board staff, office staff, technical staff, infrastructure staff and freight centre staff.

Excludes:

- Employees when not on duty.

Railway Employee types are defined as follows

1.7.2 Railway Staff

A person employed directly by a Railway Organisation.

1.7.3 Contractor

A person and any employee of that person, who has a contract of service to carry out work for a railway organisation and is carrying out that work.

1.7.4 Volunteer

A person who undertakes railway work for a railway organisation on a voluntary or unpaid basis and is carrying out that work.

1.7.5 Passenger

A person travelling or intending to travel on a train.

Includes:

- Before and after travel, but while on railway premises, irrespective of whether they have a valid authority to travel;
- An employee travelling while not on duty;
- Person boarding or alighting from train;
- Person travelling without a valid ticket.

Excludes:

- A trespasser;
- A person travelling on the outside of a train or in any location on a train not authorised for passenger travel; (Refer Section 1.7.6)
- A stowaway; (Refer Section 1.7.6)
- A railway driver or other employee who is on duty and travelling to a place of work at the time of the occurrence; (Refer Section 1.7.1)
- A person in a railway station car park. (Refer Section 1.7.7)

1.7.6 Trespasser

A person on railway premises and whether intentionally or negligently, is in a place they have no right or authority to be or for the purpose of carrying out unauthorised activities.

Includes:

- Suspected suicide;
- A person travelling in a place not authorised for their use, e.g. outside trains;
- Stowaways;
- A passenger or member of the public who uses without authority a recognised 'staff only' crossing (e.g. a staff foot crossing) at a station;

- A person who acts in disobedience of warning signs or signals, or strays away from the normal route of the level crossing;
- A person crossing the track anywhere other than at an authorised crossing point;
- People electrocuted while dangling or throwing objects from a position on non-railway property onto overhead line equipment/conductor rails at bridges etc;
- A person who falls or jumps from a platform, unless it can be established that the person did not do it deliberately, e.g. a fall caused by illness, platform congestion etc, in which case they should be treated as a 'passenger', 'employee' or 'public';
- A person on railway premises carrying out illegal activities.

Excludes:

- Any authorised person.

1.7.7 Public

Any other person affected by a railway occurrence.

Includes:

- A person who has no intention of travelling but who is not a trespasser, e.g. person taking a 'short-cut' through an open station concourse, provided it is not in any unauthorised area;
- A level crossing or bridge user who becomes affected by an occurrence on the railway;
- A bystander;
- A person who is lawfully on any part of railway premises which is used in railway operations;
- A person who is adjacent to railway property when affected as the result of a railway occurrence;
- Emergency services personnel.

Excludes:

- Trespasser; (Refer Section 1.7.1)
- Railway Employee; (Refer Section 1.7.1)
- Passenger. (Refer Section 1.7.5)

1.8 Road Vehicle

A vehicle or any device in, on, or by which any person or property is permitted to be transported on a public or private roadway.

Includes:

- An automobile, bus, truck, motorcycle, bicycle, farm vehicle etc;
- An animal-drawn vehicle and an animal that is being ridden or drawing a vehicle (as defined in the *Australian Road Rules*);
- Motorised scooters.

Excludes:

- A tram; (Refer Section 1.4.5)
- Pedestrian conveyance. i.e., any human powered device by which a pedestrian may move other than by walking or by which a walking person may move another

pedestrian (e.g., baby carriage, roller skates, skateboard and non-motorised scooters and wheelchairs);

- Motorised wheelchairs.

Road Vehicle Types are defined as follows.

1.8.1 Light Passenger Vehicles

- Car (sedan/utility/station wagon/4WD).
- Light commercials (<4.5t).
- Delivery vans.
- Mini buses (maximum capacity 12 passengers).

1.8.2 Heavy Freight Vehicles

- Medium rigid trucks.
- Semi trailers.
- B doubles.
- Road trains.

1.8.3 Dangerous Goods Vehicles

- Fuel tankers.
- Tankers containing other dangerous goods (eg. acid).

1.8.4 Buses

Buses with a capacity greater than 12 passengers.

1.8.5 Motorcycles

- Motorcycles.
- Motorised scooters.

1.8.6 Bicycles

Bicycles while being ridden.

1.8.7 Special Purpose Machinery

- Tractors.
- Forklifts.
- General farm machinery.
- Specially constructed machinery.

1.8.8 Other

A description must be provided.

1.9 Level Crossing

A location where a public or private roadway, footpath, or both, crosses one or more railway tracks at grade.

Level crossings are provided with various levels of traffic control, which are defined as follows

1.9.1 Crossing with Active Warning Devices

Control of the movement of vehicular or pedestrian traffic across a railway level crossing by devices such as flashing light signals, bells or other audible

warning devices, gates or barriers, or a combination of these, where the device is activated prior to and during the passage of a train through the crossing. This includes passive pedestrian crossings at road crossings equipped with active warning devices.

1.9.2 Crossing with Passive Warning Devices

Control of the movement of vehicular or pedestrian traffic across a railway level crossing by signs or devices, none of which are activated during the approach or passage of a train, and which rely on the user detecting the approach or presence of a train by direct observation.

1.9.3 Unprotected level crossing

No active or passive warning of any kind provided. Usually a field or farm crossing (occupational crossing).

1.10 Casualty

A fatality or a person admitted to hospital, or injured requiring medical attention as a result of a railway occurrence.

Includes:

- Death or injury of employee, passenger, trespasser, or member of the public;
- Death or injury of a person involved in a level crossing occurrence;
- A person killed or injured as the result of a fall at a railway station;
- Death or injury due to suspected suicide;
- Death or injury of a person as a result of an assault on railway premises.
- Death or injury sustained in a defined railway occurrence that is triggered by a health-related condition (e.g. person has a seizure, collapses and falls from the platform and is struck and injured by a train).

Excludes:

- Casualty as a direct result of a health-related condition (e.g. heart attack) on board a train or on railway property where it is not associated with or leads to a defined railway occurrence;
- Death or injury due to substance abuse (e.g. drug or alcohol overdose) on board a train or on railway property where it is not associated with a defined railway occurrence;
- Death or injury due to an occurrence in a repair shop, e.g., a person killed while engaged in the maintenance of a stationary train in a repair shop;
- Death or injury of a person travelling in a road vehicle involved in an accident on railway property where a train or other railway vehicle was not involved.

Casualty types are defined as follows.

1.10.1 Fatality

A person who dies, within 30 days of a railway occurrence, from injuries sustained in that occurrence.

