

# Guideline

## Safety performance reporting

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## 1. Purpose

The purpose of this document is to provide guidance to rail transport operators on the preparation and submission of safety performance reports as required under the *Rail Safety National Law* (RSNL).

## 2. Background

This document should be read in conjunction with the relevant Office of the National Rail Safety Regulator (ONRSR) documents, including:

- > Safety Performance Reports Policy;
- > Preparation of a Rail Safety Management System Guideline; and
- > Compliance and Enforcement Policy

## 3. Definitions

Definitions provided by the RSNL and the National Regulations apply within this guideline.

- > **RSNL** - means the Rail Safety National Law which has been enacted as a Schedule to the Rail Safety National Law (South Australia) Act 2012 (SA) as it applies in each state and territory. In Western Australia, 'RSNL' means the Rail Safety National Law which has been enacted as mirror legislation in the Rail Safety National Law (WA) Act 2015.
- > **National Regulations** – means the Rail Safety National Law National Regulations 2012; or the Rail Safety National Law (WA) Regulations 2015 in Western Australia.

Where terms are not defined within the legislation the Macquarie Dictionary definition applies.

Use of the word 'should' indicates a recommendation of the ONRSR. However; the rail transport operator is free to follow a different course of action provided that it complies with the legislation. Use of the word 'must' indicates a legal requirement where compliance is necessary.

The following abbreviations and acronyms are used throughout this guidance:

<b>KPI</b>	Key Performance Indicator
<b>SMS</b>	Safety Management System
<b>SPR</b>	Safety Performance Report

## 4. Legislative framework

This section provides guidance on the legislative requirements relating to SPRs.

### 4.1 General requirements

RSNL section 103 requires rail transport operators to submit an SPR about the operator's railway operations to the ONRSR for each reporting period.

RSNL section 103(3) defines "reporting period" as a financial year or other period as is agreed from time to time by the Regulator and the rail transport operator.

Under RSNL section 103(2), the SPR must be submitted within 6 months after the end of the reporting period.

Under RSNL section 103 the SPR must be in a form approved by the Regulator and is required to contain:

- > a description and assessment of the safety performance of the rail transport operator's railway operations;

- > comments on any deficiencies in, and any irregularities, in the railway operations that may be relevant to the safety of the railway;
- > a description of any safety initiatives in relation to the railway operations undertaken during the reporting period or proposed to be undertaken in the next reporting period; and
- > any other information or performance indicators prescribed by the national regulations for the purposes of this section.

The rail transport operator's railway operations include railway operations carried out for or on behalf of the rail transport operator.

RSNL section 102 requires rail transport operators to review its Safety Management System (SMS). Regulation 17 specifies matters to be covered by the review and requires that the outcomes of the review must be summarised and reported within the SPR.

Whilst the National Regulations do not specify performance indicators to be included in SPRs, guidance on performance indicators is provided in Section 5 of this guideline.

Under RSNL section 103(2), it is an offence for a rail transport operator to fail to submit a compliant SPR by the specified deadline.

## 4.2 Review of the SMS

Under RSNL section 102, rail transport operators are required to review their SMS in accordance with the requirements of Regulation 17; in order to identify any deficiencies in the system and design, and assess methods of remedying them. As detailed above, the outcomes of the review must be summarised and reported within the safety performance report.

RSNL section 99(3) requires that before conducting the review of the SMS, rail transport operators must, so far as is reasonably practicable, undertake consultation on how the SMS could be improved prior to being reviewed. The rail transport operator must also provide the persons consulted with reasonable time to make submissions on the SMS and advise them in a timely manner of the outcome of the consultation process.

The persons with whom the rail transport operator must consult with include

- > workers and their representatives; and
- > any other rail transport operators with whom an interface agreement is required under RSNL section 105.

Under Regulation 17(3) of the National Regulations, in conducting the review the rail transport operator must ensure that the effectiveness of the SMS is assessed, taking into account:

- > records of notifiable occurrences and breaches of the SMS;
- > revisions to the SMS made as a result of the previous review;
- > recommendations or issues arising out of any audits or safety investigations that have occurred since the last review;
- > any issues arising from prohibition or improvement notices issued since the last review; and
- > opinions provided during consultation or other suggestions for improving the SMS that arise during the review.

