

HARD TIMES: A DIFFERENTIATED REGULATORY APPROACH

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SUMMARY

Regulating railway safety in a developing country poses specific and unique challenges which are exacerbated during financially challenging times. This is specifically applicable to small operators (private siding operators) in South Africa, whose core business is not rail. To the vast majority of rail operators, their rail operations are simply a necessary part of the logistical chain needed in or resulting from manufacturing/mining/agricultural activities. Initially both large and small operators were subjected to a single set of regulatory requirements. In support of small operators, the Railway Safety Regulator (RSR) introduced a differentiated approach, easing the requirements placed on those operators and reducing the cost of compliance.

Implementation of a differentiated approach allowed the RSR to move closer to the approach to small operators applied by the rest of the world. In addition, the simplification of permit requirements has led to an increased number of permit applications submitted by small operators, increasing the level of industry compliance. Efficiencies within the RSR have been increased due to speedy assessment of permit applications and simplified audit protocols. This demonstrated that it is achievable for a regulator to adapt its approach to the industry and reduce the cost of compliance, especially in financially challenging times.

INTRODUCTION

Section 22 of the South African National Railway Safety Regulator Act (Act 16 of 2002)(as amended) states: “A person may not undertake any railway operation or component of a railway operation without being in possession of a safety permit.” [1]. Regulation of railway safety in South Africa is therefore not limited to major mainline operators, and includes railway activities by a large variety of operators – from Transnet Freight Rail (20 000 km+ network) and PRASA Rail (2 million+ commuters daily) on the one extreme, to rural farmers with short private sidings on the other extreme.

Regulating railway safety in a developing country poses specific and unique challenges which are exacerbated during financially challenging times. Along with the rest of the world, South Africa was negatively impacted on by the world-wide recession. The results are evident in a growing number of operators informing the Regulator about the closure of their rail facilities. During 2011/12 the number of closures increased by 225% on the average of closures during the preceding three financial years.

This is particularly applicable to small operators (private siding operators) in South Africa, whose core business is not rail. The regulatory approach in South Africa differs from that followed by countries such as Canada [2], Germany [3] and the UK [4] generally not focussing on private sidings. To the vast majority of small South African rail operators, rail is simply a necessary part of the logistical chain needed in or resulting from manufacturing/mining/agricultural activities. Initially both large and small operators were subjected to a single set of regulatory requirements. In support of small operators, the RSR introduced a differentiated approach, easing the requirements placed on those operators and reducing the cost of compliance.

SMALL OPERATOR CHARACTERISTICS

Literature reveals that small companies in a variety of industries experience difficulties in complying with regulatory requirements and expectations. Examples include regulation on the use of information technology [5], food safety legislation [6], taxes [7] as well as occupational health and safety [8]. A number of characteristics seem to be common to these small companies. Some examples of these characteristics influencing compliance decisions taken by small operators include the following:

- Previous individual experiences with government or regulatory bodies influence their attitude towards regulation.
- Most adopt a reactive approach to railway regulation. They seem to wait until their non-compliance is pointed out to them and then rely heavily on external sources of information on requirements. To many compliance is based on “doing what they were told to do” rather than on clear understanding of the legal requirements
- Small businesses typically operate in a more informal manner, not based on written procedures and policies. They also tend to depend heavily on a single individual to take responsibility for compliance, reducing it to a “task” rather than “a way of life”.
- There seems to be resistance to written guidance, with personal interaction being preferred. Many companies prefer to believe that reaction to direct verbal instructions represent compliance, rather than implementing required systems.
- There seems to be both a lack of awareness of the need to comply and a lack of basic industry knowledge, limiting their understanding of guidance provided and the risks inherent to operations.
- The belief that their operations pose no immediate threat leads to reluctance to comply as they are both daunted by requirements and not convinced that it will add value.

While all the characteristics mentioned above are applicable to small rail operators in South Africa, the following additional factors are of particular relevance:

- **Rail is not their core business**, so they do not regard themselves as rail operators as defined in legislation. Many simply do not understand that railway safety legislation is applicable to them, while most seem to find it very difficult to keep track of any changes or additions to the regulatory framework.
- A definite **lack of awareness of railway hazards** is demonstrated with doing rail risk assessments beyond the scope of occupational health and safety guidelines posing a distinct challenge. There seems to be an inability to distinguish between occupational health and safety and railway safety.
- An exceptionally **high turn-over rate** amongst Nominated Managers is experienced. This disrupts continuity and lead to the loss of “training time” invested by the RSR in educating previous incumbents.
- The **cost of compliance** is of great concern to small rail operators and even more so in the current economic climate. Compliance is not seen as a priority during times when survival of the business is at stake.

