



Government of Western Australia  
Department of Transport  
Office of Rail Safety

**OFFICE OF RAIL SAFETY**

**ANNUAL REPORT 2010-2011**

## Contents

1. The Office of Rail Safety and Rail Safety Regulator .....	1
2. Structure and Organisation.....	1
3. Functional Activities.....	1
3.1. General.....	1
3.2. Approval Activities .....	2
3.3. Compliance Monitoring .....	3
3.4. Enforcement Activity .....	4
3.5. Education and Training .....	5
4. Regulatory Relations.....	5
4.1. National Regulatory Relations .....	5
4.2. International Regulatory Relations .....	7
5. Rail Safety Performance.....	7
5.1. Rail Occurrences.....	7
5.2. Safety Improvements.....	8
5.3. Road-Rail Interfaces .....	8
6. Governance and Administration.....	8
6.1. General.....	8
6.2. Finance.....	9
6.3. Freedom of Information .....	9
7. Looking forward .....	9
Appendix 1: Accredited Rail Transport Operators at 30 June 2011.....	10
Appendix 2: Rail Safety Statistics 2006/07 - 2010/11.....	11
Appendix 3: Serious Accidents in 2010-2011.....	13

## FOREWARD

As required under section 17 of the *Rail Safety Act 2010*, we present this, our first annual report to the Minister of Transport. This report provides an overview of our functional performance, governance and administration and of the safety performance of the railway operators we regulate.

An important step in the development and improvement of rail safety regulation and rail safety occurred on 1<sup>st</sup> February 2011 when the new *Rail Safety Act 2010* was proclaimed. This Act which replaced the *Rail Safety Act 1998* is based on a Model Bill developed by the National Transport Commission with input from the rail safety regulators including this Office and the industry. The aim of implementing the Model Bill was to make rail safety law and its application throughout Australia more consistent.

Implementing this new law has taken a significant portion of our time and this will continue through the transition periods provided in the new Act.

Through the last year demand on resources in the Office of Rail Safety increased significantly with nine organisations in discussion about accreditation or applying for rail safety accreditation and four others being granted rail safety accreditation.

Accident trends continue to improve and rail safety performance in Western Australia has been generally better than elsewhere in Australia. Some rail occurrence statistics are detailed in Appendices 2 and 3.

I wish to thank all staff of the Office of Rail Safety for their commitment and support through the year.

Rob Burrows

Director Rail Safety  
Office of Rail Safety

## ANNUAL REPORT 2010-2011

### 1. The Office of Rail Safety and Rail Safety Regulator

The Office of Rail Safety (ORS) was established in 1998 to administer the *Rail Safety Act 1998*. The Director Rail Safety then operated as an independent rail safety regulator with full delegation from the Director General for that purpose.

The Director is responsible for approving applications from rail transport operators for rail safety accreditation or for registration of their private sidings. The ORS then monitors safety performance and compliance by the accredited and registered operators.

On 1<sup>st</sup> February 2011 a new *Rail Safety Act 2010* was proclaimed. Under this Act independence of the regulator was strengthened. The Director Rail Safety (the Rail Safety Regulator) independently administers and performs functions under the Act and is not subject to direction or control of any person in relation to the manner in which the functions are performed.

### 2. Structure and Organisation

The ORS comprises a small professional team with specialist rail technical expertise and significant experience in various aspects of design, construction and operation of rolling stock and rail infrastructure as well as in rail operations.

A flat organisation structure facilitates free flow of information internally and encourages multi-functional learning and thinking. It also provides some flexibility in operation which can help us to meet most work demands.

In the last year demand has increased significantly and combined with the difficulty of recruiting staff with suitable expertise and experience in a strongly competitive workforce market the ORS has not been able to resource some activities.

We currently have 9 FTE (7 full time and two part time staff) but have approval for up to 14 FTE with implementation of the new Act.