Under Regulation 17(3)(i), if any deficiencies or practicable improvements are identified, the rail transport operator must create a plan to address the deficiencies or implement required improvements.

## 4.3 Rail Safety National Law SMS provisions

The required contents of an SMS are set out in Schedule 1 of the National Regulations. SMS requirements relevant to the provision of SPRs include requirements for:

- > systems and procedures for the review of the SMS in accordance with section 102 (Schedule 1, CI 8);
- > systems and procedures to ensure that consultation occurs when the SMS is reviewed or varied (Schedule 1, CI 13);
- > documentation of the matters set out in Regulation 17(3) (Schedule 1 CI 8);
- > the use of key performance indicators to determine the effectiveness of the SMS (Schedule 1, CI 9(1)); and
- > an audit program to determine whether the railway operations comply with the SMS and to determine the effectiveness of the SMS (Schedule 1, CI 10).

The *Preparation of a Rail Safety Management System Guideline* which is available on the ONRSR website provides detailed guidance on the contents of an SMS and processes for developing an SMS.

#### **4.4 Difference between rail safety and work health and safety risks**

RSNL section 52 specifies that a rail transport operator must ensure, so far as is reasonably practicable, the safety of the operator's railway operations.

Under Work Health and Safety legislation persons conducting a business or undertaking have an obligation to, so far as is reasonably practicable, provide a safe and healthy workplace for workers and other persons.

The purpose of an SPR is to primarily deal with rail safety risks associated with the rail transport operator's railway operations.

## **5. Contents of safety performance reports**

This section provides guidance on the structure and contents of SPRs, which encompasses RSNL and National Regulations provisions for both the conduct of annual reviews of the SMS and the contents of SPRs.

This section indicates a recommended structure for SPRs which includes nine sections:

1. Executive summary
2. Index
3. General information
4. Description and assessment of safety performance for the reporting period
5. Deficiencies or irregularities in railway operations relevant to safety
6. Safety initiatives in the reporting period
7. Safety initiatives proposed for the next reporting period
8. The outcomes of the SMS review conducted during the reporting period
9. The review process and consultation

### **5.1 Executive summary**

It is recommended that SPRs contain an executive summary that contains key points on how rail transport operators have managed rail safety risks during the reporting period, taking into account the size and complexity of its railway operations. The executive summary should be concise and clearly bring to the attention of the reader the highlights of the SPR and provide key safety performance advice against selected KPIs.

### **5.2 Index**

It is recommended that SPRs contain an index section that allows information to be easily located.

### **5.3 General information**

SPRs should include the following items of introductory and general information:

- > the name of the rail transport operator as indicated on the Notice of Accreditation;
- > the states and territories in which the rail transport operator conducts railway operations;
- > the reporting period covered by the SPR;
- > the name and contact details of a person who has been appointed by the rail transport operator to deal with any queries that the ONRSR may have in relation to the SPR; and
- > evidence that the SPR has been endorsed by an appropriate office holder.

### **5.4 Description and assessment of safety performance for the reporting period**

Within this section of the SPR, rail transport operators should consider including data tables and/or graphs indicating safety performance against the KPIs identified in the rail transport operator's SMS (see RSNL section 103(c)(i)).

Data and/or graphs should be accompanied by explanatory notes and analysis of the performance outcomes. For example, this explanatory information may include:

- > key factors affecting the rail transport operator's performance against the KPIs and trends in KPI outcomes over time (e.g. significant changes in the nature and extent of the rail transport operator's railway operations);
- > reasons for any significant movements (improvements or deterioration) in the rail transport operator's performance against their KPIs; and
- > where relevant, comments on the nature, severity and consequences of significant safety incidents which have influenced performance against the KPIs (e.g. brief descriptions of incidents resulting in fatalities or serious injuries; causal factors associated with increased incidence of specific types of safety incidents).

To ensure that information provided about the KPIs is clearly understood, it is recommended that the SPR include advice regarding the definition of the terms used to describe the KPIs, why the KPIs were selected and the nature and source of the data used for the KPIs.