PERMIT CLASS CRITERIA

Due to the lack of railway skills amongst small operators, a simple set of criteria had to be found to differentiate between larger, high-risk operators and small, low-risk operators. As even small operators are able to indicate the annual tonnage dispatched/received by rail, this was chosen as basis for the criteria. In addition, the nature of commodities transported was taken into account.

The following permit class criteria were decided on:

Class A (Larger, high-risk operators)

- i All operators involved with the movement of **passengers**
- ii All operators involved with the movement of **dangerous goods** exceeding **50 000** net tons per annum
- iii All operators involved with the movement of **general freight** exceeding **500 000** net tons per annum
- iv **Railway manufacturing and maintenance** companies involved with the movement of locomotives, empty wagons/coaches and any other rail-bound maintenance vehicles equal exceeding **500 000 gross tons** per annum.

Class B (Small, low-risk operators)

- i. All operators involved with the movement of **dangerous goods** less than or equal to 50 000 net tons per annum
- ii. All operators involved with the movement of **general freight** less than or equal to 500 000 net tons per annum.
- iii. **Railway manufacturing and maintenance** companies involved with the movement of locomotives, empty wagons/coaches and any other rail-bound maintenance vehicles less than or equal to 500 000 gross tons per annum.

In the case of network owners not directly involved with the dispatch/receipt of goods by rail (such as ports and municipalities), the total gross tonnage of all goods traversing their network on an annual basis will be used to determine the permit class.

Passenger transport was classified as high risk for the following reasons:

- Injuries and fatalities are highly likely during an occurrence
- The introduction of the first rapid rail passenger operations to South Africa
- The use of “uncommon” technology, in a South African context. This converted rolling stock and traction power used by some heritage and tourism operators.
- The majority of small heritage and tourism operators traverse mainlines, which requires high safety standards to be adhered to in order to avoid disruption of mainline rail services.

The validity period of permits issued to operators was also amended, from the initial 3 year period to 5 and 6 years respectively for Class A and B operators. The extended validity periods allowed the RSR to move away from frequent permit re-applications, to a pro-active focus on Annual Safety Improvement Plans. The ASIPs represents a “progress report” on continual railway safety improvements achieved by operators. *Class B operators are however not required to submit ASIPs.* The extended validity periods and removal of the need to submit ASIPs further reduces the administrative burden on small operators and further contributes to lowering the cost of compliance.

All safety permit holders are required to submit an Annual Class Declaration Form to the Regulator. This is used to confirm the class of permit applicable to an operator and makes provision for movement between permit classes due to the growth or decline of rail volumes.

Application of these criteria has to date resulted in a 30:70 ratio in Class A and Class B safety permits issued.

SAFETY MANAGEMENT SYSTEM REQUIREMENTS

Class B safety management system requirements have been reduced to allow for a simple but effective safety management system able to ensure railway safety. The following safety management system elements as described in the South African National Standard 3000-1 (2009): Railway Safety Management: Part 1: General [9] apply to Class B operators:

Policy, structure and procedure

- A **Nominated Manager** needs to be appointed.
- Internal safety management system adequacy and compliance **audits** need to be conducted regularly and the findings implemented.
- Compliance with safety legislation needs to be ensured, including a process to remain informed of changes in the legal framework guiding railway safety

Operational rail risk management processes

- A rail risk assessment process needs to be implemented.
- A rail risk control strategy needs to be implemented.