### 3. Functional Activities

#### 3.1. General

Section 16 of the *Rail Safety Act 2010* sets out the functions of the Rail Safety Regulator including administering the Act and improving safety in this jurisdiction and nationally. In that context the ORS undertakes four main functions: –

- a) Approvals;
- b) Compliance monitoring;

- c) Enforcement; and
- d) Provision of advice, education and training.

To undertake these functions we need to engage with other Rail Safety Regulators nationally and internationally.

### 3.2. Approval Activities

The last year has been one of ORS's busiest ever in this area. The mining boom in particular has seen unprecedented growth in rail by the existing railway operators and from the emergence of new rail operators constructing and commencing operation of new railways in Western Australia.

#### 3.2.1. Accreditations

During the year four new rail transport operators were accredited taking the number of currently accredited operators to twenty nine.

The new accreditations were granted to:

- Busselton Jetty Environment and Conservation Association Inc.
- BHPBilliton Iron Ore Pty Ltd
- Karara Mining Limited
- Roy Hill Infrastructure Pty Ltd

The accreditation of BHPBilliton Iron Ore in December 2010 saw the end of its exemption from regulation under the previous *Rail Safety Act 1998* and its regulation of rail safety operations under the *Mines Safety and Inspection Act 1994*. Now safety of all rail operations in Western Australia is regulated under the *Rail Safety Act 2010*. This will benefit all participants in the rail industry. A list of accredited rail transport operators as at 30 June 2011 is at Appendix 1.

Discussions are also proceeding with nine other organisations seeking rail safety accreditation:

- API Management;
- CBH Group;
- Cockburn Cement;
- Coogee Chemicals;
- BHP Billiton Nickel West;
- Oakajee Port and Rail (OPR);

- QR Services;
- Specialised Bulk Rail (SBR); and
- Watco Companies.

Many existing operators also submitted requests for approval to amend their accreditation or to change their operation. Eighty five change advices were received and processed during the year.

The *Rail Safety Act 2010* requires a different approach to managing the accreditation of rail transport operators and consequently all current accreditations are being reviewed and accreditation notices will be re-issued in a nationally agreed format by February 2012.

### **3.2.2. Private Siding Registrations**

The ORS is also processing applications from two owners seeking to construct and register new private sidings. This will take the number of registered private sidings to fifty eight.

The new Act requires a different approach to managing the registration of private sidings and consequently all current registrations are being reviewed and registration notices will be re-issued in a new format by February 2012.

### **3.3. Compliance Monitoring**

Following approval of accreditations and registrations the ORS monitors the performance of rail transport operations to see that they are complying with the *Act* and the terms of their accreditation or registration. Key processes include compliance auditing, inspections and rail occurrence monitoring.

#### **3.3.1. Compliance Auditing**

During the year the ORS undertook 23 compliance audits. This included joint audits with regulators in other jurisdictions for interstate operators.

Fifty eight 'non-compliances' requiring improvement to safety management practices were issued. Also the ORS issued ninety 'observations' which are suggestions given to help operators improve their safety management systems.

#### **3.3.2. Inspections and Occurrence Monitoring**

Some inspections undertaken by the ORS include:-

- Site inspection at Bodallin following the derailment on 13 June 2011 of wagon AZDY 30757 on Train 426 and discovery of a shattered wheel.

- A number of private sidings to review established safety systems and assess whether accreditation of rolling stock operation would be required under the *Rail Safety Act 2010*
- Route for new railway for Karara Mining Ltd.

We also monitor occurrence data and look for adverse trends that may become target areas for further inspections or other compliance activity.

### **3.3.3. Investigations and Reactive Monitoring**

The ORS directed that operators investigate and report on the causes and contributing factors for thirty one accidents and safety issues. The ORS often provides assistance or advice to operators on the direction of investigations.

The Australian Transport Safety Bureau undertakes independent investigations of some serious accidents on the defined interstate network (DIRN) from Perth to the border. In the event that the ATSB recommends and safety improvements then the ORS works with the relevant rail transport operators to improve their safety management systems.

