

ONRSR Guideline

Occurrence Data Submission Requirements

safe railways for Australia

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1 Overview

This guideline is designed to help rail transport operators provide ONRSR with the data required when reporting notifiable occurrences.

ONRSR uses a secure online portal to collect reportable occurrence data from operators. The portal is designed to guide a user through the steps required when submitting notifiable occurrences to ONRSR.

These steps involve the population of a series of data fields.

At the outset it is important you and your organisation understand the mandatory data fields that must be populated when reporting notifiable occurrences, particularly in relation to how you can configure your own business processes and IT systems to support your reporting obligations.

This guideline is divided into the following 5 sections:

Section 1

Explains the process for reporting incident causes, precursor and consequence events.

Section 2

Explains the common data fields used for multiple occurrences.

Section 3

Explains the mandatory data fields required for all Category A and B occurrences.

Section 4

Explains data fields specific to the type of incident and any likely precursor and consequence events.

Section 5

Explains data fields required when reporting Category C incidents annually.

1.1 Reporting timeframes

Rail transport operators should take note of the reporting requirements legislated in *Rail Safety National Law*.

Cat A – immediate, then details in 7 days

Cat B - 72 hrs detail for ATSB, then 14 days

Cat C – aggregated data only (Annual).

Reporting incident causes, precursors and consequence events

Incidents and accidents are not singular events, rather they are usually a series of sequential events with initiating event(s) leading to incident/accident realisation and then to consequence event(s). To improve rail safety, ONRSR must understand the sequence or series of events in order to evaluate the effectiveness of preventative and mitigating risk controls.

ONRSR requires rail transport operators to include valuable chain of event information when reporting. Firstly, operators must identify the main event - being the event with the most serious consequence or outcome (e.g., damage or injury). All required data elements for the main event must be provided, including the required data elements associated with likely cause and precursor and consequence events.

Reporting of main events <u>must</u> be accompanied by data associated with precursor and/or consequence events and these are marked with the domino image below, symbolising that they are part of a sequential <u>series of events</u>:



1.1.1 Example reporting of the incident causes, precursors and consequence events

The following is a hypothetical example of sequence or "series" of events reporting and the logic that is built into the ONRSR Portal.

A train passes a signal at stop and is unable to stop before colliding with another train. The collision results in the derailment of the second train. The chain of events for this notifiable occurrence can be summarised as follows:



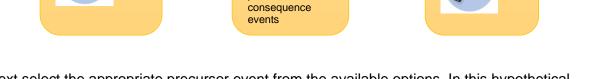
The occurrence report should firstly identify the main event, being the event with the most serious consequence or outcome. In this case, this would be the collision between the trains.

The next step is to provide the required details as outlined in section 3.1 General Details, 3.2 Post Incident Drug and/or Alcohol testing and 3.3 Location Information.

Next, provide the incident specific information for the collision, as outlined in section 4.1 Collision. This includes information such as line type and status, collision object, train details for both trains involved in the collision and any damage or injuries.

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Main Event

Collision

3.1 General

3.3 Location

Information

4.1 Incident

specific information including likely precursor and

3.2 Post Incident

Details

Testing

Next select the appropriate precursor event from the available options. In this hypothetical example, the collision was preceded by a Proceed Authority Exceedance. Therefore, Proceed Authority Exceedance would be selected from the list of precursor events. You are required to

provide the data items marked with the series of events symbol in section 4.4 Proceed Authority Exceedance. In this hypothetical example, it would be data item M1 Authority Type. Since the train passed a signal, the correct selection would be Wayside Signal.

A list of likely causes and precursor events is provided in section 4.4, Proceed Authority Exceedance, and includes "Completely Missed" which should be selected in this example.

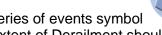
If it was determined there are no other likely causes or precursors applicable for this event, the next step is to provide the required data for the consequence event. In this hypothetical case this was the derailment and under "Collision" the user should select "Derailment" as a consequence event.

Once again, the required data items are outlined in section 4.2 Derailment and marked with the

. In this hypothetical data item I1 Point of Derailment and J1 Extent of Derailment should be selected.

A list of consequence events is provided in section 4.2 Derailment. This data item is only required if there was a consequence event. In this hypothetical case there were no further consequence events and therefore this data item is not required.

series of events symbol



safe railways for Australia

Precursor

Event

Procced

Authority Exceedance

4.4 Incident

information

marked with the

series of events

symbol including

event/likely causes

any precursor

specific





Consequence

Derailment

4.2 Incident

information

marked with the

series of events

symbol including

consequence

specific

anv

event

Event

2.1 Person Type

Data Item ID	Data Item	Format
E1.1	Person Type	 Passenger Rail Safety Worker Worker (other than Rail Safety Worker) Member of the Public Trespasser

2.2 Road Vehicle Type

Data Item ID	Data Item	Format
E1.2	Road Vehicle	1. Light Passenger Vehicle
		2. Heavy Freight Vehicle
		3. Agricultural Vehicle
		4. Civil Construction Vehicle
		5. Dangerous Goods Vehicle
		6. Bus
		7. Motorcycle
		8. Bicycle

2.3 Train Type

Data Item ID	Data Item	Format
F1.2	Train Type	 Single Selection 1. Freight Train 2. Passenger train 3. Light Rail Vehicle 4. Track machine 5. Road Rail Vehicle 6. Locomotive 7. Self-propelled vehicle 8. Rolling Stock

2.4 Mode of Operation (for operators with Autonomous / Driverless Operation Only)

Data Item ID	Data Item	Format
F1.5	Mode of operation	Single Selection Attended mode Unattended mode

