

## **ANNUAL REPORT ON RAILWAY SAFETY**

**FOR THE YEAR 2008**

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## PART A – GENERAL INFORMATION

### A.1 Purpose and scope of the Report

This document has been prepared in accordance with Article 7 of Legislative Decree No 162 of 10 August 2007 ‘Implementing Directives 2004/49/EC and 2004/51/EC on safety on and the development of the Community’s railways’, which embodies Article 18 of Directive 2004/49/EC, as well as Provision No 13/2001 of the Infrastructure Manager. This describes the development over the course of the year 2008 of safety on the Italian railways, which consist of the national rail infrastructure the management of which is contracted out to be managed on a concession basis by Rete Ferroviaria Italiana SpA by Decree 138-T of 31 October 2000 of the Transport Ministry (the instrument of concession) and of the rail transport service operated over the infrastructure by railway undertakings holding a safety certificate.

As to the regional networks for which the application of Legislative Decree No 162/2007 is postponed for three years as laid down in Article 27(4) of the Decree itself, the Report sets out the safety indicators referred to at 1.1 and 1.2 of Annex 1 to said Legislative Decree No 162/2007, calculated from data collected by the Italian National Statistical Institute [*Istituto nazionale di statistica* – (ISTAT)].

### A2 – Summary in English

[the following passage down to the end of Part A is in English in the source text]

## PURPOSE AND SCOPE OF THE REPORT

The present report has been worked out in conformity to the Art. 7 of the Legislative Decree 18.08.2007 n. 162 ‘Implementation of the EU Dir. 2004.49/CE and 2004.51/CE’ applying the Art. 18 of the Dir. 2004.49 and in conformity to the Infrastructure Manager Provision n. 13/2001.

It describes the evolution of the safety of the railway Italian system under the NSA control, which consists of:

- the national railway infrastructure granted, for the exploitation, to Rete Ferroviaria Italiana S.p.A., by the Ministry of Transport Decree n. 138-T of 31/10/2000;
- the certified railway undertakings operating on the network managed by RFI.

The report structure has been written considering the ERA documents: ‘Template - Structure for the content of the NSA Annual safety Report’ (Version 14) and ‘Guidelines for the use of the template - structure for the content of the NSA Annual safety Report’ (Version 10). It is published on the Italian National Safety Authority website ([www.ansf.it](http://www.ansf.it)).

In June 2008 the Italian National Safety Authority starts its activity. Before this date, the tasks concerning safety had been carried out by RFI. The report takes into account the whole year.

## ORGANISATION

The Italian National Safety Authority is a non-economic Public Body belonging to the Public Administration, controlled by the Ministry of Infrastructure and Transports, and it is independent from the investigation body and from the railway operators.

Currently, the NSA is carrying out only the following tasks:

- the technical regulation;
- the technical admission of rolling stock;
- the safety certification of the railway undertakings;
- the audit and monitoring activity.

**EVOLUTION OF THE SAFETY CERTIFICATION AND AUTHORIZATION**

Until now neither safety certificates or safety authorisations have been delivered in conformity to the articles 10 and 11 of the Dir. 2004.49, as implemented by the Legisl. Decr. N. 162/2007. During 2008 the new Certificates and the extensions have been delivered according to the existing procedures, without the distinction in Part A and Part B. A new procedure for the delivering of the safety certificate parts A and B is in progress: a preliminary document is under discussion. As far the Safety Authorisation is concerned, the NSA has not yet assumed the concerning competencies.

**CONCLUSIONS, PRIORITIES, SAFETY RECOMMENDATIONS**

The NSA supervision on the railway system has pointed out a positive trend of the safety. The NSA confirmed, however, the 2007 targets, listed below:

- reduction of the technological and structural discontinuities inside the railway system and in the external interfaces;
- reduction of human factor errors;
- reduction of lacks in the infrastructure and rolling stock maintenance process.

An absolute priority has to be given to the completion of the equipping of the technological systems for ATP.

It is still necessary to make the safety management systems more effective, in particular improving the procedures for the design and the review phases and defining safety quantitative targets deriving from an accurate risk analysis.

About criticalities concerning infrastructure maintenance, it shall be controlled more effectively the modality of execution of the maintenance activity, in particular when carried out by contractors.