As with all aspects of the rail transport operator's SMS, the scope, nature and number of KPIs reported against, should reflect the scope and nature of the rail transport operator's railway operations. Further advice on the KPIs suitable for inclusion in rail transport operators' SMSs and SPRs is available in Section 5 of this guideline.

### **5.5 Deficiencies or irregularities in railway operations relevant to safety**

This section of the SPR should include any significant deficiencies or irregularities identified during internal/external audits or monitoring processes of an SMS, or outcomes connected with any SMS compliance activities undertaken.

A summary of deficiencies or irregularities reported which prompted the ONRSR to issue any prohibition or improvement notices during the reporting period should also be detailed within the SPR. In particular, any notice which specifically indicated deficiencies or irregularities within the SMS or its consistent implementation across the rail transport operator's railway operations should be reported.

### **5.6 Safety initiatives in the reporting period**

This section of the SPR should include a description of significant safety initiatives undertaken by the rail transport operator during the reporting period (see RSNL section 103(c)(iii)).

For example, this section of the SPR may include significant revisions or additions to the SMS which were implemented during the reporting year, including SMS changes arising from:

- > previous SMS reviews;
- > changes to rail safety legal requirements;
- > changes to the scope and nature of the rail transport operator's railway operations during the reporting year;
- > the outcomes of investigations of serious safety incidents concerning the rail transport operator's operations or comparable railway operations;
- > corporate restructuring, mergers acquisitions, divestments, etc; or
- > changes in the use of contractors.

The level of detail provided should be sufficient to convey the relevance and significance of the initiatives to the overall safety performance of the rail transport operator.

The SPR should also include information on significant delays and/or barriers to implementing significant safety initiatives and SMS changes, and information on how their effectiveness has, or is proposed to be, assessed.

Rail transport operators may also use this section to highlight industry wide issues which have impacted on safety performance, including participation within initiatives led by the ONRSR, industry associations or research institutions.

## **5.7 Safety initiatives proposed for the next reporting period**

This section of the SPR should outline significant safety initiatives which will be developed or implemented during subsequent reporting periods (see RSNL section 103(1)(c)(iii) and regulation (3)(i) of the National Regulations).

Within this section, rail transport operators are advised to focus on the implementation of remedial actions to address any significant SMS deficiencies indicated by the annual SMS review.

It is also appropriate to include significant safety issues or SMS changes expected to arise from known future changes to:

- > rail safety legal requirements and "network rules";
- > scope and nature of the rail transport operator's railway operations;
- > interfaces with other rail transport operators;
- > corporate restructuring, mergers, acquisitions, divestments etc; and
- > the extent of the use of contractors.

In relation to these types of changes, it is recommended that this section of the SPR include:

- > the anticipated impact of the initiatives on future safety performance, including the nature of the risks they address and details of assessments of those risks; and
- > key milestones and timeframes for the implementation of the initiatives.

## **5.8 Outcomes of the SMS Review conducted during the reporting period**

This section of the SPR should provide a summary of the outcomes of the annual review of the SMS, and identify any significant deficiencies or irregularities in the conduct of railway operations (see RSNL section 103(1)(c)(ii) and regulation 17 of the National Regulations). For example, this section of the SPR may include:



- > the key findings and proposed remedial actions or initiatives arising from the SMS review, including significant deficiencies within the SMS and deficiencies in compliance with the SMS across the rail transport operators railway operations;
- > the key findings and the proposed response to the outcomes of formal SMS audits;
- > the outcomes of investigations into significant incidents (either occurring in, or relevant to the rail transport operator's railway operations) that were finalised or published during the reporting year;
- > the response to any prohibition or improvement notices issued to the rail transport operator during the reporting period, particularly notices which indicated deficiencies in the SMS or its consistent implementation across the rail transport operator's railway operations; and
- > deficiencies within the SMS and suggestions for improving the SMS that were identified during consultation with workers and their representatives as part of the annual review of the SMS.

All the above matters should be included within the SPR. Where no significant safety issues requiring remedial action were identified during the course of the SMS review process, it may be noted that the item was considered during the review and that no significant safety issues were identified.

The type of safety issues included within this section of the SPR, and the level of detail provided will vary according to the size and nature of the rail transport operator's railway operations. Matters should be selected for inclusion within the SPR based on an assessment of their relevance and significance to the overall safety performance of the rail transport operator.