1.10.2 Serious Personal Injury

A person admitted to hospital as the result of injuries sustained in a railway occurrence who does not die within 30 days of the occurrence.

1.10.3 Minor Personal Injury

A person injured and requiring medical attention as a result of a railway occurrence but not admitted to hospital who does not die within 30 days of the occurrence.

1.11 Near Miss

Any occurrence where the driver of a moving train takes emergency action, or would have if there was sufficient time, to avoid impact with a person, vehicle or other obstruction and no collision occurred. Emergency action includes continuous audible warning and/or brake application.

1.12 Railway Premises

Any premises used for railway operation and any railway rolling stock used in trains on those premises.

Includes:

- Land (including any premises on land) on or in which is situated rail infrastructure;
- Land (including any premises on land) on or in which is situated any over track or under track structure or part of an over track or under track structure;
- Freight centres or depots;
- Workshops or maintenance depots;
- Premises including an office, building or housing used in connection with the carrying out of railway operations ;
- Rolling stock or other vehicles associated with railway operations;
- The infrastructure (e.g. the permanent way/area on or about the track);
- Stations (including platforms);
- Train control centre;
- Signal boxes;
- Railway under construction; and
- Level crossings.

1.13 Track

The combination of rails, rail connectors, sleepers, ballast, points and crossings, or substitute devices, if used.

Track types are defined as follows.

1.13.1 Running Line

Railway track used primarily for the through movement of trains.

Includes:

- Main lines;
- Crossing/passing loops;
- Main line within yard limits;
- Lines within terminal stations;
- Balloon loops that form continuous part of the running line.

Excludes:

- Sidings;
- Yards (except main lines within yard limits).

1.13.2 Yard

Tracks other than running lines.

1.13.3 Running Line Occurrence

Occurrences that involve the movement of a running train.

Includes:

- Occurrences involving a train which has been authorised to depart and has commenced its journey to operate on a running line;
- Track machine occurrences if they are travelling on the line as a running train;
- Shunting occurrences on running lines within station limits;
- Occurrences in a yard or siding that results in the running line being obstructed or interferes with the safe operation of a running line; and
- Occurrences on a portion of track closed for maintenance or other purposes that results in obstruction of a non-closed running line or interferes with the safe operation of a non-closed running line.

1.13.4 Yard Occurrence

All other occurrences.

Includes:

- Occurrences on or affecting yard tracks only;
- Occurrences on a portion of running line closed for maintenance or other purposes where there is no possibility that the safe operation of any non-closed running line is affected;
- Occurrences of rolling stock on loop lines, equipped with roll out protection (e.g. derailleurs) to protect the main line, which are temporarily being used for the stabling of rolling stock; and
- Occurrences on balloon loops during the loading and unloading process not involving a train that has been authorised to depart and has commenced its journey to operate on a running line.

1.14 Civil

Railway structures and track base/drainage works not included under Track (Refer Section 1.13) and not related to signalling or electrical systems.

Includes:

- Bridges and Overpasses;
- Platforms and other trackside structures;
- Culverts other drainage structures.

1.15 Signal

Any track side device capable of displaying a proceed or stop indication or aspect for the purpose of stopping a train.

1.16 Proceed Authority

A formal authority issued to a train, or any party, allocating, occupancy of one or more block sections or segments of track.

- 1.17 Safeworking**
An integrated system of operating procedures and technology for the safe operation of trains and the protection of people and property on or in the vicinity of the railway.
- 1.18 Security**
Protection of persons, property and railway operation by means of arrangements to reduce the risk of harm from criminal acts of other parties such as theft, assault, sabotage and terrorism.
- 1.19 Railway Security Occurrence**
An occurrence related to security breaches, violations, threats or illegal actions that endanger, or may endanger, the safety of railway operations, people or property.
- 1.20 Terrorism (act of)**
An act, including but not limited to the use of force or violence and/or the threat thereof, of any person or (group(s) of persons, whether acting alone or on behalf of or in connection with any organisation(s) or government(s), which from its nature or context is done for, or in connection with, political, religious, ideological or similar purpose or reason, including intention to influence any government and/or to put the public, or any section of the public in fear.
- 1.21 Wrong Side Failure**
Where safeworking equipment fails to other than a safe state (eg. Signal fails to a less restrictive aspect than required, crossing barrier does not come down).
- 1.22 Security Sensitive Goods**
Security Sensitive Dangerous Goods refers to any substances prescribed by relevant State and Federal legislation as security sensitive or of security concern.

In general these are items or materials carried as cargo which, if not controlled, may be used to perform an act of terrorism, sabotage etc.

- 1.23 Dangerous Goods**
- Dangerous Goods are goods described in the Australian Dangerous Goods Code and may be liquid, solid, gaseous or vapour and may include, for example*
- *Substances hazardous to health.*
 - *Substances that may be corrosive or potentially hazardous by virtue of their temperature or pressure.*
 - *Substances which may, depending upon the circumstances of the escape, present a fire or explosion hazard.*
 - *Biological agents.*

2. REPORTING REQUIREMENTS

The following is a guide to assist in the notification of occurrences to rail safety Regulators. It provides general guidance on the type of occurrences that need to be reported and sets out the data/information required to be reported as part of a Notification of Occurrence.

This Part is intended to be used in the following manner:

- Section 2.1 identifies the data items that need to be provided for all notifiable incidents that are reported.
- Section 2.2 identifies the data items that need to be provided to the Regulator in relation to any personal consequences (typically a casualty) or property consequences associated with an occurrence.
- Section 2.3 identifies the data items that may need to be provided to the Regulator depending on the type of occurrence.

These Sections can be used to guide the development of individual databases for occurrence data management and the development of a common data exchange protocols between individual industry organisations and rail safety regulators. However, it should be noted at this time, the data field names set-out in Section 2 have not yet been nationally agreed.

Section 3 contains all of the occurrences that may be identified as notifiable occurrences under the relevant jurisdictional legislation. The entry for each occurrence type contains:

- a description of the occurrence that provides guidance on whether a specific occurrence requires notification to the regulator. The definitions are supplemented with inclusions and exclusions to provide further clarity of the need to notify and where there is an exclusion notes, with no further reference to an occurrence type, the occurrence should be taken as not being notifiable; and
- guidance on the type of information that should be provided in a notification in terms of describing the occurrence (expressed in terms of what information should be included in the Description of Occurrence as requested in Section 2.1.14).