2.5 Service Status (for Passenger Trains and Light Rail Vehicles)

Data Item ID	Data Item	Format
F1.6	Service Status	Single Selection
		1. In-service
		2. Not in service

2.6 Driver Only Operation

Data Item ID	Data Item	Format
F1.7	Driver Only Operation	Single Selection 1. Yes 2. No

2.7 Injury Severity

Data Item ID	Data Item	Format
G1	Injury Severity	Count 1. Minor Injury 2. Serious Injury 3. Fatality

2.8 Consequence (Damage)

Data Item ID	Data Item	Format
F1-4	Consequence (Damage)	Single Selection No damage Minor damage

3. Significant damage

2.9 Occurrence Type

Data Item ID	Data Item	Format
A3	Occurrence Type	Single Selection
		1. Collision/Near Hit
		2. Derailment
		3. Wrong Side Failure
		4. Proceed Authority Exceeded
		5. Runaway
		6. Fire, Explosion, Dangerous Goods
		7. Network Rule or Procedure Breach
		8. Load Irregularity
		9. Rolling Stock Irregularity
		10. Level Crossing Irregularity
		11. Track Irregularity
		12. Civil Infrastructure Irregularity
		13. Electrical Traction Irregularity
		14. Person/Train Interface
		15. Fatality or Serious Injury
		16. Incident Directly Threatening Safety

3 Level 1 – Essential Information

Level 1 data items are required to be provided for all occurrence reports.

3.1 General Details

Data Item ID	Data Item	Format	Description	
A1	RTO Occurrence ID	Alphanumeric	The reporter's occurrence reference number.	
A2	Notifying Organisation	Auto populated		
A3	Occurrence Type	Single Selection	Single Selection from Occurrence Type	
A4	Date of Occurrence	DDMMYYYY	Local date at the incident location of the occurrence.	
A5	Time of Occurrence	HH:MM	Local time at the incident location of the occurrence.	
A6	Involved Operators	Multiple Selection	Multiple selection from list of accredited operators in the state or territory of the occurrence.	
A6.1	Operator Role	Multiple Selection 1. RIM 2. RSO	Multiple selection of RIM or RSO for each of the operators selected in data element A6.	
Α7	Occurrence Description	Free Text	 Detailed description of the occurrence, including: The circumstances Extent of damage/disruption Casualty information Events leading up to and as a result of the occurrence 	

Data Item ID	Data Item	Format	Description
Z1	Post Incident Drug and/or Alcohol testing undertaken?	Single Selection 1. Yes 2. No	Mandatory. Select whether post incident drug and/or alcohol testing has been undertaken.
Z2	Worker Number	Automatically assigned	A number will be automatically assigned for each worker that has been tested.
Ζ3	Rail Safety Worker Type	 Single Selection Train Driver Guard Shunter Rolling Stock Maintainer Train Controller/Signaller Station Staff Railway Infrastructure Worker Other (Free Text) 	Mandatory if Z1 was answered with '1. Yes'. Select the applicable Rail Safety Worker type of the person tested.
Z4	Employment Type	 Employee Contractor 	Mandatory. Select whether the Rail Safety Worker selected under Z3 was an employee or contractor.
Z5	Test Type	 Multiple Selection 1. Drug Oral Fluid 2. Drug Blood Test 3. Drug Urine Test 4. Alcohol Breath Test 5. Alcohol Breath Analysis 6. Alcohol Blood Test 	Select the type of test(s).
Z6	Test Date/Time	DD/MM/YYYY HH:MM	Provide the local date and time for each of the tests selected in Z5. Mandatory for each test undertaken.

3.2 Post Incident Drug and/or Alcohol Testing

Data Item ID	Data Item	Format	Description
Z 7	Tested by	Single Selection 1. Operator 2. Police	Provide who undertook the test(s) selected in Z5. Mandatory for each test undertaken. Testing undertaken by ONRSR do not need to be reported. ONRSR will provide test details through the portal.
Z 8	Result	 Single Selection 1. Positive 2. Negative 3. Awaiting Result 4. Refused 5. Tampered/Interfered 	Select the result for each of the tests as selected in Z5. Mandatory for each test undertaken. The record will require updating at a later time if item 3. 'Awaiting Result' is selected.

3.3 Location Information

Data Item ID	Data Item	Format	Description
A8	Jurisdiction	Single Selection	State or Territory in which the incident occurred.
A9	Line Section	Single Selection	The line section as defined by the Rail Infrastructure Manager. Only line sections that are in the jurisdiction selected in data item A8 are valid.
A10	Line Kilometre Point	(numerical, two decimal points)	Mandatory if A11 is not provided; otherwise optional.
A11	Defined Location	 Single Selection 1. Station 2. Crossing loop 3. Yard / Siding 4. Private siding 5. Bridge (rail) 	Mandatory if A10 is not provided; otherwise optional. Selection based on the ontology data from the RIM.

Data Item ID	Data Item	Format	Description
		6. Control Point	
		7. Level Crossing	
A11.1	Location	Single Selection	Single selection from list of specific locations in the line section provided in A9. Mandatory if A11 is provided.

Rail Infrastructure Managers are required to provide a list of line sections to ONRSR as part of the ontology data. This data is used for data item A9, A11 and A11.1.

4 Level 2 – Occurrence Specific Information

4.1 Collision / Near Hit

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the point of collision was on a running line or a yard.
C1	Line Status	Single Selection1. Normal Operation2. Under Possession	Mandatory. Select whether the line was under normal operation or under possession.
D1	Collision or Near Hit	Single Selection 1. Collision 2. Near Hit	Mandatory. Select whether the incident was a collision or near hit.
E1	Collision/Near Hit Object	 Multiple Selection 1. <u>Train/Rolling Stock</u> 2. <u>Person</u> 3. <u>Road Vehicle</u> 4. Non-Road Vehicle 5. Plant/Machinery 	Mandatory. Select the collision or near hit object.