During 2010-11 the ATSB completed and published one final investigation report into a level crossing collision between a school bus and train 7GP1 near Moorine Rock on 23 March 2009.

The ORS is currently undertaking an investigation into allegations that the Public Transport Authority operated a train with failed brakes. The investigation findings will be provided to the Minister and the PTA when the investigation is completed.

### **3.3.4. Safety Alerts**

During the year the ORS issued two Safety Alerts that may be relevant to some accredited rail transport operators (RTO):

- RSN 2011-01 Braking systems on Hi-rail Vehicles.
- RSN 2011-02 Checking for damage to rail vehicle axles following train parting incidents.

### **3.4. Enforcement Activity**

Where a rail transport operator fails to comply with the rail safety law we may implement enforcement activity. Part 5 of the *Rail Safety Act 2010* provides for a number of enforcement measures ranging from the Regulator giving directions to issuing improvement or prohibition notices.

We are pleased to observe that most operators do aim as a first level objective to run their rail operations safely. Accordingly they are usually quickly proactive in identifying and fixing any safety problems. There was little need to consider engaging in any enforcement

activity during the year and there were no prosecutions and no improvement or prohibition notices issued.

### **3.5. Education and Training**

The ORS continues to provide guidance to individual rail transport operators on safety management including safety aspects for a range of new rail developments.

We also continue to contribute to the development of national guidelines for rail safety management and consistent regulation nationally.

We have also provided presentations to larger operators to train them and seek their commitment to using a new Contributing Factors Framework (CFF) during rail accident investigations. This tool was specifically designed by the national Rail Safety Regulators' Panel to help identify and consistently code different types of factors that contribute to rail accidents. In time this contributing factors data will assist in better targeting and prioritising safety improvement activities.

## **4. Regulatory Relations**

### **4.1. National Regulatory Relations**

#### **4.1.1. National Rail Safety Regulation Reform**

Rail safety regulation in Australia has been undergoing a process of national reform for several years. Proclamation of the new *Rail Safety Act 2010* on 1<sup>st</sup> February 2011 saw Western Australia implement model national rail safety law designed to support consistent regulation across Australia. This law supports interstate cooperation by regulators on accreditations and under a Ministerial Agreement allows cross border operation by the Regulator and rail safety officers.

Currently work is proceeding to develop and implement a single national Rail Safety Regulator to be headquartered in Adelaide with branch offices in the mainland state capitals.

#### **4.1.2. Rail Safety Regulators' Panel (RSRP)**

Regulating rail safety has a national dimension and regulators in each jurisdiction met formally five times during the year to exchange safety information and work on the development of common processes, standards and guidelines to improve consistency of rail safety regulation across Australia. The Director is currently Chair of the RSRP and the ORS provides a secretariat function to support its operation. Key achievements include:

- Development of uniform, standard national processes for undertaking rail safety accreditations and audits;

- Development of a set of MOUs and Agreements to support harmonised national regulation. These are now being implemented. Of particular note is:-
  - o An MOU in relation to the Principal Regulator concept. Implementation of the Principal Regulator concept establishes a single point of entry for operators who are accredited to operate in more than one jurisdiction. The Principal Regulator concept is a significant step in reducing the regulatory burden for these multi-jurisdiction operators;
  - o The Reciprocal Assistance and Reciprocal Powers Agreement. This will support cross border operation by regulators and rail safety officers under corresponding rail safety laws. This agreement, to be signed by State and Territory Ministers, will allow increased cooperation and alignment of regulatory action between jurisdictions; and
  - o An MOU in relation to Disclosure of Information between Rail Safety Regulators. This sets out protocols for sharing rail safety information between regulators on particular operators and on safety issues. An outcome will be that a Principal Regulator will have a national view and understanding of an operator's safety performance which will assist in risk review and development of compliance activities.

#### **4.1.3. Rail Safety Consultative Group (RSCG)**

Members of the RSRP meet with rail industry representatives at the RSCG three times during the year. The Director co-chairs these meetings with the General Manager of the Rail Industry Standards Board (RISSB).