## 5.9 The review process and consultation

This section should describe the process undertaken in conducting the review of the SMS, in order to show compliance with the legislated requirements for consultation and conduct of the review is clear (refer to section 3.2 above).

## 6. Development of key performance indicators

### 6.1 Relevant legal provisions

Under RSNL section 99 and Schedule 1, cl 9 of the National Regulations, the SMS of rail transport operators must include:

- > systems and procedures to ensure that the safety management system is effective by using key performance indicators to measure safety performance and determine the effectiveness of the safety management system; and
- > systems and procedures to ensure the collection, analysis, assessment and dissemination of safety information held by the rail transport operator.
- > The *Preparation of a Rail Safety Management System Guideline* indicates that rail transport operators should consider including in their SMS a range of:
  - > "positive" or "lead" indicators, or those indicators which measure activities undertaken to improve safety performance (e.g. the number of safety audits conducted, or competence checks undertaken, or the number of drug and alcohol tests conducted); and
  - > "outcome" or "lag" indicators, or those indicators which measure safety outcomes, for example the number of non-compliances revealed by a safety audit, or the number of positive results of drug tests, or injuries sustained, or signals passed at danger.

Details of the rail transport operator's performance against the KPIs identified within their SMS should be included within the SPR.

## 6.2 Principles for selecting KPIs

This section sets out some general principles for the selection and presentation of KPIs within SPRs. Examples of KPIs which may be considered suitable for inclusion within a rail transport operator's SPR are provided throughout Appendix 1 of this guide.

For any KPI to be effective it must be objective and easy to measure, relevant to the activity being measured, provide an immediate indicator of the level of performance, be cost effective, and be understood by the workgroup whose performance is being measured.

It is recommended that the following principles are considered when selecting KPIs for inclusion within SPRs:

- > Relevant to high level rail safety objectives
- > While measurable performance indicators can be adopted for a virtually limitless range of safety management processes, the purpose of "key" performance indicators is to provide readily understandable information regarding the overall objectives of the SMS (e.g. to reduce the incidence and consequences of injuries and illnesses arising from railway operations).
- > It is recommended that the SMS and SPR include a relatively small and manageable number of KPIs which reflect the overall safety performance of the rail transport operator and the effectiveness of key elements or processes of the SMS which contribute to the prevention of high consequence safety incidents.
- > Clearly defined and unambiguous terms and concepts
- > The KPIs used within SPRs should be clearly defined (including concise and unambiguous definitions of key terms used to define the KPIs). This will ensure the KPIs are readily understandable to relevant stakeholders and can be clearly related to the overall objectives of the SMS.
- > Measurable over time
- > The KPIs should be based on quantifiable data items that can be easily collected, stored and analysed in the medium to long term.
- > This will enable movements in performance to be monitored over time (trend analysis) and compared (or benchmarked) against similar railway operations or the railway industry as a whole.
- > Reflect outcomes rather than outputs
- > To control the effects of changes in the size or volume of railway operations and activities, the KPIs should be expressed in relative terms rather than absolute terms.
- > Rather than relying on simple counts of the number of activities or processes, the KPIs included within SPRs should measure their incidence or rate, relative to a quantifiable measure of the volume of relevant activities, or as a percentage of a target performance level.

A range of KPIs that are considered suitable for inclusion within SPRs can be located throughout Appendix 1. Section A1 of the Appendix includes examples of "activity" or "lead" KPIs which may be considered suitable for inclusion within SPRs. These types of indicators serve to:

- > measure the effectiveness of control measures and give advance warning of potential problems;
- > measure the inputs to safety critical activities in order to promote a positive culture towards improving performance;
- > provide data to determine the effective implementation of processes and facilitate corrective action to avoid unwanted outcomes; and
- > assist in improving performance by identifying where potential deficiencies exist before a problem occurs.

The Appendix sections provide examples of “outcome” or “lag” KPIs based on the national occurrence categories defined in *ONRSR [Classifying notifiable occurrences: Occurrence classification \(OC-G1\) guideline](#)*.

Since they are based on OC-G1 categories and periodic data which rail transport operators are required to report to the ONRSR and any other relevant rail safety regulators, there are also opportunities for these outcome KPIs to be used to benchmark rail transport operator performance nationally and across all jurisdictions.