It has been found that the maintenance activities concerning rolling stock are not aligned with the foreseen periodicity. There are also difficulties to guarantee the traceability of the maintenance processes.

Another critical aspect concerns the worksites: the NSA has asked specific projects to improve the safety of the workers during the train operation.

The ‘accidents caused by rolling stock in motion’ analysis shows that the number of passengers falling from a train is still a relevant topic. In this field a significant number of projects has been adopted to mitigate connected risks, involving technological equipping of rolling stock, organizational aspects and press campaigns.

In 2008 there has been a further increase of the incidents connected to the transport of dangerous goods (load problems or defectiveness of the tanks). It is necessary to improve the control system on the processes involving this kind of transport.

Regarding the critical aspects of the start-up of the NSA, the priority shall be given to the reorganisation of the legislative framework.

An analysis on the railway safety trend can not leave out of consideration the accident occurred in Viareggio on 29 of June in the consciousness that the restrict number of accidents allows just to draw up a trend to be evaluated in the long term. The only activity that must be carried out constantly is the identification and the systematical removing of causes of accidents.

## Part B – INTRODUCTION

### *B.1 Introduction to the Report*

Until 15 June 2008 responsibility for activities in the area of railway safety lay with the Technical Directorate of RFI, continuing what had been the position the previous year.

From 16 June 2008 the ANSF, entering upon its operations, under Executive Decree No 2043 of 10 June 2008 of the Ministry of Infrastructure and Transport, took over only a part of the institutional tasks set by Legislative Decree No 162/2007 concerning the National Rail Infrastructure.

The present document has been drawn up on the basis of supervision of the Infrastructure Manager and Railway Undertakings carried out by the ANSF concerning:

- state of implementation and improvement of the Train Movements and Railway Operation Safety Management System,
- statistics on accidents and major incidents,
- safety inspection activities
- state of progress of the activities included in the Safety Plans.

The document, which is set out according to the guidelines given in the ‘Template – Structure for the content of the NSA Annual Safety Report’ (Version 14) and in the ‘Guidelines for the use of the Template - Structure for the content of the NSA Annual Safety Report’ (Version 10), issued by the European Railway Agency (ERA), is published on the ANSF website [www.ansf.it](http://www.ansf.it), and has been forwarded to the Ministry of Infrastructure and Transport and the European Railway Agency [itself].

#### *B.1.2 Definitions*

The following table sets out the definitions used in the document but which are not to be found in Legislative Decree No 162/2007.

<b>Term</b>	<b>Definition</b>
<i>IUR accident</i>	<p>Accidents are classed as ‘IUR’ [International Union of Railways], provided they appear in the statistics of that organisation, if they have had the following consequences:</p> <ol style="list-style-type: none"> <li>1. fatalities (persons killed immediately or dying within 30 days as a result of the accident) or serious injury (persons hospitalised for more than 24 hours), excluding suicides or attempted suicides. Deaths due to crime or to natural causes are also excluded;</li> <li>2. significant damage to rolling stock, infrastructure or installations (damage greater than or equal to EUR 150 000) or serious disruption to traffic (main line blocked for more than six hours, diversion or transfer of passengers).</li> </ol> <p>IUR accidents do not include incidents on stretches of line blocked to rail traffic.</p>
<i>typical accidents</i>	<p>The following IUR accidents are classified as ‘typical’ by the Italian State Railways:</p> <ul style="list-style-type: none"> <li>▪ collisions between rolling stock or between rolling stock and obstacles, excluding level-crossing accidents;</li> <li>▪ derailments (of trains, during shunting or of isolated locomotives);</li> <li>▪ level-crossing accidents involving collisions between rail and road vehicles at level crossings;</li> <li>▪ fires in rolling stock in service.</li> </ul>

<b>Term</b>	<b>Definition</b>
<i>non-typical accidents</i>	On the Italian State Railways non-typical accidents are defined as accidents to persons caused by rolling stock in motion. They include accidents which may occur to persons who: <ul style="list-style-type: none"> <li>▪ are taking part in shunting or coupling of vehicles;</li> <li>▪ are standing or walking on railway premises;</li> <li>▪ are hit by an obstacle or vehicle while being transported by a railway vehicle;</li> <li>▪ fall from a railway vehicle in motion;</li> <li>▪ are run down at a level crossing.</li> </ul>
<i>critical area</i>	Area within which action needs to be taken in order to achieve the macro-targets.
<i>macro-target</i>	State of the system which it is desired to achieve.
<i>target</i>	Detailed application of macro-target in a specific area of intervention (critical area or areas of intervention identified by the individual organisation). It may be set in qualitative or quantitative terms at various levels of detail.
<i>projects</i>	The activities planned in order to achieve the targets set.