The RSCG is a forum where Rail Safety Regulators from each jurisdiction meet with representatives from the rail industry to seek and explore views, gain clarification and understanding relating to the operation of rail safety regulatory regimes and related improvement projects and changes. The RSCG supports our co-regulatory approach to regulation with the objective of continuously improving rail safety management.

A key achievement by regulators at this forum has been to have the industry agree to develop and publish a National Rail Safety Strategy. A high level strategy with a 10 year horizon (2010-2020) and including seven national priorities was completed and published on the RISSB website on 18<sup>th</sup> April 2011.

#### **4.1.4. Other**

The Director, in his role as Chair, has represented the RSRP at other national meetings concerned with the development and implementation of arrangements for the new national regulator. Other members of the ORS have also participated in national RSRP projects.

#### 4.2. International Regulatory Relations

International application of rail technologies and operational practices is common. To regulate effectively it is important that the ORS remains up to date with safety issues involving the local adoption of new technologies and their safety effectiveness. To assist it maintains an effective network with other international Rail Safety Regulators, investigation agencies and operators.

##### 4.2.1. Advisory

During the year the Director received requests for advice and assistance on rail safety and regulation from South Africa, Sweden, Indonesia and Hong Kong.

##### 4.2.2. International Meetings

The ORS is a member of the International Rail Safety Conference (IRSC) and the Director is Secretary of its IRSC Core Group which is responsible for developing strategies for the ongoing improvement of this important forum for exchanging information to improve rail safety. The Director attended the IRSC meeting in Hong Kong in October 2010 and previously advised the host on planning and running this event. The next IRSC meeting will be held in Melbourne in October 2011 and will be hosted by the Australasian rail industry. The ORS is a sponsor for the Melbourne meeting.

In January 2011 the Director was invited to present a keynote address at a Safety Symposium in Hong Kong run by its Electrical, Mechanical Safety Department.

### 5. Rail Safety Performance

#### 5.1. Rail Occurrences

During the year 1 July 2010 to 30 June 2011 the ORS received notification of 2,186 Category A and Category B rail safety occurrences from accredited rail transport operators compared to 2,532 in 2009-2010 an improvement of 13.7%.

Category A occurrences are defined in the new *Rail Safety Regulations 2011* to identify those serious or potentially serious accidents that must be notified immediately to the Rail Safety Regulator.

The new definition of Category A occurrences has changed a little from the definition in the previous *Rail Safety Regulations 1998* and results in a reduced range of occurrence types that need to be notified immediately.

Applying the definition in the *Rail Safety Regulations 1998* then 117 occurrences are classified as Category A occurrences in 2010-11. The definition in the *Rail Safety Regulations 2011* result in 93 occurrences being classified as Category A in 2010-11.

Some aggregate rail safety statistics are presented in Appendices 2 and 3.

## 5.2. Safety Improvements

Operators implemented a number of improvements to their rail safety systems. This is consistent with the requirement for accredited rail transport operators to continuously improve their safety management systems.

One notable improvement was made by the Pilbara Iron Rail Division (Rio Tinto Rail) which implemented a GPS based tracking system on its light on-track vehicles. Normally lighter vehicles travelling on signalled track are not easily detected by the system and therefore their presence is not indicated on the electronic train control system. This new system has involved fitting GPS to all light rail vehicles allowing their presence on track to be identified and tracked. Because this GPS information is now integrated into the electronic train control system train controllers can now see where these vehicles are in the rail network enabling them to more safely manage all on-track operation. Rio Tinto won a technology prize for this innovation which reduces the risk of collisions between trains and light on-track vehicles and was developed in the early stages with involvement by the ORS.

## 5.3. Road-Rail Interfaces

Safety at road-rail interfaces, particularly at level crossings, continues to be a concern nationally.