Data Item ID	Data Item	Format		Description
		Plan	Infrastructure (excluding t/Machinery) er Object (Free Text)	
E2	Collision Type	1. Hea 2. Rea 3. Side	Selection d on r end e swipe of gauge	Conditional. Only to be provided if "1. Collision" is selected in D1 and Collision Object in E1 is "1. Train/Rolling Stock".
F1	Train Details	 <u>Train</u> Train Train <u>Con</u> <u>Mod</u> <u>Serv</u> 	n ID (alphanumeric) <u>n Type</u> (single selection) n Speed (numeric) <u>sequence (Damage)</u> <u>le of operation</u> <u>vice Status</u> <u>er only operation</u>	 Mandatory. To be completed for each train/rolling stock involved in the collision/near hit collision. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-5 only required for operators with autonomous/driverless trains. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
L1	Consequence (Persons)	Multiple Selection and Input 1. <u>Person Type</u> 2. <u>Injury Severity</u>		Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
H1	Consequence (Rail Infrastructure)	1. Mino	Selection or damage iificant damage	Conditional. Only required if there was damage to rail infrastructure.
LC	Precursor Event/Likely	PE1. PE2.	Collision / Near Hit Collision Derailment	Conditional.

Data Item ID	Data Item	Format		Description
	Cause	PE3.	Wrong Side Failure	Either one item from
		PE4.	Proceed Authority Exceeded	the PE list or one item
		PE5.	Runaway	from the list 1-7 must be provided.
		PE6.	Fire, Explosion, Dangerous Goods	Provide any precursor
		PE7.	Network Rule or Procedure Breach	event from the PE list and/or any applicable likely cause (item 1-7).
		PE8.	Load Irregularity	
		PE9.	Rolling Stock Irregularity	
		PE10.	Level Crossing Irregularity	
		PE11.	Track Irregularity	
		PE12.	Civil Infrastructure Irregularity	
		PE13.	Electrical Traction Irregularity	
		PE14.	Person/Train Interface	
		PE16.	Incident Directly Threatening Safety	
		1. Self-	Harm	
		2. Misa	adventure	
		3. Delik	perate act and vandalism	
		4. Trair	n handling	
		5. Rail/	wheel adhesion	
		6. Und	er investigation	
		7. Othe	er event (Free Text)	
CE	Consequence	CE1.	Collision / Near Hit Collision	Conditional.
	Event	CE2.	Derailment	Only required if the
		CE5.	Runaway	incident resulted in a
	Man	CE6.	Fire, Explosion, Dangerous Goods	consequence event.
		CE7.	Network Rule or Procedure Breach	
		CE13.	Electrical Traction Irregularity	
		CE16.	Incident Directly Threatening Safety	

4.2 Derailment

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection	Mandatory.

Data Item ID	Data Item	Format	Description
		 Running Line Yard 	Select whether the point of derailment was on a running line or yard.
C1	Line Status	Single Selection1. Normal Operation2. Under Possession.	Mandatory. Select whether the line was under normal operation or under possession.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) Train Speed (numeric) <u>Consequence (Damage)</u> <u>Mode of operation</u> <u>Service Status</u> <u>Driver only operation</u> 	Mandatory. To be completed for each train/rolling stock involved in the derailment. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-5 only required for operators with autonomous/driverless trains. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
L1	Consequence (Persons)	Multiple Selection and Input 1. <u>Person Type</u> 2. <u>Injury Severity</u>	Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
H1	Consequence (Rail Infrastructure)	Single Selection 1. Minor damage 2. Significant damage	Conditional. Only required if there was damage to rail infrastructure.
11	Point of Derailment	Single Selection 1. Head of train 2. Within Consist	Conditional. Not required if F1-2 Train Type is "Locomotive" or "Rolling Stock".

Data Item ID	Data Item	Forma	t	Description
J1	Extent of Derailment	1. Sin 2. Sin	Selection gle bogie gle rolling stock Itiple rolling stock	Mandatory. Select the extent of the derailment.
LC	Precursor Event/Likely Cause	PE1 PE2. PE3 PE4 PE5 PE7 PE8 PE9 PE11 PE12 PE16	Collision / Near Hit Collision Derailment Wrong Side Failure Proceed Authority Exceeded Runaway Network Rule or Procedure Breach Load Irregularity Rolling Stock Irregularity Track Irregularity Civil Infrastructure Irregularity Incident Directly Threatening Safety	Conditional. Either one item from the PE list or one item from the list 1-4 must be provided. Provide any precursor event from the PE list and/or any applicable likely cause (item 1-4).
		2. Adv 3. Uno	in handling verse weather der investigation er event (Free Text)	
CE	Consequence Event	CE1. CE2. CE6. CE13. CE16.	Collision / Near Hit Collision Derailment Fire, Explosion, Dangerous Goods Electrical Traction Irregularity Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event.

4.3 Wrong Side Failure

Data Item ID	Data Item	Format	Description
К1	Type of System	 Single Selection Active Level Crossing Signalling System Authority Management System 	Mandatory. Select the type of system that failed in an unsafe state.