## ***B.2 Information on the structure of the rail system***

### ***B.2.1 Network map***

The national rail infrastructure map in Annex A.1 is also available on the website [www.rfi.it](http://www.rfi.it) (in the '*Rete e territorio. La rete oggi*' section [Territory and projects: the network today]).

### ***B.2.2 Infrastructure manager***

Rete Ferroviaria Italiana S.p.A., of Piazza della Croce Rossa 1, 00161 Rome, Italy, is licensed to manage the national railway infrastructure, which is 16,529 kilometres in length. The main information concerning this network is set out in the table in Annex A.2. This information has been supplied by '*Rete Ferroviaria Italiana*' [Italian Rail Network] (hereinafter 'RFI') in its annual Safety Report for 2008.

### ***B.2.3 List of the Railway Undertakings***

Railway Undertakings holding Safety Certificates as at 31 December 2008, which are, therefore, licensed to provide freight or passengers services on the national infrastructure, are listed in Annex A.2.

The table gives the following information supplied by the Undertakings in their annual Safety Reports for 2008, forwarded to this Agency:

- details of the most recent safety certificate issued under Directive 2001/14/EC. It is to be noted that no safety certificates under Directive 2004/49/EC (parts (a) and (b)) were issued in 2008, hence the relevant column is omitted from the table;
- the date of commencement of trading;
- the types of service authorised;
- make-up of rolling stock used. As regards hauled freight stock, it should be noted that only the railway undertaking Trenitalia S.p.A. has stock registered in its own park. The

other certified undertakings carry freight using hauled stock which is registered to the parks of other railway undertakings;

- the make-up of the staff performing safety tasks;
- the make-up of the services (passenger and freight) provided, expressed in train-kilometres.

The following table 'Traffic in train-kilometres 2008' provides data on passenger and freight services provided by the railway undertakings operating over the national infrastructure in 2008.

This information, forwarded by each of the undertakings in its 2008 annual Safety Report, cannot be compared with the data for previous years, as those were calculated in relation to the railway undertaking which owned the time slot.

The table also shows the percentage of train-kilometres covered by Train Movement Protection Systems. In 2008 the percentage protected reached 78% of total traffic.



**Traffic in train-kilometres 2008**

		passenger	freight	% of total traffic		TOTALS	Automatic Train Protection (ATP)-equipped	% of train-kilometres equipped
TRENITALIA SPA	Passenger	273.860.000,00		80,74%	96,16 %	326.171.000,00	260.752.000,00	80%
	Freight		52.311.000,00	15,42%				
LeNord		581.406,00		0,17%		581.406,00	130.532,00	22%
Rail Traction Company			2.450.000,00	0,72%		2.450.000,00	0	0%
IMPRESA FERROVIARIA ITALIANA SPA (EX DFG)			231.389,94	0,07%		231.389,94	0	0%
SERFER - Servizi Ferroviari S.r.l.		29.750,00	790.824,00	0,24%		820.574,00	231.200,00	28%
HUPAC S.p.A.			55.000,00	0,02%		55.000,00	0	0%
Ferrovie Emilia Romagna S.r.l.		1.360.000,00		0,40%		1.360.000,00	502.000,00	37%
NORD CARGO			1.054.396,00	0,31%		1.054.396,00	93.915,00	9%
FERROVIA ADRIATICO SANGRITANA SRL		650.000,00	31.000,00	0,20%		681.000,00	520.000,00	76%
DB SCHENKER RAILION ITALIA SRL			528.836,00	0,16%		528.836,00	160.711,00	30%
SBB CARGO ITALIA			1.824.347,00	0,54%		1.824.347,00	191.324,00	10%
METROCAMPANIA NORD EST SRL		396.559,38		0,12%		396.559,38	2.133,30	1%
SAD		270.000,00		0,08%		270.000,00	94.000,00	35%
SNCF FRET ITALIA			367.838,00	0,11%		367.838,00	0	0%
RAILONE			13.965,00	0,00%		13.965,00	6.689,00	48%
Ferrovie Udine Cividale s.r.l.			27.080,00	0,01%		27.080,00	0	0%
Crossrail Italia srl			54.786,00	0,02%		54.786,00	0	0%
Veolia Cargo Italia srl			3.000,00	0,00%		3.000,00	0	0%
Ferrovie del Gargano srl		43.320,00		0,01%		43.320,00	0	0%
RFI				0,20%		680.955,58 (*)	0	0%
Sistemi Territoriali SpA			226.000,00	0,07%		226.000,00	0	0%
Trasporto Ferroviario Toscano S.p.A.			83.172,00	0,02%		83.172,00	0	0%
Ferrovia Centrale Umbra srl		756.095,64		0,22%		756.095,64	75.800,00	10%
Torinese Trasporti SpA Group		332.000,00		0,10%		332.000,00	240.000,00	72%
FERROVIA LINEA SRL			188.000,00	0,06%		188.000,00	81.000,00	43%
TOTAL		278.279.131,02	60.240.633,94			339.200.720,54	263.081.304,30	78%