Occurrence management

- Procedures to manage occurrences as well as emergency preparedness plans need to be developed.
- Rail occurrence recording, notification and reporting needs to be done. The main focus is on Quarterly Occurrence Reporting.
- Occurrence investigations need to be done to determine root causes while corrective action plans aimed at avoiding recurrences also need to be implemented

Human factors management

- All safety-related grades need to be identified
- A human factors risk assessment needs to be conducted
- A gap analysis needs to be done to identify the difference between the current and required state of human factor risk areas
- An implementation plan reflecting targets need to be drafted and managed

Safety standards for engineering and operational systems

- Life-cycle management of rail-related equipment and assets needs to be implemented
- Design and maintenance standards for rail-related equipment and assets
- Maintenance plans for rail-related equipment and assets
- Written standard operating procedures for all rail-related actions

Interoperability and interface management

- Interfaces with other operators need to be identified and managed in line with formal interface agreements entered into.

Changes to the safety management system

- A process needs to be implemented to ensure the RSR is given written notice of meaningful changes to rail operations or systems.

The Class B safety management system requirements are similar to the newly established Australian National Rail Safety Regulator's approach to private sidings [10]. They will accredit what the RSR refers to as a Class A operator (full safety management system), while the RSRs equivalent to Class B operators only needs to register. In South Africa safety permits are still issued to both classes of operators, although the requirements to be met have been differentiated.

SAFETY PERMIT FEES

The RSR charges safety permit fees to augment the government grant received. Operators pay safety permit fees prior to a permit being issued to them, and annual safety permit fees during each year for which the permit is valid. Failure to pay annual permit fees may jeopardise the continued validity of the permit. Safety permit fees charged are based on audited annual operator rail cost figures, submitted to the Regulator. These rail costs represent the cost of rail operations and maintenance, but excludes railage paid to Transnet Freight Rail for the transportation of goods on the mainline. Permit fees are determined on a sliding scale, with higher rail costs associated with higher permit fees. This approach initially applied to all operators.

Since the introduction of the differentiated approach, Class B operators are charged a flat fee, not related to their rail costs. This rate is deliberately maintained at a low level in support of Class B operators, given the difficult economic climate they have to function within. Class B operators are no longer required to submit audited annual rail cost figures to the Regulator, resulting in a further reduction in the cost of compliance.

OPERATOR SURVEY RESULTS

The first Class B safety permits were issued during 2010/11, forming part of a Board-approved pilot study to determine the effectiveness of the new approach. This year was deliberately chosen as a smaller number of permit expired, offering opportunity to test the approach on a smaller number of operators. The smaller number of permits needing to be re-issued also afforded staff members the time to provide guidance to operators exposed to the new permit requirements.

A questionnaire was sent to the 20 operators issued with Class B safety permits during that year. The questionnaire contained questions on the permit class criteria and the safety management system report, while operators were specifically asked to indicate if they are supportive of the new approach or not.

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rate of 90% was achieved, with the following results having been