Data Item ID	Data Item	Format	Description
		 4. Rolling Stock Interlocking System 5. Train Protection System 6. Electrical Traction System 7. Other System (Free Text) 	Provide detail about the system that failed in an unsafe state in free text if item K1-7 Other System is selected.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Mode of Operation</u> <u>Service Status</u> <u>Driver Only Operation</u> 	Conditional. Only to be completed if a train was involved. To be completed for each train/rolling stock involved in the wrong side failure. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-5 only required for operators with autonomous/driverless trains. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
LC	Precursor Event/Likely Cause	 PE3. Wrong Side Failure PE6. Fire, Explosion, Dangerous Goods PE7. Network Rule or Procedure Breach PE9. Rolling Stock Irregularity PE11. Track Irregularity PE13. Electrical Traction Irregularity PE16. Incident Directly Threatening Safety 	Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	 CE1. Collision / Near Hit Collision CE2. Derailment CE3. Wrong Side Failure CE4. Proceed Authority Exceeded CE5. Runaway CE6. Fire, Explosion, Dangerous Goods CE7. Network Rule or Procedure Breach CE9. Rolling Stock Irregularity 	Conditional. Only required if the incident resulted in a consequence event.

Data Item ID	Data Item	Format		Description
		CE10.	Level Crossing Irregularity	
		CE13.	Electrical Traction Irregularity	
		CE14.	Person/Train Interface	
		CE16.	Incident Directly Threatening Safety	

4.4 Proceed Authority Exceeded (including SPAD)

Data Item ID	Data Item	Format	Description
В1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select running line if the proceed authority exceedance was on or onto the running line. Select yard if the proceed authority exceedance was in the yard and remained in the yard.
C1	Line Status	Single Selection1. Normal Operation2. Under Possession	Mandatory. Select whether the line was under normal operation or under possession.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Mode of Operation</u> <u>Service Status</u> <u>Driver Only Operation</u> 	Mandatory. Provide the details of the train involved in the proceed authority exceedance. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-5 only required for operators with autonomous/driverless trains. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
M1	Authority Type	Single Selection 1. Wayside Signal	Mandatory.

Data Item ID	Data Item	Format	Description
		 Written Proceed Authority Restraint Authority Verbal Authority Staff / Token In-cab Signal 	Select the authority that was exceeded or that should have been in place if the train proceeded without authority.
N1	Conflict Point	 Single Selection Occupied section of track Point / Crossover / Derailer Worksite Level Crossing Light Rail Traffic Intersection End of Line No Conflict Point 	Mandatory. Select the nearest conflict point or the conflict point that the train entered.
01	Entered Conflict Point	Single Selection 1. Yes 2. No	Mandatory. Select whether the train reached the conflict point.
P1	Distance to Conflict Point	Single Input 1. Value (m)	Conditional. Select the distance to the nearest conflict point. Only to be completed if O1 was answered with "No".
LC	Precursor Event/Likely Cause	PE3.Wrong Side FailurePE4.Proceed Authority ExceededPE5.RunawayPE7.Network Rule or Procedure BreachPE9.Rolling Stock IrregularityPE11.Track IrregularityPE16.Incident Directly Threatening Safety1.Completely missed2.Statted against signal3.Misjudged	Conditional. Either one item from the PE list or one item from the list 1-11 must be provided. Provide any precursor event from the PE list and/or any applicable likely cause (item 1- 11). Select PE4 Proceed Authority Exceeded if the train had multiple proceed authority
		 Rail-wheel interface Signal blackout 	proceed authority exceedances and one

Data Item ID	Data Item	Format	Description
		 6. Signal restored – technical 7. Signal restored – human error 8. Signal restored – emergency 9. Signal/signs obstructed/not visible 10. Miscommunication 11. Rollback 	of them was a precursor event.
RA	Response Action	 Driver responded Controller responded Other person responded System responded No response action 	Mandatory. Select the initial response action that was taken. Select system responded if an automatic train protection system stopped the train.
CE	Consequence Event	CE1.Collision / Near Hit CollisionCE2.DerailmentCE3.Wrong Side FailureCE4.Proceed Authority ExceededCE7.Network Rule or Procedure BreachCE10.Level Crossing IrregularityCE13.Electrical Traction IrregularityCE16.Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event. Select CE4 Proceed Authority Exceeded if the train had multiple proceed authority exceedances and one of them was a consequence event.

4.5 Runaway

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the runaway was on or onto the running line or in a yard and remained in the yard.
C1	Line Status	Single Selection1. Normal Operation2. Under Possession	Mandatory. Select whether the line was under normal operation or possession.

Data Item ID	Data Item	Forma	t	Description
F1	Train Details	 Mode of Operation Service Status Driver Only Operation 		Mandatory. Provide the details of the train involved in the runaway. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-5 only required for operators with autonomous/driverless trains. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
Q1	Runaway Distance	Single Input 1. Value (m)		Mandatory. Provide the estimated runaway distance.
LC	Precursor Event/Likely Cause	2. Driv 3. Del	Collision / Near Hit Collision Wrong Side Failure Network Rule or Procedure Breach Load Irregularity Rolling Stock Irregularity Incident Directly Threatening Safety ufficiently secured ver lost control iberate act and vandalism der investigation	Conditional. Either one item from the PE list or one item from the list 1-4 must be provided. Provide any precursor event from the PE list and/or any applicable likely cause (item 1-4).
RA	Response Action	 Runaway protection stopped / derailed train Rerouting Intentional Derailment Control Regained System Intervention No Action 		Mandatory. Select any response action that was taken.
CE	Consequence Event	CE1. CE2.	Collision / Near Hit Collision Derailment	Conditional.

Data Item ID	Data Item	Format		Description
	N	CE4. CE16.	Proceed Authority Exceeded Incident Directly Threatening Safety	Only required if the incident resulted in a consequence event.
				CE2 must be provided if the response action in item RA was "3. Intentional Derailment".