(\*) train-kilometres effected carried out by diagnostic trains, special journeys etc., hence appearing only in the total.

The programme to equip rolling stock with train movement protection on-board sub-systems continued in the course of 2008. Progress made at 31 December 2008 in equipping stock is shown for each undertaking in the following table.

<b>Railway undertaking</b>	<b>stock equipped</b>	<b>total stock</b>	<b>% of stock equipped out of total stock</b>
Trenitalia S.p.A.	3426	4573	75%
LeNord S.r.l.	14	60	23%
Rail Traction Company S.p.A.	0	38	0%
GTT S.p.A.	10	20	50%
SERFER – Servizi Ferroviari s.r.l.	0	4	0%
Hupac S.p.A.	0	3	0%
Ferrovia Emilia-Romagna S.r.l.	16	104	15%
Trasporto Ferroviario Toscano S.p.A.	4	6	67%
NordCargo S.r.l.	3	21	14%
Ferrovia Adriatico Sangritana S.p.A.	4	14	29%
Sistemi Territoriali S.p.A.	6	23	26%
DB Schenker Rail Italia S.r.l. (ex Railion)	3	10	30%
SBB Cargo Italia S.r.l.	10	43	23%
Azienda Consorziale Trasporti ACT	0	0	0%
Metrocampania Nord Est S.r.l.	2	30	7%
Ferrovia Centrale Umbra S.r.l.	4	44	9%
Rail One S.p.A.	1	1	100%
ATC S.p.A.	0	0	0%
SNCF Fret Italia S.r.l.	0	20	0%
SAD - Trasporto Locale S.p.A.	20	20	100%
Ferrovie Udine Cividale S.r.l.	0	5	0%
Linea Ferroviaria S.p.A.	3	5	60%
Fertramviaria S.p.A.	0	0	0%
Ferrovie del Gargano S.r.l.	0	12	0%
Crossrail Italia S.r.l.	0	3	0%
Veolia Cargo Italia S.r.l.	0	2	0%
<b>TOTAL</b>	<b>3526</b>	<b>5061</b>	<b>70%</b>

In view of the impossibility of equipping all rolling stock by the intended date of 30 June 2009, in order to avoid halting rail traffic, Directive 1/Dir/2009 of 3 June was issued, following the indications given by the Minister for Infrastructure and Transport, permitting movements of stock not yet equipped, provided the stock is included in equipment programmes deemed consistent and subject to adoption of certain traffic-reducing measures.

The following table sets out for each railway undertaking data on the number of certificates issued to staff carrying out safety functions (driving, crewing, checking and train make-up) in 2008. The data have been supplied directly by the undertakings in the Annual Safety Report for 2008.

