

BACK TO THE FUTURE

Biennial Symposium: 10 – 11 October 2012



THE FUTURE OF SAFETY OVERSIGHT AS THE RAIL INDUSTRY EVOLVES

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CONTINUING EDUCATION
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1. Introduction to the RSR

- a) Established by the NSR Act. 16 of 2002.
- b) Mission: To oversee & promote rail safety through appropriate support, monitoring & enforcement guided by enabling regulatory framework
- c) Reports to the minister of transport

2. RSR Mandate

- a) To oversee safety of railway transport, while operators remain responsible for safety;
- b) To promote the use of rail through safety;
- c) To monitor and ensure safety compliance through the audits, inspections and occurrence investigations

3. Approach to Safety Regulation

Railway Safety Regulator Act, 2002 (Act 16, 2002)

Railway Safety Management Regulation, 2004: SMS; SMSR; Safety performance assessment

SANS 3000/RSR Standard

- 3000-1: Railway Safety Management: General : (Describes the elements of Railway Safety Management Regulation and refers to 3000-2 -1 to -2-6; -3; and-4)
- 3000-2-1: Technical requirements for Engineering and Operational standards: General
- 3000-2-2:Track, Civil and Electric Traction Infrastructure
- 3000-2-3: Rolling Stock
- 3000-2-4:Train Control Systems and equipment
- 3000-2-5:Train operations management
- 3000-2-6:Railway interface with other modes and utilities
- 3000-3: Railway occurrence management
- 3000-4:Human Factors management
- 3000-2-2-1:Level Crossing
- 10405: Dangerous Goods

Industry Standards- Standards generally applicable throughout the industry and which detail overarching standards above

Local Standards- Standards applicable to unique local situations

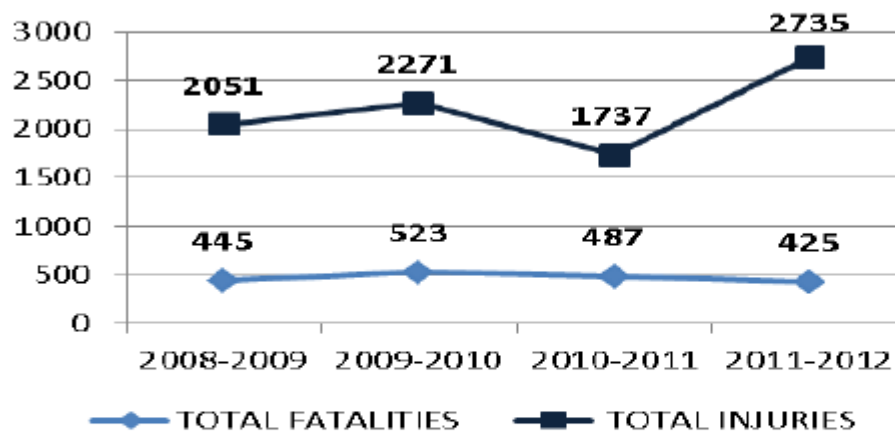
Approach to Safety Regulation/Assurance...

LEGAL INSTRUMENTS	COMPLIANCE & MONITORING	ENFORCEMENT
<ol style="list-style-type: none"> 1. NRSR Act 2. Safety Regulations 3. Standards 4. Safety Management System 5. Safety Permit 6. Cooperative Agreements 	<ol style="list-style-type: none"> 1. Safety Audits and Inspections 2. Occurrence Investigations 3. Safety Assessments of new works/technology and operational improvements 4. State of Safety Reports 5. Safety Plans 	<ol style="list-style-type: none"> 1. Directives and Notices 2. Restriction or suspension of an activity (unsafe conditions) 3. Criminal charge for contraventions 4. Penalties 5. Suspension and Revocation of Safety Permit

4. State of Safety Reporting

- a) RSR must produce and submit to the Minister an annual report on the safety of workers, the public and the environment (section 20, the ACT)
- b) Collecting and analysing information (data and statistics on railway occurrences and corrective actions)
- c) The 2007/08 - 2011/12 SoS published

State of Safety Reporting..... Safety performance



COLLISIONS (Normalised Per Million Train Km)

	08/09	09/10	10/11	11/12
TFR	18.19	16.63	16.17	15.16
PRASA	2.33	1.57	1.79	2.00

DERAILMENTS (Normalised Per Million Train Km)

	08/09	09/10	10/11	11/12
TFR	13.22	11.29	10.76	8.27
PRASA	1.06	0.73	1.06	1.15

5. Industry Challenges

Safety performance - Contributing Factors

- Poor state of rolling stock and infrastructure
- Investment backlog
- Obsolete, inadequate technology
- Inadequate maintenance
- Inadequate service capacity
- Skills – high vacancy levels
- Human Factors challenges-non compliance with rules
- Settlements in the vicinity of the rail reserve, Fencing
- Theft of assets

Industry Challenges

Safety Performance

- Performance not satisfactory- Interventions are required to address areas of poor performance
- Some interventions require use of new or modified technology
- RSR to be notified before implementation
 - **RSR Safety Assessments of new works/technology and operational improvements (Technology Review)**

6. Technology reviews

Operator Obligation:

- Section 2 of the Act-the RSR must be notified of significant changes to operations or technology before implementation
- A guidance notice on the design, construction and commissioning of rolling stock has been issued. A regulation will be promulgated soon
- RSR statement of “No objection” – not approval of technology

Technology reviews...

RSR Role

- Ensure compatibility of systems – application of design standards
- Assess impact on other systems and environment
- Identify the safety risks associated with the intended action
- Technology developments have to address known risks !!!
- RSR provides a statement of “No objection” – not an approval of technology or modification

Technology reviews...

Applicability

- All modifications with impact on railway safety – all life cycle phases

Examples:

- Organisational -maintenance responsibility, asset owner
- New operations - Gautrain
- Introduction of new Rolling Stock – PRASA new RS, TRE
- Throughput expansion – TFR export lines projects
- R.S mods. – TRE tankers, locos
- Construction of New Lines – country-wide
- Operating procedures – 1 man crew operation
- Train authorization and control systems or equipment

6. The Future

- Standard gauge track
- Medium to fast speed trains
- PRASA new rolling stock
- New Station designs
- Longer & heavier freight trains
- Automatic Train Protection, In-cab signalling
- Vertical Separation
- Regulate maintenance providers
- Private siding operators
- Development/adoption of regulations and standards for future railway systems

THANK YOU