## **7. Timeframes and process for submitting safety performance reports**

As outlined within section 3.1 of this document, RSNL section 103(3) defines “reporting period” as a financial year or other period as is agreed from time to time by the Regulator and the rail transport operator. This agreed period will be outlined on the Notice of Accreditation.

### **7.1 How to submit a safety performance report**

Safety performance reports should be lodged via email to the National office of the ONRSR at [operations@onrsr.com.au](mailto:operations@onrsr.com.au). If e-mail is unavailable to your organisation please lodge via hard copy to PO Box 3461, Rundle Mall, Adelaide SA 5000.

### **7.2 Submission deadlines**

Rail transport operators have a period of 6 months at the conclusion of each reporting period in which to submit a SPR (see RSNL section 102(2)). Failure to submit adequate safety performance reports or failure to submit a safety performance report at all, may result in the ONRSR issuing an infringement penalty notice or implementing prosecution proceedings. These decisions will be guided by the *ONRSR Compliance and Enforcement Policy*.

Where a rail transport operator is unable to comply with the deadline, it is recommended that the rail transport operator advise the ONRSR in writing for the reasons for the delay and the expected submission date. This information will be taken into consideration whether a delay will be accepted or enforcement actions may be appropriate.

### **7.3 Alternative reporting periods for applicants for accreditation**

New applicants for accreditation should indicate within their application if they are seeking an alternative SPR reporting period. The agreed reporting period will be detailed upon the Notice of Accreditation.

### **7.4 Alternative reporting period for currently accredited rail transport operators**

Accredited rail transport operators who wish to change their reporting period are advised to submit their request in writing to the National Manager Audit & Compliance outlining;

- > current reporting period;
- > intended proposed reporting period;
- > interim reporting period to ensure there is no period not reported; and
- > reason for the change request.

Once the new date has been accepted and agreed upon, a new Notice of Accreditation will be issued.

## **8. Assessment of safety performance reports**

Upon receipt of an SPR, the ONRSR will conduct a desktop review to ensure the SPR conforms with the requirements of the legislation. If these requirements have not been met, the rail transport operator will be advised in writing of the particulars of the non-compliance and any outstanding required information.

In the event that a rail transport operator does not comply with the request for further information, the ONRSR may consider taking enforcement action.

If no further information is required, the desktop review will be completed and considered internally by the ONRSR.

## Appendix 1 – KPIs suitable for inclusion in safety performance reports

### A1. Activity or lead indicators

The following are examples of “positive” or “lead” KPIs suitable for inclusion in SPRs

#### Conduct of SMS audits

- > The number of audits carried out in accordance with the rail transport operator’s SMS during the reporting period and the number of audits carried out expressed as a percentage of the number of planned audits for the reporting period;
- > The percentage of non-conformances specified in audit reports which have not been “closed out” within planned timeframes; and
- > The number of non-conformances identified within ONRSR compliance audits which have not been closed out within agreed timeframes, and the number of non-conformances which have not been closed out within agreed timeframes. It is expressed as a percentage of all non-conformances identified in ONRSR compliance audits.

#### Health assessments

The number of the rail transport operator’s rail safety workers who have undergone periodic health assessments in accordance with the National Health Assessment Standard, by category (1-4), at a specified date within the reporting period and the number of rail safety workers who have undergone periodic health assessments in accordance with the National Health Assessment Standard, by category (1-4), expressed as a percentage of the number of rail safety workers who were due to undergo health assessments.

#### Rail infrastructure and rolling stock inspections

The number of rail infrastructure and rolling stock inspections carried out in accordance with SMS procedures and the number of inspections carried out expressed as a percentage of the number of inspections planned to be carried out.

#### Rail infrastructure and rolling stock defects

- > The total number of notifiable rail infrastructure and rolling stock defects or irregularities reported during the reporting period and the number and percentage of the total which have not been responded to in accordance with SMS procedures; and
- > The total number of notifiable rail infrastructure and rolling stock defects or irregularities reported during the reporting period compared with the total number of notifiable rail infrastructure and rolling stock defects or irregularities reported during previous reporting periods.