The *Rail Safety Act 2010* includes new provisions requiring road managers and rail infrastructure managers to enter into agreements on their respective roles and responsibilities to manage the safety risks at the road-rail interface. These provisions come into full force in February 2014, giving affected organisations three years to undertake risk assessments and to prepare and implement the required interface agreements.

The PTA and Main Roads WA have previously implemented an agreement for the management of safety risks where the railway interfaces with the Mitchell Freeway and the Kwinana freeway between its northern extremity and its intersection with Thomas Road, Bertram.

# 6. Governance and Administration

## 6.1. General

Corporate governance comprises the systems and procedures by which government departments are directed and controlled. In this regard, the ORS is required to operate as a self-funded unit in the Department of Transport (DOT) and complies with DOT and Public Sector administration policies and procedures.

Rail safety regulation is required to be independent and under section 15 of the *Rail Safety Act 2010* the Director Rail Safety as Rail Safety Regulator performs his regulatory functions without external direction or control. Appropriately qualified and experienced persons are appointed as Rail Safety Officers to assist the Director in carrying out these functions.

## 6.2. Finance

The ORS operates on a full cost recovery basis. In accordance with s 43 of the *Rail Safety Act 2010* all fees and charges related to rail safety accreditations and private siding registrations and other regulatory related payments are receipted into the Rail Safety Accreditation Account. The account is charged with the costs of administering the Act.

Accreditation fee rates are determined using an approved mathematical fee model that takes into account growth in rail activity (train kilometres travelled and kilometres of track managed) and resource needs. Changes in these fee rate drivers can result in increases or decreases in fee rates from year to year. This fee model which was accepted by the rail industry in Western Australia and applied successfully for over ten years is also used in many other jurisdictions. Fees in Western Australia are generally lower than most other jurisdictions reflecting a more efficient approach to regulation in the ORS.

Accreditation fees proposed for 2010-11 were adjusted to remove a minor cross subsidy between large rail operators and heritage, not-for-profit operators. Previously the industry at large had agreed to and supported this arrangement but the Joint Standing Committee on Delegated Legislation reviewed this practice and required it be changed to remove the cross subsidy. Removal of the cross subsidy generated a revenue shortfall of approximately \$52,000 in the year. This will be funded from reserves in the Rail Safety Accreditation Account during 2011-12.

Other fees rates are generally increased by CPI each year.

The requirement for the ORS to be self-funded was implemented in order to support the requirement for it to operate as an independent regulator.

Our financial situation is reported in the Department of Transport's annual report.

## 6.3. Freedom of Information

No FOI requests were received during the year.

## 7. Looking forward

The ORS will continue to implement its responsibilities under the *Rail Safety Act 2010* to improve rail safety. Particular areas for priority are:

- Assisting rail operators through the transition periods set out in the new Act;
- Engagement in the development and implementation of the single national Rail Safety Regulator. This is expected to generate a large workload as we move towards an implementation date of 1 January 2013.
- Attraction and retention of competent staff to cope with staff attrition due to industry competition and to manage workload increases from the new Act and industry growth.