4.6 Fire, Explosion or Dangerous Goods Spill

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the incident occurred on a running line or yard.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Consequence (Damage)</u> <u>Service Status</u> <u>Driver Only Operation</u> 	Conditional. Provide the details if a train was involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
R1	Incident Type	 Single Selection Fire Explosion Dangerous Goods Spill 	Mandatory. Select the type of incident.
H1	Consequence (Rail Infrastructure)	Single Selection 1. Minor damage 2. Significant damage	Conditional. Only required if there was damage to rail infrastructure.
U1	Caused by Train	Single Selection 1. Yes 2. No	Conditional. Select whether a lineside fire was caused by a train.

Data Item ID	Data Item	Format	Description
			Only required if Incident Type R1 is "1. Fire" and Asset Type S1 is "3. Lineside".
L1	Consequence (Persons)	Multiple Selection and Input 1. <u>Person Type</u> 2. <u>Injury Severity</u>	Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
V1	Dangerous Goods Type	 Class 1 - Explosives Class 2 - Gases Class 3 - Flammable Liquids Class 4 - Flammable Solids Class 5.1 - Oxidizing Substances Class 5.2 - Organic Peroxides Class 6.1 - Toxic Substances Class 7 - Radioactive Material Class 8 - Corrosive Substances Class 9 - Miscellaneous Dangerous Goods 	Conditional. Provide the Dangerous Goods Type involved in the incident as per the Dangerous Goods Code. Optional if Incident Type R1 is "1. Fire" or "2. Explosion". Mandatory if Incident Type R1 is "3. Dangerous Goods Spill".
LC	Precursor Event/Likely Cause	 PE1. Collision / Near Hit Collision PE2. Derailment PE3. Wrong Side Failure PE6. Fire, Explosion, Dangerous Goods PE8. Load Irregularity PE9. Rolling Stock Irregularity PE13. Electrical Traction Irregularity PE16. Incident Directly Threatening Safety 1. Deliberate Act and Vandalism 2. Natural Event 3. Load Related 4. Under Investigation 	Conditional. Provide any precursor event from the PE list and/or any applicable likely cause (item 1- 4).

Data Item ID	Data Item	Format		Description
CE	Consequence Event	CE3. CE6. CE9. CE10. CE11. CE12. CE13. CE15. CE16.	 Wrong Side Failure Fire, Explosion, Dangerous Goods Rolling Stock Irregularity Level Crossing Irregularity Track Irregularity Civil Infrastructure Irregularity Electrical Traction Irregularity Fatality / Serious Injury Incident Directly Threatening Safety 	Conditional. Only required if the incident resulted in a consequence event.

4.7 Network Rule or Procedure Breach

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the incident was on the running line or yard.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Service Status</u> <u>Driver Only Operation</u> 	Conditional. Mandatory if Nature of breach in W1 is item 1, 3, 8 or 9. To be completed for each train/rolling stock involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
W1	Nature of Breach	 Single Selection Proceed authority incorrectly given Workers in danger zone before setup or after fulfilment Unauthorised movements in/out/within protected zone 	Mandatory. Provide the nature of the breach. Select "10. Other breach" if the breach is not listed and provide details in free text.

Data Item ID	Data Item	Forma	t	Description
			rk authorised without protection angements in place	
		5. Inc	orrect track protection method	
		6. Wo	rkers in danger zone without authority	
			rk near electrical infrastructure nout correct authority	
		8. Tra set	in incorrectly routed/points incorrectly	
		9. Tra	in exceeding permitted speed limit	
		10. Oth	er breach (Free Text)	
X1	Track Protection Type	1. Loc	Selection al Possession Authority (LPA)	Conditional. Select which track protection type that
	T	3. Tra	ck Occupancy Authority (TOA) ck Work Authority (TWA)	was in place or should have been in place.
			solute Signal Blocking (ASB) bkout Working (LW)	Mandatory if Nature
			pped Rail Traffic as Protection	of breach in W1 is
			Authority Required	item 2, 3, 4, 5, or 6.
LC	Precursor	PE1.	Collision / Near Hit Collision	Conditional.
	Event/Likely Cause	PE2.	Derailment	Only to be provided if the incident was
		PE3.	Wrong Side Failure	preceded by a
		PE4.	Proceed Authority Exceeded	precursor event.
		PE5.	Runaway	
		PE6.	Fire, Explosion, Dangerous Goods	
		PE7.	Network Rule or Procedure Breach	
		PE8	Load Irregularity	
		PE9.	Rolling Stock Irregularity	
		PE10. PE11.	Level Crossing Irregularity Track Irregularity	
		PE11.	Civil Infrastructure Irregularity	
		PE13.	Electrical Traction Irregularity	
		PE14.	Person/Train Interface	
		PE15.	Fatality / Serious Injury	
		PE16.	Incident Directly Threatening Safety	

Data Item ID	Data Item	Format	E Contraction of the second seco	Description
CE	Consequence	CE1.	Collision / Near Hit Collision	Conditional.
	Event	CE2.	Derailment	Only required if the
		CE3.	Wrong Side Failure	incident resulted in a consequence event.
	Allua	CE4.	Proceed Authority Exceeded	
		CE5.	Runaway	
		CE6.	Fire, Explosion, Dangerous Goods	
		CE7.	Network Rule or Procedure Breach	
		CE8.	Load Irregularity	
		CE9.	Rolling Stock Irregularity	
		CE10.	Level Crossing Irregularity	
		CE11.	Track Irregularity	
		CE12.	Civil Infrastructure Irregularity	
		CE13.	Electrical Traction Irregularity	
		CE14.	Person / Train Interface	
		CE16.	Incident Directly Threatening Safety	

4.8 Load Irregularity

Data Item ID	Data Item	Forma	t	Description
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (auto selected Freight Train) 		Mandatory. Provide the details of the train involved in the load irregularity.
Y1	Loading Point	A11 A11.1	3. Yard / Siding4. Private siding1. Location	Mandatory. Select where the train or wagon was loaded. The selection is based on the ontology data from the RIM.
Τ1	Type of Load Irregularity	 Los Los Los Uno Ove 	Selection as of load ad shift derloading erloading even load	Mandatory. Select the type of load irregularity.