The Notification of Occurrence needs to be submitted to the Regulator in a form that is acceptable to the Regulator (e.g. via a database application, internet based or paper form, etc.) depending on the jurisdiction and any reporting arrangements that have been negotiated. If the agreed reporting arrangement provide for the entry of data in specific fields (either electronically or on a form) the data should be entered against these fields as set-out in Section 2. Where there is no specific field for requested data, the information should then be included within the Description of Occurrence field.

This Standard describes the information to be included in a Notification of Occurrence associated with the regulatory requirement to provide a written report of a notifiable occurrence within a 72 hour period. The request for information is intended to be reflective of the extent of information that is available to a rail transport operator during this period.

While rail transport operators are encouraged to provide further updates to rail safety Regulators in relation to occurrences beyond this initial 72 hour reporting period, as a result of new or revised information, it is acknowledged that this is not currently a regulatory requirement across all jurisdictions (it may be necessary to confirm any requirements of this type with the relevant jurisdictional rail safety regulator).

Regulators may use additional information obtained through subsequent investigation reports, further requests for information from rail transport operators regarding specific occurrences or from other sources of information (e.g. other government agencies) to enhance the information initially provided as a notification of an occurrence report in order to improve the accuracy and/or completeness of the information on an occurrence.

Guidance for the national consistent classification of occurrences notifiable under this Standard is contained in the Occurrence Classification Standard/Guideline that accompanies this Standard.

Editorial Note:

Users of previous versions of the ON-SI document will be more familiar with the structure of Occurrence Classification document rather than as presented in this document.. This version of the Occurrence Notification Standard has been prepared in a format that is consistent with the structure of notifiable occurrences classification and with the current national model Regulations for notifiable occurrences (as a guide only, references to the national model Regulations, as approved by the Australian Transport Council in December 2006, are included). However, it is likely that this Part will continued to be reviewed to produce a document that is better structured to support the interpretation of nationally consistent Regulations regarding notifiable occurrences. Any further review will be undertaken with reference to the work program established under the national strategy for rail safety data. In the meantime, this document is presented as a useable guide to support current regulatory requirement, reflecting current practices, for notification of occurrences, however, reference should always be made to the relevant regulations, or other regulatory requirements imposed by the legislation or Regulators of each jurisdiction to confirm what is a notifiable occurrence.

2.1 Data Items Required for all Occurrences

These data items must be provided, where available and applicable, for all Occurrences.

2.1.1 Notifying Organisation

The organisation code for the reporting rail organisation.

2.1.2 Infrastructure Manager

The infrastructure manager for the railway on which the occurrence took place.

2.1.3 Rolling Stock Operator(s)

The rolling stock operator or operators, if there was more than one, that were involved in the occurrence.

2.1.4 Train Control Report Number/Code

The unique code issued by a train control authority to identify the Occurrence.

2.1.5 Incident Number/Code

The unique code used by the reporting rail organisation to identify the Occurrence within their own recording system.

This may be the same as the Train Control Report Number/Code if the reporting rail organisation is the train control authority.

2.1.6 Location of Occurrence

The location where the Occurrence took place.

Where the Occurrence involves a piece of rolling stock or other mobile plant, or is a load shift etc. and is detected only on arrival at a destination, the location is that arrival point.

2.1.7 Description of the Location

A text description of the location where the Occurrence occurred is to be provided. E.g. Spencer Street Station.

2.1.8 Line Section Identifier

The location code or line section name identifying the section of track where the Occurrence occurred e.g. “Adelaide to Crystal Brook”, “ACB”, “ADL-CBR”.

2.1.9 Running Kilometerage

The running line kilometerage of the Occurrence. Where the Occurrence occurs in a yard, the adjacent running line kilometerage may be reported.

2.1.10 Date of Occurrence

Expressed in day/month/year format.

2.1.11 Time of Occurrence

Expressed in 24 hour clock format.

2.1.12 Notification Category

Occurrences are categorised by severity as defined in the relevant legislation of the jurisdiction, typically being:

- **Category A** Occurrences, requiring immediate notification of the occurrence to the rail safety regulator in addition to a written notification within 72 hours of the occurrence; and
- **Category B** Occurrences, requiring written notification to the rail safety regulator within 72 hours of the occurrence.

2.1.13 Occurrence Classification

Where requested to provide a Classification of the occurrence, the Classification Category of the occurrence, based on the Occurrence Classification Standard/Guideline.

2.1.14 Description of Occurrence

A clear and complete description of the circumstances and outcomes of the Occurrence, based on the information available at the time of the notification.

Including:

- A description of the chain of events which occurred.
- Specific information appropriate to each type of Occurrence (as detailed in section 3).

2.1.15 Description of Causes/Contributing Factors

A description of any factors that may have contributed to the Occurrence or any other qualifying information which is available at the time of notification.

2.1.16 Likely Involvement of External Parties

An indication as to whether it was likely that the occurrence was caused as a result of actions by external parties such as trespassers/vandals or railway employees acting outside their normal duties, expressed as a “Yes” or “No” response.

2.2 Data Items Required for all Personal and Property Consequence

Where a casualty occurs in conjunction with an Occurrence or when a railway employee is involved and is required to undergo an alcohol or drug test, this is to be reported as part of the Notification.

Note: It is the railway organisation's responsibility to use best endeavours, noting that this may involve a judgement decision based on information available at the time of notification, to confirm the status of casualties in respect to:

- Serious personal injury to confirm admission to hospital;
- Fatality to confirm whether the person has died within 30 days.

2.2.1 Personal Consequence

Each person is to be reported separately. Details to be provided with each casualty record are:

2.2.2 Person Type

The type of person as defined in Section 1.7, being one of:

- Railway Staff
- Contractor
- Volunteer
- Passenger
- Public
- Trespasser

2.2.3 Personal Consequence

The type of personal consequence (casualty) being one of:

- Fatality
- Serious Injury
- Minor Injury

2.2.4 Person's Gender

Male, Female or Unknown

2.2.5 Person's Age

Where a passenger, trespasser or member of the public is involved in an occurrence, the person's age, where this can be determined, in years or an estimation within the following age ranges:

- 0-5
- 6-15
- 16-24
- 25-39
- 40-59

- 60+

It is not necessary to report a person's age in relation to an employee, contractor or volunteer of a railway organisation.

2.2.6 Property Damage/Consequence

Where property damage occurred, a description of the rolling stock, railway infrastructure and other property damaged and the type of damage that was sustained.

2.2.7 Drug and Alcohol Testing of Rail Safety Workers (Employees)

Information on any Alcohol Test or other Drug Tests performed, to be provided for each rail safety worker employee.