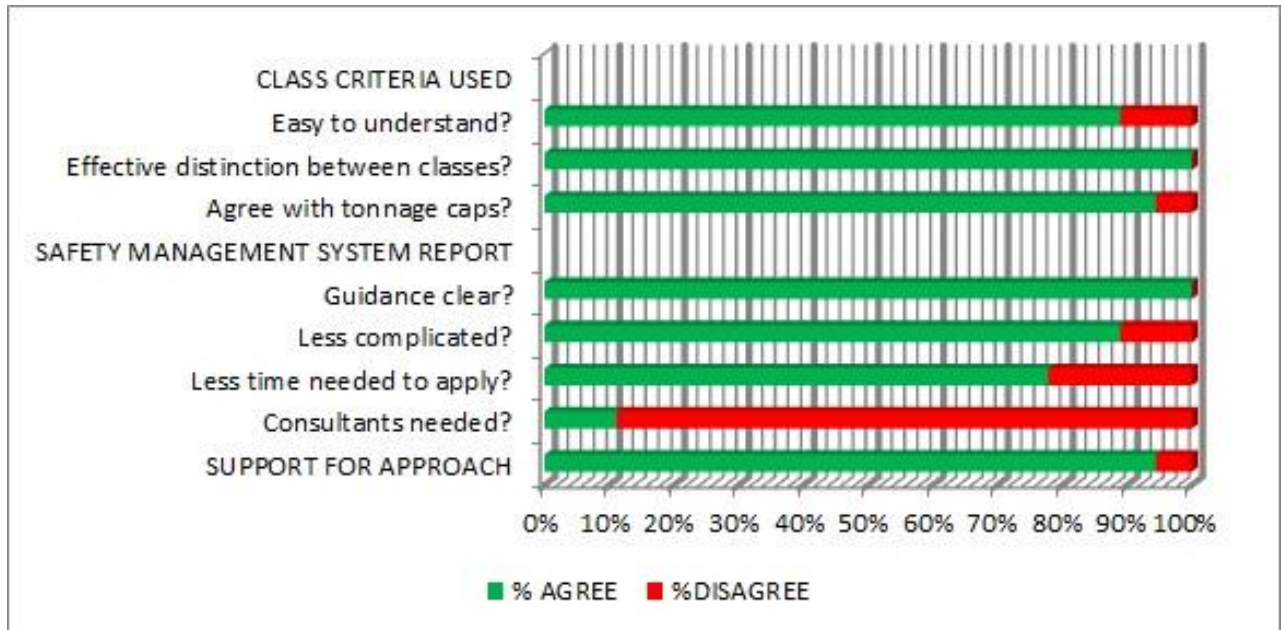


Figure 1: Class B Operator survey results: 2010/2011

Despite positive feedback on the nature and clarity of guidance provided to Class B operators, some requests were received to avoid the use of railway terminology in the guidance documents!

It was however very pleasing to note that 90% of operators no longer required the assistance of consultants in completing safety permit applications, while a further 5% indicated that consultants were used only because of time constraints faced. This confirmed that the new approach would lower the cost of compliance of Class B operators in general, providing support in the uncertain economic climate.

Based on 92% of Class B operators expressing support for the new approach, the RSR Board approved full implementation from 1 April 2011.

REGULATORY BENEFITS DERIVED

Introduction of the differentiated approach benefitted the RSR in a number of ways:

1. Class B operators have expressed their appreciation for the amendments and the resultant reduction in their administrative burden and cost of compliance. Many now seem to have a more **positive perception** of the RSR
2. While larger rail operators – especially those with rail as their core business – more readily comply with rail regulation, small operators were reluctant to participate in the regulatory approach. Most seem to have followed the strategy of non-compliance until they were identified and targeted by the RSR. Following the introduction of the differentiated approach a 68% increase in Class B permits issued to first-time permit applicants was experienced during 2011/12 as compared with the average for the preceding 3 years. This indicated a **higher level of compliance** by small operators.
3. Extension of the permit validity dates has reduced the frequency of permit application submissions, lessening the RSRs **administrative burden** of processing permit applications. This creates capacity to focus on pro-active permit-related compliance (especially by Class A operators) during the permit validity periods.

- The frequency and scope of safety assurance audits for Class B operators have been amended, allowing for shorter, less time-consuming audits to be conducted at longer intervals than has been the case in the past.

5. **Permit finalization improvements**

Permit applications are received and assessed. Written feedback is provided on any additional information required in order to meet the legal requirements for a permit – should that be required. Operators then respond by submitting additional information which is again assessed. Once the RSR is comfortable that the requirements have been met a decision to issue the permit is taken. The time between receipt of the application and the decision to issue a permit can be referred to as the “permit processing period”. On average during 2011/12, the “permit processing period” for Class B safety permits was 46% shorter than that of Class A permit applications.

Permits are only physically issued on receipt of payment of the final permit fees by operators. This can be referred to as the “payment period”. During 2011/12, the Class B “payment period” was 24% shorter than that of Class A operators.

The “permit finalization period”, the time between the permit application having been received and the physical issuing of the permit, was 40% shorter for Class B safety permit than was the case with Class A permits as is reflected in the graph below.