Data Item ID	Data Item	Format	Description
		 Empty wagon in consist Ineffective restraint Open doors / hatches / gate 	S
LC	Precursor Event/Likely Cause	 PE7. Network Rule or Proce PE9. Rolling Stock Irregulari PE11. Track Irregularity PE12. Civil Infrastructure Irreg PE16. Incident Directly Threa 1. Incorrect loading / securing 2. Ineffective loading / securing 3. Tampering 4. Incorrect marshalling 	ty Provide any precursor event from the PE list and/or any applicable likely cause (item 1- 4).
CE	Consequence Event	 CE1. Collision / Near Hit Collicity CE2. Derailment CE4. Proceed Authority Excel CE9. Rolling Stock Irregulari CE10. Level Crossing Irregular CE11. Track Irregularity CE13. Electrical Traction Irregolation CE16. Incident Directly Thread 	eeded ty rrity ularity

4.9 Rolling Stock Irregularity (including Monitoring System)

Data Item ID	Data Item	Format	Description
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Service Status</u> <u>Driver Only Operation</u> 	Mandatory. Provide the details of the train involved in the rolling stock irregularity. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.

Data Item ID	Data Item	Format		Description
B2	Type of Irregularity	 Single Selection Bearing failure Broken axle Broken wheel Train parting Structural integrity Braking system Vigilance system Train protection system Draw gear / coupler failures Dragging equipment Pantograph Communication system Electrical system 		Mandatory. Select the type of irregularity or system that was affected by the irregularity.
H1	Consequence (Rail Infrastructure)	 Minor damage Significant damage 		Conditional. Only required if there was damage to rail infrastructure.
LC	Precursor Event/Likely Cause	PE8.Load IrregularityPE9.Rolling Stock IrregPE11.Track IrregularityPE16.Incident Directly T Safety		Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	CE1. Collision / Near Hi CE2. Derailment CE3. Wrong Side Failur CE4. Proceed Authority CE5. Runaway CE6. Fire, Explosion, D CE8. Load Irregularity CE9. Rolling Stock Irreg CE11. Track Irregularity CE13. Electrical Traction CE14. Person / Train Inte	e Exceeded angerous Goods gularity Irregularity	Conditional. Only required if the incident resulted in a consequence event.

Data Item ID	Data Item	Format		Description
		CE16.	Incident Directly Threatening Safety	

4.10 Level Crossing Irregularity

Data Item ID	Data Item	Format		Description
LC	Precursor Event/Likely Cause	PE3. PE4. PE5. PE7. PE9. PE11. PE13. PE16.	Wrong Side Failure Proceed Authority Exceeded Runaway Network Rule or Procedure Breach Rolling Stock Irregularity Track Irregularity Electrical Traction Irregularity Incident Directly Threatening Safety	Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	CE1. CE3. CE7. CE16	Collision / Near Hit Collision Wrong Side Failure Network Rule or Procedure Breach Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event.

4.11 Track Irregularity

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the incident was on the running line or yard.
C1	Line Status	 Single Selection Normal Operation Under Possession 	Mandatory. Select whether the line was under normal operation or possession.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Service Status</u> 	Conditional. Provide the details if a train was involved in the incident.

Data Item ID	Data Item	Forma	t	Description
				F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
D2	Type of Irregularity	 Single Selection Broken rail Rail defect Horizontal / vertical misalignment Spread track Narrow track Points irregularity Washaway Other (Free Text) 		Mandatory. Provide the type of track irregularity.
L1	Consequence (Persons)			Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types. For example, injuries to passengers when a train traverses a track defect.
LC	Precursor Event/Likely Cause	PE6. PE7. PE8 PE9. PE12. PE16.	Fire, Explosion, Dangerous Goods Network Rule or Procedure Breach Load Irregularity Rolling Stock Irregularity Civil Infrastructure Irregularity Incident Directly Threatening Safety	Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	CE1. CE2. CE3.	Collision / Near Hit Collision Derailment Wrong Side Failure	Conditional.

Data Item ID	Data Item	Format	t	Description
		CE4.	Proceed Authority Exceeded	Only required if the
		CE8.	Load Irregularity	incident resulted in a consequence event.
		CE9.	Rolling Stock Irregularity	
		CE10.	Level Crossing Irregularity	
		CE13.	Electrical Traction Irregularity	
		CE16.	Incident Directly Threatening Safety	

4.12 Civil Infrastructure Irregularity

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Conditional. Select whether the incident happened on or impacted on the running line or yard. Not required if the incident involves station infrastructure.
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Service Status</u> 	Conditional. Provide the details if a train was involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
S1	Type of Irregularity	 Single Selection Structural damage Structural collapse Bridge strike (by road vehicles) Landslide / rock fall Fallen tree Floodwater (over track) Embankment failure Other (Free Text) 	Mandatory. Select the type of infrastructure failure.

Data Item ID	Data Item	Forma	t	Description
L1	Consequence (Persons)	1. <u>Per</u>	e Selection and Input son Type iry Severity	Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types. For example, injuries to passengers due to a structural collapse.
LC	Precursor Event/Likely Cause	PE6. PE12. PE16.	Fire, Explosion, Dangerous Goods Civil Infrastructure Irregularity Incident Directly Threatening Safety	Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	CE1. CE2. CE8. CE11. CE12. CE13. CE16.	Collision / Near Hit Collision Derailment Load Irregularity Track Irregularity Civil Infrastructure Irregularity Electrical Traction Irregularity Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event.