2.2.8 Type of Test Performed

An indication of what type of tests, if any, were performed, being one of:

- Drug
- Alcohol
- Drug and Alcohol

2.2.9 Reason for Test

The reason why the test was performed, being one of:

- Random
- Following Occurrence
- Triggered by Suspicion

2.2.10 Time of Test

For a test undertaken following an occurrence, the time that the test took place.

2.2.11 Test Results

In relation to a test undertaken following an occurrence, advice on whether the result was positive (relative to the legislative requirements for drug and alcohol) or negative.

In relation to a test undertaken on a random or triggered basis, advice that the result was positive (relative to the legislative requirements for drug and alcohol). Negative test outcomes are not notifiable.

2.3 Data Items Required for Specific Occurrences

The following data items may be required to complete the notification of a specific occurrence. The data must be provided, where available to appropriate, for specific occurrences and where available to the organisation making the notification.

2.3.1 Train Description

Where a train or rolling stock is involved in the occurrence, the following information is to be provided, where available or applicable.

2.3.2 Train Type

The type of train (Refer Section 1.4.) is to be reported.

2.3.3 Train Identification

The common identification of the train (e.g. the train number).

2.3.4 Traction Type

The type of traction (Refer Section 1.5) is to be reported.

2.3.5 Rolling Stock Class

The class code or codes of rolling stock that is primary to the occurrence (eg. RKCX).

2.3.6 Level Crossings

Where a level crossing is involved in an occurrence it is to be identified as follows:

2.3.7 Level Crossing Identifier

The unique identifier for the level crossing at which the collision occurred (eg. "RLX0012", "123.45 ADL-CBR Smith Street").

2.3.8 Level Crossing Control Type

The class of road vehicle/pedestrian control used at the level crossing at the time of the incident, defined in section 1.9, being one of the following:

- Active – lights only
- Active – lights and boom gates
- Passive – Stop Signs
- Passive – Give Way Signs
- None

2.3.9 Road Vehicle Type

The class of road vehicle involved in the occurrence as follows:

- Light Passenger Vehicle
- Heavy Freight Vehicle
- Dangerous Goods Vehicle
- Bus
- Motorcycle
- Bicycle
- Other

2.3.10 SPAD/Proceed Authority Exceedence Over-run

Where a signal is passed at danger or a proceed authority is exceeded the distance (in metres) which the front of the train travels beyond the signal or limit of authority is to be provided.

2.3.11 Infrastructure Features

Where an item of track or infrastructure, as set out below, is primary to an occurrence its identification is to be provided as follows:

2.3.12 Signal Number

The number of the trackside signal involved in the Occurrence.

2.3.13 Perway Switch/Points Number

The number of the switch/points involved in the Occurrence.

2.3.14 Dangerous Goods Type

Where a dangerous good is associated with an Occurrence, the ADG class and/or description of the type of dangerous goods involved is to be provided.

3. OCCURRENCE CATEGORIES AND DEFINITIONS

This section contains a description of events that are considered to be Notifiable Occurrences. Where the description of an occurrence excludes a particular type of event and does not provide an alternative occurrence description, the event does not require notification to the Regulator (subject to specific jurisdictional requirements).

The description provided for collisions and derailments includes a description of running line collisions and running line derailments to assist with the determination of whether an occurrence of this type is required to be reported as a Category A occurrence (as required by the National Model Regulations).

Note:

Throughout this document, the requirement to notify the Regulator of irregularities that have the potential to endanger the safety of railway operations etc. is not intended to require the notification of irregularities detected through routine inspection and maintenance programs, where as a result of detection of the irregularity, an appropriate management measure is implemented so as not to endanger the safety of railway operations.

3.1 **Derailment**

National Model Regulation 27(1)(a)(ii) and 27(1)(b)(i)

An incident where one or more rolling stock wheels leave the rail or track during railway operations.

The **Description of Occurrence** should include, where applicable:

- A general description of the derailment including the direction of travel;
- The numbers of derailed wagons and where they were situated in the consist;
- The operational status (running line or yard) of the line on which the derailment occurred and of any other lines which the derailment affects (Refer to Sections 1.13.3 and 1.13.4); and
- The best available detail of the chain of events leading to and resulting from the derailment, including any related precursor events already identified (e.g. natural events that have occurred in the area).

3.2 **Collision**

National Model Regulation 27(1)(a)(iii) and (iv) and 27(1)(b)(ii)

When a train or rolling stock strikes or is struck by another train, rolling stock, road vehicle, obstruction, person or rail infrastructure.

Includes:

- Collisions with open rolling stock doors.
- Collisions with a load protruding from rolling stock.
- Collisions with bridges, platforms, overhead traction or signalling equipment.
- Collisions with buffer stops.
- Collisions on roadways crossing tramways where tramways operate on roadways shared with road vehicles.
- Collisions with objects on or foul of track.
- Collision with animals that results in damage to train safety equipment or rail infrastructure or that endangers the safety of railway operations.

Excludes:

- Collisions with animals that does not result in damage to train safety equipment or rail infrastructure or that does not endanger the safety of railway operations.

Note:

- For collisions (except train to train) that occur at a level crossing. (Refer to Section 3.3.)
- For collisions with objects projected at trains. (Refer to Section 3.20.)
- For suspected and attempted suicides involving collisions with people or vehicles. (Refer to Section 3.16.)

The **Description of Occurrence** should include, where applicable:

- A description of the nature of the collision, including the trains, rolling stock, vehicles, persons, objects or obstructions etc. involved in the collision.
- A description of the direction of travel of the train, rolling stock, vehicles, persons etc. involved in the collision.

- The operational status (running line or yard) of the line on which the collision occurred and any other lines which the collision affects (Refer to Sections 1.13.3 and 1.13.4); and
- The best available detail of the chain of events leading to and resulting from the collision, including relevant signal indications or settings, train orders in force, points settings, train control instructions or line side hand signals or other relevant communications.

3.3 Level Crossing Occurrence

National Model Regulation 27(1)(a)(iv) and 27(1)(b)(iii)

A collision of a train or rolling stock with either a road vehicle, person, level crossing safety equipment or gate, or any other occurrence that endangers or has the potential to endanger the safety of a railway operations or level crossing operations.