Appendix 1: Accredited Rail Transport Operators at 30 June 2011

ACCREDITED RAIL TRANSPORT OPERATOR	INITIAL ACCREDITATION
Australian Rail Track Corporation Ltd (ARTC)	27 May 1999
Australian Western Railroad Pty Ltd	17 December 2000
BHP Billiton Iron Ore Pty Ltd	1 December 2010
Busselton Jetty Environment and Conservation Association Inc.	19 January 2011
Busselton Shire (Jetty Railway)	19 April 2002
Carnarvon Heritage Group Inc.	5 March 2002
EDI Rail Bombardier Transportation (Maintenance) Pty Ltd (EDI-BT)	11 June 2004
Freightliner Australia Pty Ltd	20 November 2007
Genesee & Wyoming Australia Pty Ltd	12 July 1999
Great Southern Railway Ltd	2 August 1999
Hotham Valley Tourist Railway (WA) Inc	17 July 2001
Interail Australia Pty Ltd	2 November 2007
Intermodal Link Services Pty Ltd	22 July 2007
John Holland Pty Ltd	27 February 2009
Karara Mining Limited	28 September 2010
Kojonup Tourist Railway	25 September 2003
Pacific National Pty Ltd	28 June 2003
Pemberton Tramway Company Pty Ltd	15 February 2002
Perth Electric Tramway Society Inc.	8 May 2000
Pilbara Iron Pty Ltd	1 March 2005
Public Transport Authority of Western Australia (PTA)	1 July 2003
Rottne Island Authority	21 February 2003
Roy Hill Infrastructure Pty Ltd	18 November 2010
South Spur Rail Services (SSRS)	29 October 2002
Twentieth Super Pace Nominees Pty Ltd (SCT)	19 July 1999
The Pilbara Infrastructure (TPI-FMG)	15 May 2008
United Group Rail Services Limited (UGL)	10 December 1999
Western Australian Light Railway Preservation Association Inc	13 November 2000
WestNet Rail Pty Ltd	17 December 2000

Appendix 2: Rail Safety Statistics 2006/07 - 2010/11

Table 1: General Rail Regulation Statistics

ANNUAL STATISTICS	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	%change	2010-2011
<b>RAIL OPERATION</b>							
Number of Accredited Railway Transport Operators	22	25	26	25	29	16.00%	
Number of train kilometres (million)	25.29	29.51	32.83	33.84	39.03	15.34%	
Number of track kilometres	7894	8246	8261	8366	9833	17.54%	
<b>OCCURRENCES</b>					1998 Act		2010 Act
Total 'Category A' Occurrences	85	121	128	137	117*	-14.60%	93**
Total 'Category B' Occurrences	2110	1960	2264	2394	2069	-13.58%	2093
Total Number of Reported Occurrences (Category A + Category B)	2195	2081	2392	2531	2186	-13.63%	2186
<b>OCCURRENCE RATES</b>							
Rate of 'Category A' Occurrences per Million Train Kilometres	3.36	4.10	3.90	4.05	3.00	-25.95%	2.38
Rate of all Reported Occurrences per Million Train Kilometres	86.79	70.52	72.86	74.79	56.01	-25.12%	56.01

**Note:**

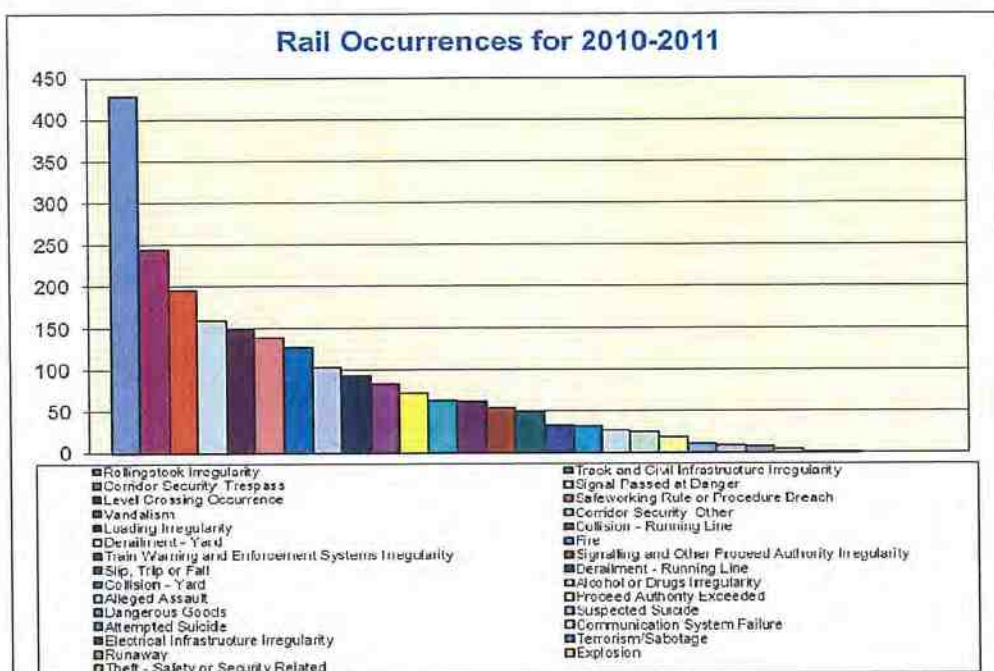
\* Number of Category A occurrences based on definitions in Rail Safety Regulations 1998.