4.13 Electrical Traction Irregularity

Data Item ID	Data Item	Format	Description
B1	Line Type	Single Selection 1. Running Line 2. Yard	Mandatory. Select whether the incident happened on or impacted on the running line or yard.
C1	Line Status	Single Selection1. Normal Operation2. Under Possession	Mandatory. Select whether the line was under normal operation or possession.

Data Item ID	Data Item	Forma	t	Description
F1	Train Details	6. <u>Service Status</u>		Conditional. Provide the details if a train was involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle.
L1	Consequence (Persons)	Multiple Selection and Input 1. <u>Person Type</u> 2. <u>Injury Severity</u>		Conditional. Only required if a person was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
LC	Precursor Event/Likely Cause	 PE1. PE2. PE3. PE4. PE5. PE6. PE7. PE8 PE9. PE11. PE12. PE13. PE16. 	Collision / Near Hit Collision Derailment Wrong Side Failure Proceed Authority Exceeded Runaway Fire, Explosion, Dangerous Goods Network Rule or Procedure Breach Load Irregularity Rolling Stock Irregularity Rolling Stock Irregularity Civil Infrastructure Irregularity Electrical Traction Irregularity Incident Directly Threatening Safety	Conditional. Only to be provided if the incident was preceded by a precursor event.
CE	Consequence Event	CE1. CE3. CE6. CE13. CE16.	Collision / Near Hit Collision Wrong Side Failure Fire, Explosion, Dangerous Goods Electrical Traction Irregularity Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event.

Item ID F1 **Train Details** Train ID (alphanumeric) Conditional. 1. 2. <u>Train Type</u> (single selection) Provide the details if a train was involved in 6. Service Status the incident. 7. Driver only operation F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is Passenger Train or Light Rail Vehicle. L1 Multiple Selection and Input Conditional. Consequence (Persons) Only required if a 1. Person Type passenger, Rail 2. Injury Severity Safety Worker or worker (other than a Rail Safety Worker) was injured. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types. G2 Single Selection Type Mandatory. 1. Door open with train in motion Select the type of incident that occurred. 2. Caught and dragged Provide free text 3. Caught in platform screen door details if item 8. Other is selected. 4. Caught between train and platform screen door 5. Falls whilst boarding / alighting 6. Fall from platform onto track 7. Fall between train and platform 8. Other (Free Text) Conditional. LC Precursor PE3. Wrong Side Failure

Rolling Stock Irregularity

Incident Directly Threatening

4.14 Person / Train Interface

Format

Data Item

Data

Cause

Event/Likely

PE9.

PE16.

Safety

Either one item from

the PE list or one item

Description

Data Item ID	Data Item	Format	Description
		 Obstacle detection system failure Obstacle detection working but obstacle not detected Traction interlocking failure Traction interlocking working, but obstacle not detected Door release speed interlocking failure Emergency door release speed interlocking failure Wrong side door released Door released whist stationary but not at platform Passenger misadventure or behaviour Under investigation Other event (Free Text) 	from the list 1-10 must be provided. Provide any precursor event from the PE list and/or any applicable likely cause (item 1- 10).
RA	Response Action	 Train crew stopped train Station staff stopped train Passengers stopped train Anti-drag system stopped train No response action / other 	Mandatory. Select any response action that was taken.
CE	Consequence Event	CE1. Collision / Near Hit CollisionCE16. Incident Directly Threatening Safety	Conditional. Only required if the incident resulted in a consequence event.

4.15 Fatality or Serious Injury

Data Item ID	Data Item	Format	Description
F1	Train Details	 Train ID (alphanumeric) <u>Train Type</u> (single selection) <u>Service Status</u> <u>Driver Only Operation</u> 	Conditional. Provide the details if a train was involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if F1-2 Train Type is

Data Item ID	Data Item	Format		Description
				Passenger Train or Light Rail Vehicle.
L1	Consequence (Persons)	 <u>Person Type</u> <u>Injury Severity</u> 		Mandatory. Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
LC	Precursor Event/Likely Cause	2. Sel	Collision / Near Hit Collision Derailment Wrong Side Failure Fire, Explosion, Dangerous Goods Network Rule or Procedure Breach Load Irregularity Rolling Stock Irregularity Track Irregularity Civil Infrastructure Irregularity Electrical Traction Irregularity Person / Train Interface Incident Directly Threatening Safety adventure f-Harm	Conditional. Either one item from the PE list or one item from the list 1-3 must be provided. Provide any precursor event from the PE list and/or any applicable likely cause (item 1- 3).

4.16 Incident Directly Threatening Safety

Data Item ID	Data Item	Format	Description
F1	Train Details	1. Train ID (alphanumeric)	Conditional.
		 <u>Train Type</u> (single selection) <u>Consequence (Damage)</u> <u>Service Status</u> <u>Driver Only Operation</u> 	Provide the details if a train was involved in the incident. F1-1 Train ID not required if F1-2 Train Type is Rolling Stock. F1-6 only required if
			F1-8 only required in F1-2 Train Type is

