**SHKStatens haverikommission**

**Swedish Accident Investigation Board Reference No A-153/09**

**Annual Report**

**Rail traffic investigations carried out in 2008**

**SHK investigates accidents and near-accidents from a safety point of view. The purpose of the investigations is to ensure that similar events are avoided in the future. However, SHK’s investigations are not intended to apportion blame or liability.**

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Introduction

**In accordance with the Swedish Accident Investigation Ordinance (1990:717), the Swedish Accident Investigation Board (SHK) is required to publish a report by 30 September each year on accidents and near-accidents affecting railway traffic in the preceding calendar year.**

**The report must contain information on the investigations carried out, safety recommendations issued and action taken in response to recommendations issued previously.**

Investigations carried out

During the year four reports were completed:

* RJ 2008:01, Collision between passenger train 8789 and a derailed freight wagon belonging to freight train 49302 at Linköping-Vikingstad, Östergötland County, on 29 March 2006.
* RJ 2008:02, Near-collision of train 67373 and train 3743 between Stenungsund and Ytterby, County of Gothenburg and Bohus, on 19 October 2007.
* RJ 2008:03, Near-accident at a level crossing between a lorry and passenger train 2513 at Esplanaden in Sundbyberg, County of Stockholm, on 13 December 2007.
* RJ 2008:04, Near-collision with prohibited movement on the stretch Alby-Ångebyn, in Västernorrland County, on 16 January 2008.

RJ 2008:01

The cause of the derailment was a broken axle that occurred as a result of a ball bearing overheating. The ball bearing failed because the wheel axle in question had a damaged wheel which was allowed to remain in service for a longer period in spite of the fact that the wagon ought to have been decommissioned for repair.

Recommendation RJ 2008:01 R1

The Swedish Rail Agency is recommended to find a suitable way of ensuring that operators licensed prior to 1 July 2007 have a safety management system and documentation that comply with basic requirements in respect of staff competence, vehicle maintenance and the use of contractors (including cases where a different legal entity runs its own operation under the liability of a licence holder).

In the light of the 2007 amendments to the Railway Act (2004:519), and by virtue of those regulations issued relating to safety management for railway undertakings (Swedish Rail Agency’s regulations (JvSFS 2007:1) on safety management systems and other safety regulations for railway undertakings), SHK is not making any recommendations in respect of the licence assessment process etc.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The Swedish Transport Agency notes that, in respect of the licence assessment process pursuant to the Railway Act, the procedure has been modified subsequent to the implementation in Swedish law of the second railways package. Reassessment is underway of all licences issued after 1 July 2004, to be followed by those issued after 1 July 2007. Since the legislator has set a further limit of 31 December 2010 for the validity of licences issued under provisions prior to 1 July 2007, all licences will be reassessed in accordance with the new provisions. Moreover, safety certificates that have been issued have a limited validity of five years, after which time further reassessment takes place.

The Swedish Transport Agency’s assessment of safety management systems is now based on an applicant demonstrating that processes are in place that govern safety management in all of its sub-systems (Part A) and that the operator has procedures specifically adapted to the network (Part B) for the infrastructure they intend to serve. In this respect, the Agency’s checking procedure may be said to have improved with regard to the licensing process in accordance with the recommendations made in the investigation. Every licence that is issued is assigned to a category based on a risk value. This then forms the basis for supervisory inspections. This also provides the Agency with a risk-based strategy for its supervisory inspections.

RJ 2008:02

A near-collision occurred between two trains on the stretch Stenungsund-Ytterby. The traffic management for the stretch between the stations is handled jointly through train announcement between the train dispatchers of both stations. The near-miss was caused by the train dispatcher in Stenungsund setting the departure signal to “go” for train 3743 without having obtained the clear signal for the train, while at the same time train 67373 was out on the stretch.

Recommendation RJ 2008:02 R1

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration takes action to make sure that train dispatchers have the prerequisites in place so that they can easily obtain correct telephone numbers in order to be able to contact drivers.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

In order to ascertain the extent of problems in terms of contacting train drivers, a specific supervisory inspection on this issue was undertaken in the winter of 2009. Measures have been taken to resolve the previous problem of inadequate tools for contacting train drivers in accordance with the results of this supervisory inspection. One such measure has been to equip all lines with MobiSIR.

Recommendation RJ 2008:02 R2

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration takes action to make sure that the system for individual follow-up takes account of variations which arise in duty shifts.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The need for specific supervision in this respect is being considered.

Recommendations RJ 2004:2 R1 and R6

*(Previous recommendations made by SHK)*

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration, as a matter of urgency, develops an automatic block system or ERTMS-based safety system on train announcement lines with heavy traffic.

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration identifies and introduces more effective barriers in the train announcement system.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The last business meeting with the National Rail Administration was held on 29/09/2008. At the meeting the National Rail Administration reported on the following measures it had taken relating to stretches that did not have automatic blocking systems:

* Restoration of the K15 monitoring interlock key system.
* Addition of MobiSIR on single-track branch lines *(since the meeting all lines have been equipped with MobiSIR, see Recommendation 2008:2 R1).*
* Restriction on the number of work trains (so that these movements take place in the form of normal trains instead). *With the introduction of the Swedish Rail Agency’s traffic regulations (JTF), this will involve the use of automatic train control.*
* Introduction of daily scheduling wherever possible.
* A broadband connection for lines that do not have automatic blocking systems.

In addition, the National Rail Administration is also planning other measures, such as extending the automatic blocking system and introducing the E-ТAM system. The introduction of Е-TAM is a major priority for the National Rail Administration.