\*\* Number of Category A occurrences based on definitions in Rail Safety Regulations 2011.

If a reported occurrence is not classified as a Category 'A' then it is recorded as a Category 'B'

This data shows that despite a continuing large increase in rail operations the rate of rail accidents in Western Australia is improving.

The graph and table on the following page show the number of occurrences in each occurrence category in each of the last two years.



**Table 2: Number of Occurrences by Category.**

Occurrence Category	2009-10	2010-11	Change
Rollingstock Irregularity	459	428	-31
Track and Civil Infrastructure Irregularity	266	244	-22
Corridor Security Trespass	222	196	-26
Signal Passed at Danger	161	159	-2
Level Crossing Occurrence	207	148	-59
Safeworking Rule or Procedure Breach	179	139	-40
Vandalism	136	127	-9
Corridor Security Other	163	102	-61
Loading Irregularity	91	93	2
Collision - Running Line	131	83	-48
Derailment - Yard	68	71	3
Fire	80	63	-17
Train Warning and Enforcement Systems Irregularity	69	62	-7
Signalling and Other Proceed Authority Irregularity	66	54	-12
Slip, Trip or Fall	83	50	-33
Derailment - Running Line	15	33	18
Collision - Yard	30	32	2
Alcohol or Drugs Irregularity	28	27	-1
Alleged Assault	25	25	0
Proceed Authority Exceeded	16	18	2
Dangerous Goods	13	11	-2
Suspected Suicide	7	8	1
Attempted Suicide	0	7	7
Communication System Failure	5	4	-1
Electrical Infrastructure Irregularity	3	1	-2
Terrorism/Sabotage	1	1	0
Runaway	0	0	0
Explosion	2	0	-2
Theft - Safety or Security Related	6	0	-6
<b>Total</b>	<b>2532</b>	<b>2186</b>	<b>-346</b>

### Appendix 3: Serious Accidents in 2010-2011

Serious accidents that rail transport operators are required to report to the Office of Rail Safety are defined as Category A occurrences in Regulation 32 of the *Rail Safety Regulations 2011* as follows:-

**Category A notifiable occurrence** means any of the following notifiable occurrences:-

- (a) an accident or incident that causes death, serious injury or significant property damage;
- (b) a running line derailment;
- (c) a running line collision between rolling stock;
- (d) a collision at a road or pedestrian level crossing between rolling stock and either a road vehicle or a person;
- (e) a fire or explosion on or in rail infrastructure or rolling stock that affects the safety of railway operations or that endangers one or more people;
- (f) a suspected terrorist attack or threat of attack;
- (g) any accident or incident involving a significant failure of a safety management system that could cause death, serious injury or significant property damage;
- (h) any other accident or incident that is likely to generate intense public interest or concern.

Accredited rail transport operators are required to notify the ORS of Category A occurrences immediately. The operator is then required to report in writing details of all Category A and the less Serious Category B occurrences within 72 hours of the event happening.

Note that the previous definition of Category A occurrences in the replaced *Rail Safety Regulations 1998* was broader and included some occurrence types that were not considered to be so serious as to require them to be reported immediately to the Regulator.