Railway undertaking	Staff performing each safety task (at 31 December 2008)					% of all qualified staff
	Train drivers	Staff accompany -ing trains	Checking	Train make-up	Total certification s	
Trenitalia S.p.A.	19402	9005	1762	7640	37809	<b>91,18%</b>
LeNord S.r.l.	284	245	9	5	543	<b>1,31%</b>
Rail Traction Company S.p.A.	124	146	22	22	314	<b>0,76%</b>
Torinese Trasporti S.p.A. Group	58	35	2	15	110	<b>0,27%</b>
SERFER – Servizi Ferroviari s.r.l.	106	60	117	68	351	<b>0,85%</b>
Hupac S.p.A.	31	3	19	40	93	<b>0,22%</b>
Ferrovia Emilia-Romagna S.r.l.	197	224	42	224	687	<b>1,66%</b>
Trasporto Ferroviario Toscano S.p.A.	16	8	2	6	32	<b>0,08%</b>
Nord Cargo S.r.l.	87	0	25	22	134	<b>0,32%</b>
Ferrovia Adriatico Sangritana S.p.A.	35	44	9	11	99	<b>0,24%</b>
Sistemi Territoriali S.p.A.	38	32	1	8	79	<b>0,19%</b>
DB Schenker Rail Italia S.r.l.	54	0	25	26	105	<b>0,25%</b>
SBB Cargo Italia S.r.l.	113	28	82	240	463	<b>1,12%</b>
MetroCampania Nord Est S.r.l.	44	32	0	4	80	<b>0,19%</b>
Ferrovia Centrale Umbra S.r.l.	46	41	0	0	87	<b>0,21%</b>
RailOne S.p.A.	9	4	4	9	26	<b>0,06%</b>
SNCF Fret Italia S.r.l.	60	9	50	60	179	<b>0,43%</b>
SAD – Trasporto Locale S.p.A.	47	46	0	0	93	<b>0,22%</b>
Ferrovie Udine Cividale S.r.l.	5	9	1	15	30	<b>0,07%</b>
Linea Ferroviaria S.r.l.	16	0	5	9	30	<b>0,07%</b>
Ferrottramviaria S.p.A.	4	4	3	4	15	<b>0,04%</b>
Ferrovie del Gargano S.r.l.	19	19	0	0	38	<b>0,09%</b>
Crossrail Italia S.r.l.	16	12	9	17	54	<b>0,13%</b>
Veolia Cargo Italia S.r.l.	6	0	3	5	14	<b>0,03%</b>
<b>TOTALS</b>	<b>20817</b>	<b>10006</b>	<b>2192</b>	<b>8450</b>	<b>41465</b>	

The columns showing train drivers, staff accompanying trains, checking and train make-up give the number of staff holding the relevant certifications, while the number given in the totals column represents the number of the staff performing safety tasks and not the sum of those engaged in each of the activities. This is because any one individual may be qualified for more than one safety task.

By comparing the data on staff for the year under review with the data for 2007, an overall increase in numbers performing safety tasks is noted.

### ***B.3 Summary and analysis of the general trend in railway safety***

The year 2008 has confirmed a falling trend in traffic volumes handled by the national infrastructure amounting to a drop of around 1% compared to 2007. Consequently some of the accident rate indicators provided for in Annex 1 to Directive 49/04/EC, such as numbers of train derailments and other accidents, though they remain constant in terms of actual numbers, represent an increase over the two-year period 2007-2008 in relation to the volume of traffic, revealing a marked lack of variation in certain values within given traffic thresholds.

The indicators most used in the Italian rail system to represent the multi-annual accident rate trend are based on the classification established by the International Union of Railways (IUR - *Union Internationale des Chemins de Fer - UIC*).

This data is analysed both as a whole and broken down as between 'typical' and 'non-typical' accidents. This breakdown arises from the need to focus the analysis on typical accidents most directly influenced by activities inherent in railway safety management, dealing separately with the problems related to the – more numerous – non-typical accidents, which are largely a function of infringements of rules on safety and railway policing by travellers or persons outside the rail service.