Includes:

- Cases of road vehicles causing damage to gates, barriers or other equipment at level crossings;
- Near miss incidents with road vehicle or person;
- Any case of a train running onto a level crossing when not authorised to do so;
- Any failure of equipment at a level crossing which could endanger users of the road or path crossing the railway. This includes ‘wrong-side’ failures of equipment (where equipment fails to a dangerous condition) whether or not any train or crossing user is involved at the time of failure;
- Incidents which occur during periods of unusual operation are to be included, e.g. when an automatic crossing is operated manually; or
- Level crossing occurrences with tramways where trams operate over their exclusive right of way.

Note:

- For suspected and attempted suicides at level crossings. (Refer to Section 3.16.)
- Where the occurrences is caused by infrastructure irregularities such as broken rails, welds and bonds that result in the unnecessary operation of crossing protection equipment. (Refer to Section 3.11.)

The **Description of Occurrence** should include, where applicable:

- Detail of the level crossing occurrence. (e.g. collision with vehicle or person, near miss with vehicle or person, equipment failure, equipment damage or interference).
- Detail the actions taken by the drivers of the train and actions taken, or observed to have been taken, by the road vehicle or pedestrian, including directions of travel.
- The nature of the damage or malfunction in the equipment.
- Road vehicle identification, where road vehicles are involved in a collision, near miss or damage to infrastructure, including, if possible, registration numbers, vehicle colours/type/make/model.
- An indication as to whether a pedestrian conveyance (e.g. pusher, wheelchair etc.) was involved.
- In the case of a near miss, a clear indication of whether the train driver applied the emergency brake, would have applied the emergency brake if there was time or did not consider it necessary to apply the emergency brake.

In addition, the **Level Crossing** specific data items detailed in Section 2.3.6 need to be included in the notification.

3.4 **Signal Passed at Danger**

National Model Regulation 27(1)(b)(iv)

Where a train passes without authority a signal displaying a stop indication or stop aspect, referred to as a SPAD (Signal Passed at Danger) or a signal passed without authority.

Includes:

- When signals blacked out.

Note:

- Where the occurrence involved failure to comply with hand signals. (Refer to Section 3.10.)
- Where a Proceed Authority is exceeded. (Refer to Section 3.5.)
- If the occurrence occurs at locations such as stop boards, limit boards etc.(Refer to Section 3.5.)

The **Description of Occurrence** should include, where applicable:

- Detail of the nature of the SPAD.
- The type of action, or absence of action, taken by the driver. (Refer to Section 3.4.1.)

In addition the **SPAD Exceedence Over-run** data, as defined in Section 2.3.10, needs to be provided.

3.4.1 **Action Taken by Train Driver**

The action, or absence of action, should be described in the following terms:

Signal Restored as Train Approached	Where a proceed signal changes to stop in the face of the driver giving insufficient time for the train to brake to a stop prior to passing the signal at danger.
Driver Misjudged	Where the driver has attempted to stop the train but failed to stop the train before passing the signal for whatever reason.
Completely Missed While Running	Where no attempt has been made to bring a train to a stand before the stop signal and the train has proceeded into the next section or block without the necessary authority. The driver has not realised that the train has passed a stop signal until a more serious event results; the driver is stopped by train control over the radio or at the next signal or stopped by other external intervention.
Starting Against Signal	Where a stationary train starts and proceeds beyond a signal at danger without authority.

	The driver may or may not realise that the train has run past the signal.
Other	Any unauthorised passing of a stop signal that does not fit one of the above terms. A description of the circumstances needs to be provided.

3.5 Proceed Authority Exceeded

National Model Regulation 27(1)(b)(v)

Where a train exceeds the limits of authorised movements.

Note:

- For Signals Passed At Danger refer to Section 3.4.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the Proceed Authority Exceeded incident.
- The type of action, or absence of action, taken by the driver. (Refer to Section 3.5.1.)

In addition the **Proceed Authority Exceedence Over-run** data, as defined in Section 2.3.10, needs to be provided.

3.5.1 Action Taken by Train Driver

The action, or absence of action, should be described in the following terms:

Driver Misjudged	Where the driver has attempted to stop the train but failed to stop the train before passing the limit of the authorised movement for whatever reason.
Completely Missed While Running	Where no attempted has been made to bring a train to a stand before the limit of the authorised movement and the train has proceeded into the next section or block without necessary authority. The driver has not realised that the train has passed the limit of the authorised movement until a more serious event results; for example the driver is stopped by train control over the radio or at the next control point or is stopped by other external intervention.

3.6 Signalling and other Proceed Authority Systems Irregularity

National Model Regulation 27(1)(b)(vi)

Any failure in the signalling system or equipment that endangers, or has the potential to endanger, the safety of railway operations.

Includes:

- Failures in design, installation, testing, operation and maintenance of vital signalling, points operating and train detection equipment.
- Failures of control systems and equipment, fixed structures and components associated with colour light, mechanical or semaphore signals, points operating and locking equipment and train detection equipment.
- Malfunction of point detection circuits.
- Failure of control systems and equipment and on-board systems and equipment that comprise “In-Cab Signalling Systems”.
- Failures of Electric Staff, Staff and Ticket or other Token based systems and equipment.
- Failures of equipment and aids of manual or electronic train authority systems.

Excludes:

- Failure of a traffic light controlling the movement of vehicles on a road, including traffic light failures that may form part of the signalling system for trams while they are operating on the road.
- Where the system is protected by means of an automatic train stop system which, in the event of a failure in the signalling system, brings a train safely to rest.

Note:

A failure is considered to have the potential to endanger the safety of railway operations if it was not detected by other parts of the signalling system AND had at least one of the following consequences:

- ‘Wrong side failure’ (it caused a signal to display an aspect less restrictive than the proper one or it prevented a signal from displaying a more restrictive aspect).
- It resulted in incorrect operation of the interlocking.
- The presence or location of trains is not detected.
- The train crew obtained an erroneous authority due to malfunctioning of the applicable control system or components thereof.
- The train crew obtained a token or staff that should have been withheld by the control system.
- Equipment refers to hardware and software.
- For failure of equipment at level crossings. (Refer Section 3.3.)
- Where Signals operating correctly, as designed, and displaying a ‘stop’ or ‘danger’ indication because of a broken rail, weld, bond wire or other infrastructure defect or an occupied block. (Refer Section 3.11.)
- For procedural safe working failures. (Refer Section 3.10.)
- For misalignment of point, broken or damaged points blade or components, such as spreader bars and brackets, or other damage caused by trailing or run throughs. (Refer Section 3.11.)

The **Description of Occurrence** should include, where applicable:

- Identification of the equipment or system that fails and detail the circumstances of the failure.
- A description of the type of train control system in force as follows, using a description such as:
 - wayside signalling system;
 - in-cab signalling system;
 - token system;
 - communications based train authority system.