**Table 3: Number and Type of Category A Occurrences\***

WA State Total	ON-S1 Category A Occurrences	FY	FY	FY	FY	Old	New
		2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2010- 2011
Total Category A Occurrences		85	125	128	137	117	93
Running Line Derailments		18	21	15	16	33	33
Running Line Collisions **		17	12	9	11	31	8
Level Crossing Collisions (with Road Vehicle/Person)		8	4	5	7	9	9
Other Category A Occurrences		42	88	99	103	44	43

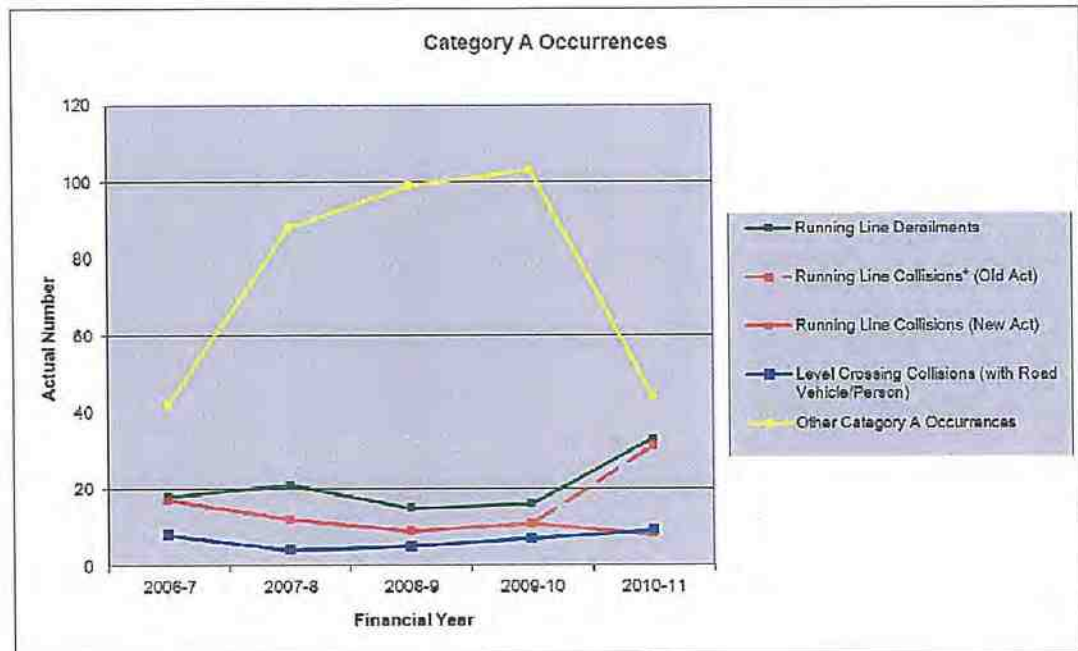
**Notes:**

\*Table 3 only contains occurrences that were classified as Category A. They consist of major occurrences resulting in serious injury to or death of a person (including a passenger, other member of the public, railway employee or trespasser), or events that endangered or could have endangered the safe operation of a railway. The definition of 'train' includes trams so

occurrences involving a tram on a tram line are also counted.

\*\*Running line collisions consist of those with a train, rolling stock, a person, infrastructure or a road vehicle. A large majority of running line collisions labelled in Table 3 as 'Other' were collisions by a train with an 'Obstruction Illegally Placed on Track' (Vandalism).

Figure 1: Types of Category A Occurrences



Note: The new *Rail Safety Act 2010* (effective Feb. 2011) does not count a running line collision with an obstruction illegally placed on track (due to vandalism) as Category A, unless it results in serious injury to or death of a person (including a passenger, other member of the public, railway employee or trespasser), or it endangers or could endanger the safe operation of a railway. The dotted line in the chart above represents the number of running line collisions that includes those with an obstruction illegally placed on track according to the 1998 Act.

Table 2: Rail Casualties

WA State Total	ON-S1 Category A Occurrences	FY 2006-2007	FY 2007-2008	FY 2008-2009	FY 2009-2010	FY 2010-2011
Fatalities (excluding suspected suicides)		5	0	0	4	1
Serious Injuries (excluding suspected/attempted suicides)		9	3	6	6	2

END OF REPORT