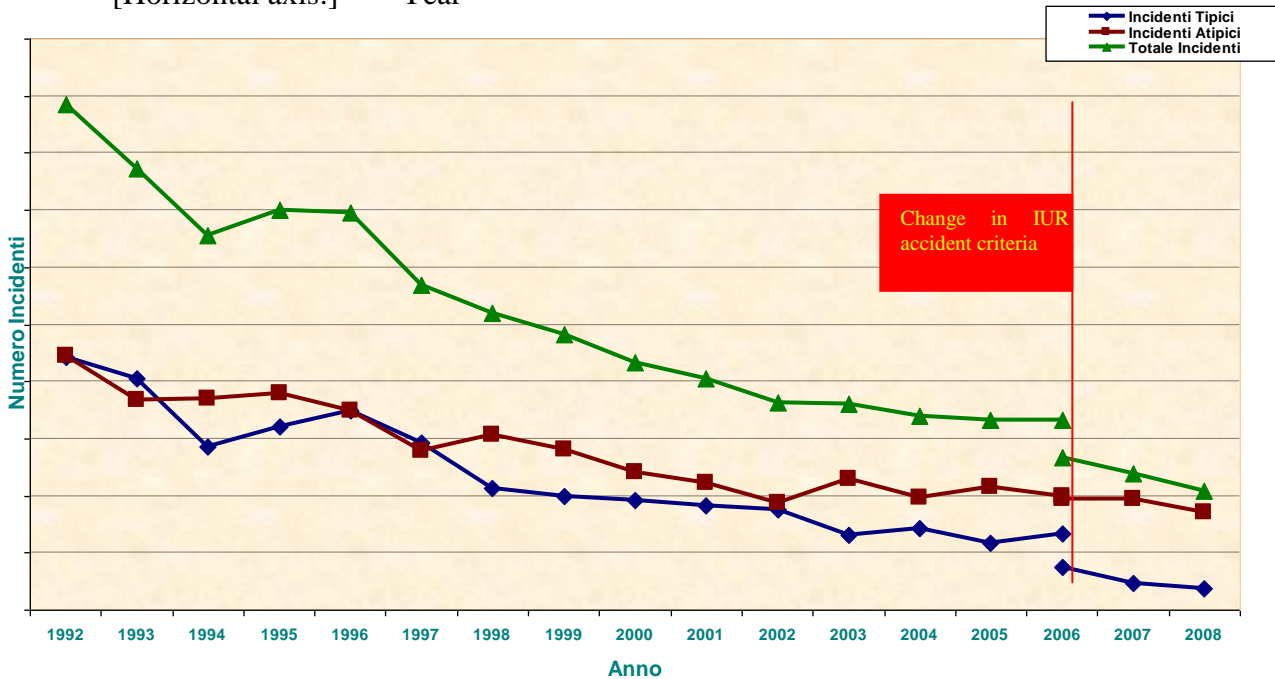
Diagram B.3.1 shows trends in the number of accidents over the period 1992-2008. The split in the curves of the graph at the year 2006, for which two values are given, is the result of the IUR raising (from €10,000 to €150,000) the cost of damage above which the accident must be reported to the IUR itself, and a change in the way serious injury is identified.

[Key at top right:]