3.7 Slip, Trip or Fall

National Model Regulation 27(1)(b)(vii)

Any occurrence involving a person slipping, tripping or falling on railway premises or being caught in train doors.

Includes:

- Tripping or falling over an obstruction or because of a defect in the surface.
- Slipping or tripping due to the presence of debris or a substance (e.g. water, ice, snow or food waste).
- Falling down steps or an escalator in a station.
- Person boarding or alighting from a train or falls from a train, including train crews when boarding or alighting from a locomotive.
- Persons falling from any structure onto railway premises.

Excludes:

- Events occurring in a railway office or maintenance workshop that does not involve the operation as movement of rolling stock.
- Events occurring on railway premises that are associated with a health-related condition where the person is not a rail safety worker and the event is not in association with the operation or movement of rolling stock.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the fall, including any other parties involved and any related train movements or equipment.

3.8 Load Irregularity

National Model Regulation 27(1)(b)(viii)

Any situation where the load endangers or has the potential to endanger the safety of railway operations, persons and/or premises or causes damage.

Includes:

- Open or incorrectly secured doors, hatches or fastenings that could result in the loss of load or a collision.
- A load that is placed or has shifted out of gauge in relation to the approved dimensions for the load.
- A load that has spilled from rolling stock.
- Uneven distribution of a load on rolling stock or in the consist of trains.
- Chains, ropes, tarpaulins etc. dragging or hanging dangerously.
- Overloading resulting in coupling misalignment.

Excludes:

- Any out of gauge load that has formal approval and special conditions for the transport of that load provided it remains compliance with that approval.

Note:

- For Dangerous Goods not loaded in accordance with the *Australian Dangerous Goods Code* refer Section 3.9.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the irregularity, describing the chain of events from loading to discovery.
- The type of load and container or rolling stock involved.

3.9 **Dangerous Goods**

National Model Regulation 27(1)(b)(ix)

Any occurrence involving dangerous goods that endangers or has the potential to endanger the safety of railway operations, people and/or premises.

Includes:

- Spillage, leakage or emission of dangerous goods.
- Dangerous goods not loaded in accordance with the *Australian Dangerous Goods Code*.

Note:

- Where the escape of dangerous goods results in a fire or explosion. (Refer Sections 3.14 and 3.15.)
- Where the release or explosion of dangerous goods is due to an act of terrorism. (Refer Section 1.20.)
- Where dangerous goods and/or security sensitive dangerous goods are stolen without endangering railway operations and/or premises. (Refer Section 3.20.)

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the incident, including the chain of events from the loading of the dangerous goods (if on train) to the discovery of their spill/release.
- Details of any containers or other vessels involved in the occurrence.
- Whether the incident occurred on a train or not on a train.

In addition, the **Dangerous Goods** data item, as defined in Section 2.3.14, needs to be included in the notification.

3.10 **Safeworking Rule or Procedure Breach**

National Model Regulation 27(1)(b)(x)

Any breach of an operational safeworking system or procedure that endangers or has the potential to endanger the safety of railway operations and/or persons.

Includes:

- Human failures (intentional and unintentional acts) in the application of safeworking procedures.
- Failure to communicate or act on vital information to protect trains and personnel.
- Failure of communications equipment that prevents the transmission of safeworking critical information. [if not already reported in a top event where the communications equipment failure may be a contributory factor to the event]
- Failure to comply with a hand signal.
- Irregularities in the management of train separation (eg a near miss).

Excludes:

- System failures identified as part of standard inspection and maintenance programs.

Note:

- Where the breach involves SPADs and Proceed Authority exceedances, refer Sections 3.4 and 3.5.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the rule breach or deficiency, including a description of the chain of events leading to and following the breach.
- Where associated with the train control system, a description of the type of train control system in force, such as:
 - wayside signalling system;
 - in-cab signalling system;
 - token system;
 - communications based train authority system.
- The identification of the appropriate track work or safeworking procedure or rule.

3.11 Track and Civil Infrastructure Irregularity

National Model Regulation 27(1)(b)(xi)

Any irregularity in the track or civil infrastructure that endangers or has the potential to the safety of railway operations, persons and/or premises.

Includes:

- Broken rail, being a fracture of the rail in a running line including a broken joint or weld, or detachment of a piece from the rail which necessitates an immediate stoppage of traffic or the immediate imposition of a speed restriction lower than that already in force.
- Misalignment of track (such as a buckle) on a running line involving either horizontal or vertical misalignment which results in an immediate stoppage of traffic or the immediate imposition of a speed restriction lower than that already in force.
- Spread track, being any spread of track, in a running line, beyond approved gauge tolerances that results in an immediate stoppage of traffic or other restrictions.
- Points failures.
- Track obstructions, being any object or damage that blocks or interferes with the track and civil infrastructure.
- Failure of, or damage to, rail infrastructure, such as a tunnel, bridge, viaduct, culvert, station, or other structure or any part thereof.
- Damage to bridges and barriers by road vehicles and ships.
- Faulty design, construction or operation of infrastructure that results in an injury to a person.
- Damage to infrastructure caused by interference.

Excluding:

- Irregularities detected and corrected under normal maintenance.

Note:

- For Signalling and Electrical Infrastructure irregularities. (Refer Section 3.13.)
- Where the irregularity involves damage to any railway equipment at a level crossing (e.g. level crossing gates, barriers, Signalling equipment). (Refer Section 3.3.)

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the irregularity, the component which has failed or is damaged and the circumstances of its discovery.
- Details of any remedial actions taken to manage the irregularity.
- The method or manner in which the irregularity was detected.
- In the case of an obstruction, the type of obstruction.

ADDITIONAL NOTIFICATION REQUIREMENT

The notification of broken rails detected during normal maintenance inspections is required in the following jurisdictions: Victoria, New South Wales and Western Australia.

3.12 Rolling Stock Irregularity

National Model Regulation 27(1)(b)(xii)

Any rolling stock irregularity that endangers or has the potential to endanger the safety of railway operations and/or people.

Includes:

- Wheel, axle or bearing failure, being a failure which occurs while the rolling stock is in service.
- Train parting, being any unintentional separation of rolling stock from a train.
- Braking system failure.
- Faulty passenger train door.
- Dragging or loose rolling stock equipment or components.
- Severe electrical arcing or fusing.
- Vehicle structural defects.
- Faulty design, construction or operation of rolling stock.
- Locomotive remote controlling equipment irregularities
- Scale build up on wheels and flat wheels.