Data Item ID	Data Item	Format		Description
				Passenger Train or Light Rail Vehicle.
L1	Consequence	Multiple	Selection and Input	Conditional.
	(Persons)		<u>on Type</u> y Severit <u>y</u>	Only required if a person was injured.
				Select the person type and provide the count of minor injury, serious injury or fatalities for each of the relevant person types.
H1	Consequence (Rail	Single S	election	Conditional.
	Infrastructure)	1. Minc	or damage	Only required if there
		2. Sign	ificant damage	was damage to rail infrastructure.
LC	Precursor Event/Likely Cause	PE1.	Collision / Near Hit Collision	Conditional.
		PE2.	Derailment	Either one item from
		PE3.	Wrong Side Failure	the PE list or one item from the list 1-6 must
		PE4.	Proceed Authority Exceeded	be provided.
		PE5.	Runaway	Provide any precursor event from the PE list
		PE6.	Fire, Explosion, Dangerous Goods	and/or any applicable
		PE7.	Network Rule or Procedure Breach	likely cause (item 1- 6).
		PE8	Load Irregularity	0).
		PE9.	Rolling Stock Irregularity	
		PE10.	Level Crossing Irregularity	
		PE11. PE12.	Track Irregularity Civil Infrastructure Irregularity	
		PE12. PE13.	Electrical Traction Irregularity	
		PE14.	Person / Train Interface	
		PE15.	Fatality / Serious Injury	
			ptage and security event	-
			er security	
			safety worker incapacitation	
		4. Detra	aining passengers into uncontrolled ronment	
		5. Trair	n exceeding permitted speed limit	
		6. Othe	er event (Free Text)	

Data Item ID	Data Item	Format		Description
CE	Consequence	CE1.	Collision / Near Hit Collision	Conditional.
	Event	CE2.	Derailment	Only required if the
		CE3.	Wrong Side Failure	incident resulted in a consequence event.
		CE4.	Proceed Authority Exceeded	
		CE5.	Runaway	
		CE6.	Fire, Explosion, Dangerous Goods	
		CE7.	Network Rule or Procedure Breach	
		CE8.	Load Irregularity	
		CE9.	Rolling Stock Irregularity	
		CE10.	Level Crossing Irregularity	
		CE11.	Track Irregularity	
		CE12.	Civil Infrastructure Irregularity	
		CE13.	Electrical Traction Irregularity	
		CE14.	Person / Train Interface	

5 Category C – Annual Data Submission Requirements

Category C occurrence data must be submitted annually for the reporting period as agreed with the Regulator. The data must be submitted in form of counts by month for each of the occurrence types as outlined in the tables below.

1. Collision (including Near Hit Collision)					
Collision with vehicle not at a level crossing.	Rolling Stock Operator				
Collision with an animal resulting in significant damage.	Rolling Stock Operator				
Near hit with a vehicle not at a level crossing.	Rolling Stock Operator				
Near hit with a person not at a level crossing.	Rolling Stock Operator				

4. Proceed Authority Exceeded (including SPAD)				
Where the rear portion of an otherwise stationary train (excluding a light rail vehicle) rolls back.	Rolling Stock Operator			
Proceed authority within a yard and the train has remained within the yard.	Rolling Stock Operator			
Light rail proceed authority exceedance.	Rolling Stock Operator			

5. Runaway

Runaway within a yard less than 10m.

7. Network Rule or Procedure Breach	
Breaches of work scheduling practices and procedures.	Rolling Stock Operator
	Rail Infrastructure Manager

8. Load Irregularity	
Open doors, hatches, gate and curtains.	Rolling Stock Operator
Ineffective/loose load restraints	Rolling Stock Operator
Uneven distribution of load.	Rolling Stock Operator
Underloading or overloading beyond safety tolerances.	Rolling Stock Operator
Empty wagon in consist.	Rolling Stock Operator
Load shift	Rolling Stock Operator

safe railways for Australia

Rolling Stock Operator

9. Rolling Stock Irregularity	
Wayside monitoring equipment failures.	Rail Infrastructure Manager
Onboard monitoring equipment failures.	Rolling Stock Operator
Administrative failures that allowed defective rolling stock to be in service.	Rolling Stock Operator

10. Level Crossing Irregularity	
Partial operation of visual/audible warning devices.	Rail Infrastructure Manager
Partial operation of boom barriers.	Rail Infrastructure Manager
Locking on pedestrian gates failing to fully engage when closed	Rail Infrastructure Manager
Missing/damaged control signs and devices at a passive level crossing.	Rail Infrastructure Manager

11. Track Irregularity	
Broken rail (including fish plates) detected during maintenance/inspection.	Rail Infrastructure Manager
Rail defects detected during maintenance/inspection.	Rail Infrastructure Manager
Horizontal/vertical misalignment detected during maintenance/inspection.	Rail Infrastructure Manager
Track gauge (spread/tight track) detected during maintenance/inspection.	Rail Infrastructure Manager
Points irregularity detected during maintenance/inspection.	Rail Infrastructure Manager

12. Civil Infrastructure Irregularity	
Bridge strike by road vehicle.	Rail Infrastructure Manager
Embankment failures and significant track obstruction.	Rail Infrastructure Manager
Structural defects of viaducts, bridges, tunnels and station infrastructure.	Rail Infrastructure Manager
Scaffolding collapses	Rail Infrastructure Manager

13. Electrical Traction Irregularity	
De-wirement or entanglement of overhead wiring.	Rail Infrastructure Manager
Failure of the overhead wiring.	Rail Infrastructure Manager
Traction equipment faults	Rail Infrastructure Manager

14. Person / Train Interface

Defective rolling stock passenger doors and inter-carriage doors.	Rolling Stock Operator
Door incorrectly opened on the wrong side of the train.	Rolling Stock Operator
Door incorrectly opened when the train is not at or not completely at the platform.	Rolling Stock Operator
Platform screen doors opened without the presence of a train.	Rail Infrastructure Manager
Emergency door release not functioning.	Rolling Stock Operator
Persons falling whilst boarding and alighting from trains resulting in minor or no injury.	Rolling Stock Operator
Persons falling from the platform onto the track resulting in minor or no injury.	Rail Infrastructure Manager
Persons falling between rolling stock and the platform resulting in minor or no injury.	Rolling Stock Operator