Recommendation RJ 2004:2 R6

*(Previous recommendations made by SHK)*

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration creates effective follow-up systems in order to spot systematic shortcomings and deviations, for example in the area of compliance with rules and local practice *(RJ 2004:2 R6).*

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The National Rail Administration’s new organisation provides the prerequisites for more effective follow-up, now that the local mandate has been reduced. One of the consequences is that any matter will now only be subject to one set of regulations, and the view is that this results in good prerequisites for effective follow-up systems. Recent licence applications have involved checking that there are clear reporting pathways and rules relating to this. Future supervisory inspections should show how this works in practice.

RJ 2008:03

This is the near-miss at a level crossing that was caused by a lorry becoming blocked in and remaining immobile at the railway crossing between the gates. After a bend, the driver of a passenger train saw something on the track between the gates, and applied the brakes and stopped just short of the lorry. The near-miss was caused by the lorry driver not observing the sound and light signals or the one-way system, the fact that his view was partly blocked, and that the gates had not been forced.

Recommendation RJ 2008:03 R1

The Swedish Rail Agency is recommended to take steps to ensure an increased use of obstacle detection systems at level crossings.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

Introducing an obstacle detection system at a level crossing is a very costly measure and has no effect unless supplemented by ATC. This means that introducing obstacle detection systems may not always be the best solution. To reduce the number of accidents at level crossings, an evaluation is therefore needed on a case-by-case basis as to which measure is most appropriate. It may be that the level crossing should be closed and a replacement road built to a better-equipped level crossing, or a crossing involving two levels, or to build on two levels. The National Rail Administration is currently investing a lot of effort and money in reducing the number of level crossings and improving protection on those that are to remain. Daily work on this means that around 100 level crossings are removed each year. The Swedish Transport Agency does not therefore take the view that special supervisory inspections or measures need be applied in this area. As regards adapting existing level crossing to changes in traffic flows, a supervisory inspection was completed during 2008 that resulted in the National Rail Administration creating a procedure for dealing with this.

Recommendations RJ 2008:03 R2 and R3

The Swedish Road Administration and the National Rail Administration are recommended to take joint steps to ensure that common standards and working methods are developed by infrastructure managers and road maintenance authorities, and that cooperation between municipalities and other stakeholders is enhanced so that the traffic environment at level crossings is evaluated on an ongoing basis as well as at the actual time of alterations.

The Swedish Road Administration and the National Rail Administration are recommended to take further steps to increase and maintain road users’ awareness of risks at level crossings and of how to act in the event of being trapped between the gates.

*Summary of the responses from the National Rail Administration and the Swedish Road Administration*

The National Rail Administration and the Swedish Road Administration have initiated a joint review of both administrations’ documents governing the geometric layout of level crossings from a highways and a railways perspective.

The National Rail Administration and the Swedish Road Administration have also formed a working party with a remit to improve the support for hauliers and abnormal loads.

The Level Crossing Delegation and the Level Crossing OLA (OLA = Objective data, List of solutions and Addressed action plans) model act as a forum for cooperation between stakeholders and harmonisation of the various views put forward in the course of work relating to the Level Crossing OLA.

There has been an information campaign directed at drivers of trailer vehicles, the purpose of which was to encourage them to report level crossings that they believe to be dangerous. In 2008, the National Rail Administration also made an inventory of 2500 level crossings. These two measures have resulted in the addition of signage to 300 level crossings, of which 150 will be modified no later than 2010.

RJ 2008:04

The near-miss was caused by wagons that were rolling out of control due to the fact that they had not been secured against rolling before the brake system was discharged of air.

Recommendation RJ 2008:04 R1

The Swedish Rail Agency is recommended to take steps to ensure that the safety management systems of the railway undertakings are adequate for identifying whether personnel have the correct skills to carry out their duties.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

When awarding licences the Swedish Transport Agency always checks that the safety management systems of railway undertakings is able to identify whether personnel have the correct skills to carry out their duties. Our supervisory activity also involves checks on the railway undertakings’ safety management systems with this in mind.

Recommendation RJ 2008:04 R2

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration, as a matter of urgency, provides information on local conditions that can have an impact on the activities of other operators, e.g. gradient conditions.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The Swedish Transport Agency is currently engaged in an activity in which we have requested that the National Rail Administration provide us with details of the schedule for measurement and checking of gradients etc. of sidings, on the basis of the new railway traffic regulations, the Swedish Rail Agency’s traffic regulations (JvSFS 2008:7). The results of this work will decide which provisions for preventing wagons rolling are to be applied to the various tracks. The activity also involves reaching joint agreement with the National Rail Administration as to how the information is to be made known to the railway undertakings in the short term.

Recommendation RJ 2008:04 R3

The Swedish Rail Agency is recommended to take steps to ensure that the National Rail Administration implements those decisions already adopted which are of importance for traffic safety, with particular focus on those decisions which affect other operators.

*Response from the Swedish Transport Agency (formerly the Swedish Rail Agency)*

The Swedish Transport Agency checks decision processes at the time licences are awarded and also checks that implementation of decisions is one of the items checked in the supervisory inspection. With regard to the National Rail Administration’s implementation of decisions in particular, there are certain specific supervisory measures that have not yet been taken, with other supervisory activities being prioritised instead. Nevertheless, as stated in the Swedish Transport Agency’s response of 29/06/2009, the Agency has taken measures in respect of the National Rail Administration’s measurements and checks of gradients etc. of sidings, as well as making this information known to the railway undertakings. This activity has a bearing on both R2 and R3.

Action taken

All recommendations made to the Swedish Transport Agency (formerly the Swedish Rail Agency), the National Rail Administration and the Swedish Road Administration have been dealt with.