Excludes:

- Any irregularity detected and corrected during a normal maintenance program.
- Failure of a locomotive or multiple unit train that does not affect the safety of railway operations.
- Any suspected rolling stock irregularity as a result of a train monitoring or warning system alert or report unless, following subsequent inspection of the rolling stock, a rolling stock irregularity is confirmed (the requirement to notify of the rolling stock irregularity is triggered by the inspection and not the warning system alert).

Note:

- If the irregularity involves on track equipment for automatic train protection or warning system equipment, refer to Section 3.18.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the irregularity, the rolling stock component which has failed or is damaged and the circumstances of its discovery.
- Details of any remedial actions taken to manage the irregularity.

3.13 **Electrical Infrastructure Irregularity**

National Model Regulation 27(1)(b)(xi)

Any irregularity in an electrical system or component that results in an electrical accident or endangers or has the potential to endanger the safety of railway operations, people and or/premises.

Includes:

- The fixed electrical equipment of an electrified system.
- Defects in electrical supply or overhead wiring sufficient to cause an electrical fault.
- Dewirement or entanglements.
- Short circuits.
- Failure of overhead line equipment.
- Wiring, other than overhead traction equipment.

Excludes:

- Irregularities detected and corrected under normal maintenance.
- Simple electrical failures, which include short circuits or tripping of circuit breakers, unless they result in another occurrence such as fire.
- Occurrences in a depot that do not affect the running line.
- Loss of power from the utility.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the irregularity, the equipment which has failed or is damaged and the circumstances of its discovery.
- Remedial actions to manage the irregularity.

3.14 **Fire**

National Model Regulation 27(1)(a)(v) and 27(1)(b)(xiii)

A fire affecting rail infrastructure or rolling stock which endangers or has the potential to endanger the safety of railway operations, people and/or premises.

Includes:

- Fires associated with rolling stock failure or defect.
- Where smoke/fumes penetrate passenger accommodation, necessitating evacuation of the passengers from the vehicle(s) concerned where there is no evidence of actual fire.
- Line side fires, including fires on properties adjacent to the railway.
- Severe electrical arcing or fusing where there is evidence of fire damage.
- Dangerous goods fires.
- Fires that lead to railway operations being disrupted or closed as a precautionary measure.

The **Description of Occurrence** should include, where applicable:

- Details of the specific area of the train, railway premises, railway infrastructure or other area where the fire occurred (e.g. signal box, station or passenger coach).
- An indication as to whether the fire was associated with the operation or movement of rolling stock (i.e. bearing friction fires) or other action (i.e. rubbish fires in passenger carriages).
- A description of any equipment or facility involved.
- A description of any person who may have been involved.

3.15 **Explosion**

National Model Regulation 27(1)(a)(v) and 27(1)(b)(xiii)

An explosion affecting rail infrastructure or rolling stock or that has the potential to affect the safety of railway operations, people and /or premises.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the incident, including where the explosion occurred and any subsequent actions taken to make the scene safe.
- Description of any equipment or facility involved.
- A description of any person who may have been involved.

3.16 **Suspected Suicide or Attempted Suicide**

National Model Regulation 27(1)(b)(xv)

Any suspected or attempted suicide.

Includes:

- Struck by train.
- Jumping from railway structure.
- Jumping from structure onto railway property.

Note:

Any incident reported under this category is based on reasonable judgement from the information available that a suspected suicide was involved. It does not pre-empt or rely on coronial decisions.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the incident, including the behaviour of the person supporting the determination of attempted suicide.
- Details of any railway operations involved.

3.17 **Alcohol or Drugs Irregularity**

National Model Regulation 27(1)(b)(xvi)

Any case where a rail safety worker returns a positive result to a test designed to determine whether the level of alcohol or other drug exceeds approved levels or the rail safety worker refuses to be tested.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstance of the tests, including what triggered the test (eg. random test, suspicious behaviour, as a result of an incident etc.) and any action taken regarding the affected person.
- The position/job role of the affected person.

3.18 **Train Warning and Enforcement Systems Irregularity**

No current requirement to report under National Model Regulations

Any failure of installed train monitoring, warning and enforcement systems to detect and act on alarm situations.

Includes:

- Failures of installed systems such as ATP, TPWS, Train Stops, Vigilance and Deadman's Handle to stop trains in potentially dangerous situations.
- Isolation of the above systems or parts of such systems to enable train operations to continue in cases where the equipment malfunctions.
- Failure of equipment such as Hot Box Detectors, Hot Wheel Detectors, Acoustic Bearing Detectors to detect defects on the passing train.
- Failure of Out of Gauge Detectors and Weighbridges to detect load irregularities.
- Failure of Dragging Equipment Detectors to detect dragging chains.
- Failure of track flood warning, rock slide detection and other installed infrastructure monitoring systems to detect unsafe conditions.

Note:

- If the irregularity involves a failure of the communications system links, refer Section 3.19.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the irregularity, including the train operations being carried out and the resulting consequences (if any).
- A description of the type of warning or enforcement system in place at the time of the incident.

3.19 **Communications System Failure**

National Model Regulation 27(1)(b)(vi)

Any deficiency or failure of a communications system (voice or data) that prevents the timely transmission of safety critical information.

Includes:

- Deficiencies of radio and telephone equipment or systems that prevents transmissions of warnings.
- Failure of a communication system that prevents transmissions of alarms from train monitoring and wayside detectors.
- Failure of a communication system that prevents transmissions of information during emergencies.

Excludes:

- Failure of communications equipment that has no critical effect on the safe operation of the railway, for example, where procedures provide for the continuance of safe operations.

Note:

- For failures of communication systems that prevent the issue of proceed authorities or the display of a proceed signal, refer to Sections 3.4 and 3.5.
- For failures of the hardware of the wayside detection systems, refer to Section to 3.6.
- For failures of in cab signalling systems, refer to Section to 3.6.

The **Description of Occurrence** should include, where applicable:

- Details of the nature of the failure, including the train operations being carried out and any actions taken by crew or train control to deal with the failure.

3.20 **Railway Network Security**

National Model Regulation 27(1)(a)(vi), 27(1)(b)(xiv), 27(1)(b)(xviii).

Unlawful activity on railway property that endangers or has the potential to endanger the safety of railway operations, people and or/premises.