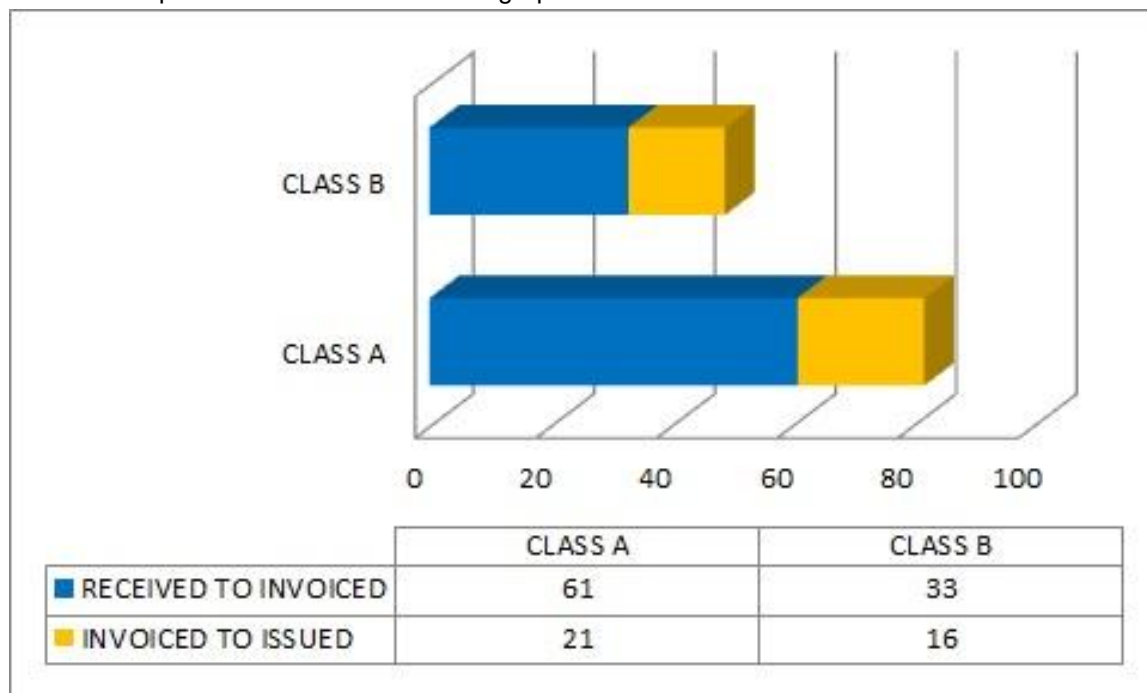


Figure 2: Permit finalization period by class (days): 2011/2012

- Due to the improved internal efficiencies, the RSR is able to focus its limited resources on **Class A operators**, and especially on Transnet Freight Rail and PRASARail whose combined rail activities represent roughly 80% of all rail activities in South Africa.
- By reducing its focus on Class B operators, the RSR has moved to a position more closely aligned with the approach followed **internationally**, where regulatory activities are limited to mainline rail operators.

CONCLUSION

Reducing and simplifying the regulatory requirements for small operators had a positive effect in the South African rail regulatory environment. Most pleasing amongst the benefits was the feedback received from small operators that these measures reduced the cost of compliance. In addition, the increase in the number of permit applications received from small operators and the increased internal efficiencies in processing permit applications and conducting Class B operator audits have benefited the Regulator.

Solutions however still need to be found for some remaining challenges pertaining to small operators. The RSR is aiming to increase the number of safety standards developed annually, while the degree of technical complexity in many of these standards – such as those on interoperability and train control – is expected to pose a new challenge to Class B operators. This could potentially reintroduce the need for small operators to make use of consultants, increase the cost of compliance and increase the number of operators choosing to avoid rail as a mode of transport.

The Regulator is therefore looking at ways in which other regulatory requirements – beyond permit applications – can also be addressed in support of Class B operators. This is of particular relevance both in terms of future industry compliance levels and in the face of the financial challenges prevalent in the South African economy.

LIST OF REFERENCES

- 1 The South African National Railway Safety Regulator Act (Act 16 of 2002)(as amended)
- 2 Railway Safety Act, 1985, c.32, 4th Suppl
- 3 Federal Law Gazette, 5 July 2007.
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- 5 Koybe M. Factors influencing SME compliance with government regulation on use of IT: the case of South Africa. JGIM. 2009; 17.2.
- 6 Fairman R, Yapp C. Compliance with food safety legislation in small and micro-businesses: enforcement as an external motivator. JEHR. 2004; 3:2.
- 7 Chamberlain D, Smith A Recent findings on tax-related regulatory burden on SMMEs in South Africa, Development Policy Research Unit, Working Paper 06/105.
- 8 Vickers I, James P, Smallbone D, Baldock R. Understanding small firm responses to regulation, Policy Studies. 2005; 26:2, 149-169
- 9 South African National Standard 3000-1 (2009): Railway safety management part 1: general.
- 10 Rail Safety National Law, 8 November 2011