#### Hazard reporting

The total number of hazard reports submitted by the rail transport operator’s rail safety workers during the reporting period and the percentage effectively responded to (or “closed-out”).

- > Emergency management
- > The percentage of the rail transport operator’s rail safety workers who have received training in emergency procedures; and
- > The number of emergency response practical exercises or drills carried out during the reporting period and the number of emergency response practical exercises or drills carried out expressed as a percentage of the number of planned exercises or drills.

#### Compliance with enforcement notices

The total number of enforcement notices received during the reporting period and the percentage of enforcement notices closed out.

### **Compliance with investigation report recommendations**

The total number of external and/or internal incident investigation report recommendations and the number of recommendations which have not been closed out within planned timeframes.

## **A2. Indicators based on notifiable occurrences**

Occurrence-based KPIs are commonly described as 'lag' or 'outcome' indicators because they represent failures that have already occurred. They can serve as useful measures of the effectiveness of risk controls, providing the KPIs reflect the full risk profile of a railway including low frequency high consequence risk. When developing occurrence-based KPIs, consideration should also be given to the availability and use of activity data relevant to the occurrences in question to account for the effect of changes in the size and nature of operation on safety performance.

### **Accident precursors**

Precursor-based KPIs potentially suitable for inclusion within SPRs of rolling stock operators include the following types of occurrences (OC-G1 references are indicated in brackets).

- > Signal passed at danger (3.4);
- > Proceed authority exceeded (3.5);
- > Signal and other proceed authority system irregularity (3.6);
- > Load irregularity (3.8);
- > Dangerous goods (3.9);
- > Safe working (Network) rule or procedure breach (3.10);
- > Rolling stock irregularity (3.12); and
- > Communications systems failure (3.19).

For rail transport operators who are rail infrastructure managers, precursor-based KPIs potentially suitable for inclusion within SPRs include the following types of occurrences (OC-G1 references are indicated in brackets):

- > Level crossing equipment failure/defect (3.3.3);
- > Safe working rule or procedure breach (3.10);
- > Track and civil infrastructure irregularity (3.11);
- > Electrical infrastructure irregularity (3.13);
- > Train warning systems irregularity (3.18.1); and
- > Communications systems failure (3.19).

### **Accidents**

KPIs potentially suitable for inclusion within SPRs include those based on events which lead directly to loss such as injury and damage. These include the following types of occurrences (OC-G1 references are indicated in brackets):

- > Running line derailment (3.1.1);
- > Running line collisions between trains (3.2.1.1);
- > Running line collision with rolling stock (3.2.1.2);
- > Running line collision with person (3.2.1.3);

- > Level crossing occurrence – collision with road vehicle (3.3.1);
- > Level crossing occurrence – collision with person (3.3.2);
- > Fire on train (3.14.1); and
- > Explosion (3.15).

Additional accident-based KPIs potentially suitable for inclusion within the SPRs of rail transport operators who operate passenger train services include the following types of occurrences (OC-G1 references are indicated in brackets):

- > Slip, trip or fall to/from train (3.7.1);
- > Slip, trip or fall between platform and train (3.7.2);
- > Slip, trip or fall on train (3.7.3);
- > Slip, trip or fall on premises other than the above (3.7.4 - 3.7.8);
- > Slip, trip or fall caught in train doors (3.7.9); and
- > Alleged assault (3.20.2).

### **Fatalities and serious injury**

In addition to accident-based occurrences, KPIs can be based on direct measures of loss arising from accidents. The types of KPIs potentially suitable for inclusion within SPRs include the following (OC-G1 references are indicated in brackets):

- > Primary Fatality (1.10.1); and
- > Serious personal injury (1.10.2).

It is recommended that these types of KPIs be broken down by the type of accident (above) and the following types of persons (OC-G1 references are indicated in brackets):

- > Railway employee – railway staff (1.7.2), contractor (1.7.3), volunteer (1.7.4);
- > Passenger (1.7.5);
- > Trespasser (1.7.6); and
- > Public (1.7.7).

Only fatalities and serious injuries associated with railway operations should be included. That is, workplace injuries and illness required to be reported to occupational health and safety and/or workers compensation authorities, and which do not fall within rail safety legislation reporting requirements, should generally be excluded.