Includes:

- Railway trespass, including train surfing, out riding, member of the public crossing track except at a designated crossing point and illegal entry into secured areas (or to dangerous goods).
- Near misses with trespassers.
- Unlawful use of railway infrastructure or rolling stock.
- Objects being projected at trains.
- Assaults on railway premises.
- Theft of safety related materials or equipment.
- Theft of dangerous goods and/or security-sensitive goods.
- Acts of terrorism or sabotage, including bomb and other security related threats.

Excludes:

- Assaults between railway employees that are not rail safety related and do not affect or have the potential to affect the safety of railway operations.

Notes:

- Where a person crosses illegally at a designated crossing point, refer to Section 3.3.
- Where a trespasser slips trips or falls to or from train, refer to Section 3.7.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the breach, the behaviour of perpetrators and any actions taken by staff.
- A description of perpetrators.
- A description of where the activity occurred, being broadly one of:
 - On a Train
 - On a Platform
 - Other location, with a description.
- An indication as to whether the breach was associated with or caused a near miss.
- In the case of a projectile, a description of the object thrown or otherwise cast (e.g. slingshot, firearm etc.) at trains and advice on whether the train was struck.
- In the case of theft, a description of the safety-related (or other) materials or equipment and the implications of this theft.

3.21 **Runaway**

National Model Regulation – New Regulation Proposed

The uncontrolled movement of an unattended train or item of rolling stock that endangers or has the potential to endanger the safety of railway operations.

The **Description of Occurrence** should include, where applicable:

- Details of the circumstances of the runaway, the extent of runaway and the actions taken to manage the incident.

4. Appendix A – Rail Safety Occurrence Reference Chart

	Description Detail Required	Train Desc.	Rolling Stock Detail	Level Xing Detail	SPAD Detail	Infrastructure Item Description	Dangerous Goods Description
Derailment	<ul style="list-style-type: none"> description of the derailment (including chain of events), direction of travel, running line or yard 	✓	✓				
Collision	<ul style="list-style-type: none"> description of the collision, trains, road and rail vehicles, persons, objects or obstructions etc. involved direction of travel of the vehicles running line or yard 	✓					
Level Crossing Occurrence	<ul style="list-style-type: none"> description of the level crossing occurrence, actions taken by the drivers of the train and road vehicle/pedestrian collision/near miss equipment damaged/malfunctioning road vehicle identification/description 	✓		✓			
Signal Passed At Danger	<ul style="list-style-type: none"> nature of the SPAD. action, or absence of action, taken by the driver 	✓			✓		
Proceed Authority Exceeded	<ul style="list-style-type: none"> nature of exceedence action, or absence of action, taken by the driver 	✓			✓		
Signaling/ Proceed Authority Systems Irreg.	<ul style="list-style-type: none"> equipment or system that fails, circumstances of the failure type of control system in force type of train 	✓				✓	
Slip Trip or Fall	<ul style="list-style-type: none"> circumstances of the fall, related train movements or equipment, other parties involved 	✓					
Load Irregularity	<ul style="list-style-type: none"> circumstances of the irregularity, chain of events from loading to discovery type of load and container or rolling stock 	✓	✓				
Dangerous Goods	<ul style="list-style-type: none"> circumstances of the incident, chain of events from loading to discovery of their spill/release. on/off train 	✓	✓			✓	✓
Safeworking Rule or Procedure Breach	<ul style="list-style-type: none"> circumstances of the rule breach/deficiency, chain of events leading to and following the breach. type of train control system in force procedure or rule breached 	✓				✓	
Track and Civil Infrastructure Irregularity	<ul style="list-style-type: none"> nature and circumstances, how detected, damaged/failed component, type of obstruction (if any) 					✓	
Rolling Stock Irregularity	<ul style="list-style-type: none"> nature of the irregularity, failed/damaged rolling stock component, circumstances of its discovery remedial actions taken to manage the irregularity 	✓	✓				
Electrical Infrastructure Irregularity	<ul style="list-style-type: none"> nature of the irregularity, failed/damaged equipment, circumstances of its discovery remedial actions to manage the irregularity 					✓	
Fire	<ul style="list-style-type: none"> specific area of the train, premises etc. where the fire occurred, equipment or facility involved source of fire (if known) description of any person involved 	✓	✓			✓	
Explosion	<ul style="list-style-type: none"> nature of incident, description of equipment/facility involved description of any person involved subsequent actions taken to make the scene safe 	✓	✓			✓	
Suicide	<ul style="list-style-type: none"> nature of the incident, behaviour of the person details of any railway operations involved 	✓		✓			
Alcohol or Drugs	<ul style="list-style-type: none"> circumstance of/triggers for the test any action taken regarding the affected person position/job role of the affected person 	✓					
Train Warning and Enforcement Systems	<ul style="list-style-type: none"> nature of the irregularity, train operations being carried out, resulting consequences (if any) type of warning or enforcement system in place 	✓					
Communication Systems Failure	<ul style="list-style-type: none"> nature of the failure, train operations being carried out actions taken to deal with the failure 	✓				✓	
Railway Network Security	<ul style="list-style-type: none"> circumstances of the breach, behaviour and description of perpetrators and any actions taken by staff, whether near miss where the activity occurred (On a Train etc.) description of any object projected at trains, whether the train was struck materials or equipment stolen, implications of theft 	✓				✓	
Runaway	<ul style="list-style-type: none"> circumstances, extent of the runaway 	✓	✓				

Appendix A- Rail Safety Occurrence Reference Chart (continued)

2.1 All Occurrences		2.3 Specific Occurrences	
Organisations Involved	Notifying Organisation	Train Description	Train Type
	Infrastructure Manager		Train Identification
	Rolling Stock Operator(s)		Traction Type
	Train Control Report Number/Code		Rolling Stock Class
	Incident Number/Code		
Geographical Location	Location of Occurrence	Level Crossing Detail	Level Crossing Identifier
	Description of Location		Level Crossing Control Type
	Line Section Identifier		Road Vehicle Type
	Running Kilometerage	SPAD	Signal Passed at Danger
Time Details	Date of Occurrence		Proceed Authority Exceeded Over-run
	Time of Occurrence	Infrastructure Features	Signal No.
Occurrence Classification	Notification Category		
	Occurrence Classification	Dangerous Goods Type	Description of Dangerous Goods
Occurrence Description	Description of Occurrence		
	Description of Causes/ Contributing Factors		
	Likely Involvement of External Parties		
Occurrence Consequences	Personal Consequence		
	Person Type		
	Persons Gender		
	Persons Age		
	Property Damage/Consequences		
Drug and Alcohol Testing of Employees	Type of Test Performed		
	Reasons for Test		
	Time of Test		
	Test Results		