accidents  
accidents

[Horizontal axis:]      Year

**Diagram B.3.1 'Trend in accidents over the period 1992-2008'**



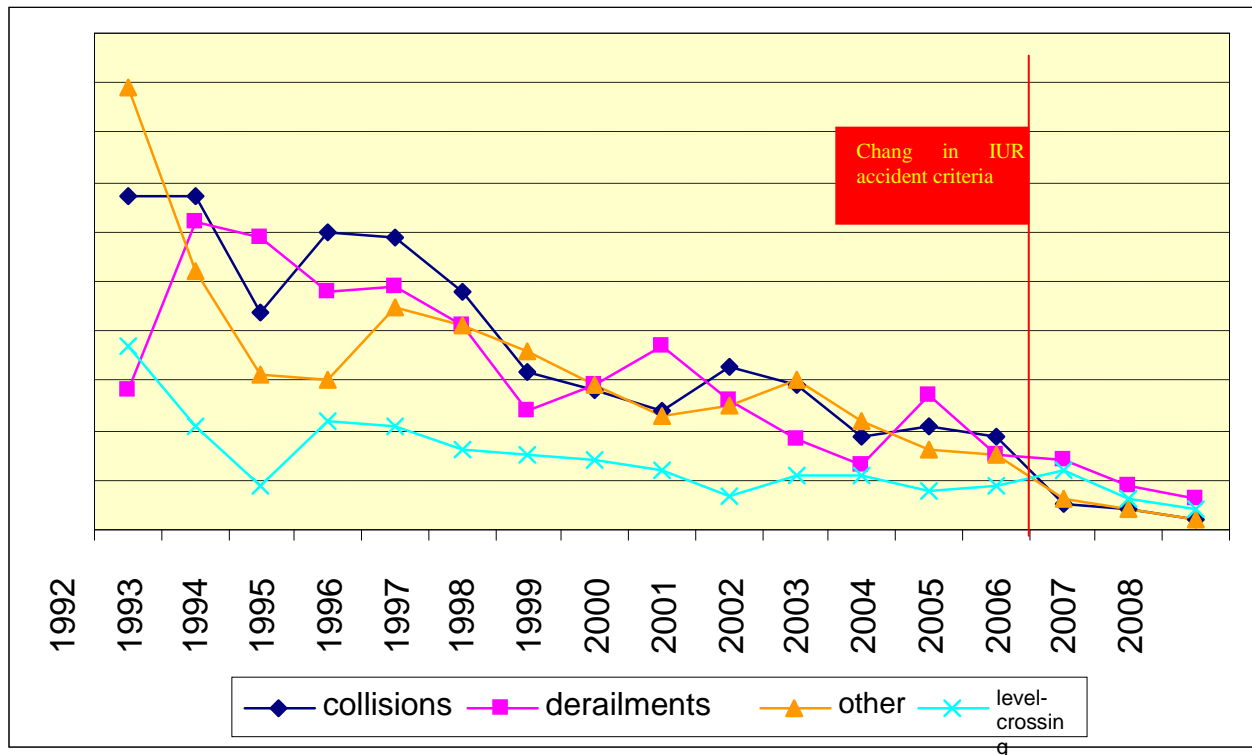
The change in the definition of serious injury has had only a marginal effect on accident trends, as is shown by the fact that non-typical accidents, which by their nature cause little damage to property, have been almost unaffected by the alteration to the reference thresholds. It actually appears more difficult to compare data for typical accidents, especially in view of the reference minimum for quantifying damage and loss being [now] fifteen times greater than previously.

Notwithstanding the foregoing, an analysis of trends based on the data gathered suggests a tendency towards reduction in accidents over the period under review.

For a detailed analysis of the individual components of the accident rate one need only refer to diagram B.3.2, showing separately the incidence of collisions, derailments, level-crossing accidents and other accidents.

The itemised analysis of the different types of accident confirms a clear falling trend in accident numbers over the period under review.

**Diagram B.3.2 ‘Trend in different types of accident over the period 1992-2008’**



## PART C – ORGANISATION

The National Rail Safety Agency, being independent of the Investigation body, the rail operators and, in particular, the National infrastructure Manager *Rete Ferroviaria Italiana SpA (RFI)*, is a non economic public agency within the State Government supervised by the Ministry of Infrastructure and Transport. At full complement it will be able to have a maximum of 300 staff.

The tasks of the Agency as laid own by Legislative Decree No 162/2007, which is the Decree actually setting up the Agency, are, briefly:

- to act as technical regulator;
- to approve system and sub-system technologies;
- safety certification of the railway operators;
- to check that the rules are being correctly applied.

Legislative Decree No 162/2007 provided, in the wake of the granting of managerial and financial independence to the Agency, for a system of ‘initial application’, through appropriate Agreements with the Agency itself, ‘Gruppo FS (Ferrovie dello Stato)’ [State Railways Group] and the Ministry of Infrastructure and Transport, for use of staff and logistic support. This is in order to enable transfer of railway safety tasks from staff already dealing in part with the safety of train movements and of railway operation (by RFI, the State Railways Group in general and the Ministry) to the Agency.

Consequently, on 21 May 2008 a Convention was signed between the Agency, the State Railways Group and the Ministry of Infrastructure and Transport whereby pursuant to Minute

No 1 of 6 June 2009 implementing the Convention, ratified by Decree No 2043, 10 June 2008, of the Ministry of Infrastructure and Transport, the Agency on 16 June 2008 commenced operations with around 100 staff brought in largely from the State Railways Group (especially RFI), and to a minimal extent – a few individuals – from the Ministry of Infrastructure and Transport.

Up to 16 June 2008 the basis of the Italian rail system so far as safety is concerned remained unchanged from that set out in the 2007 annual Safety Report.

By the aforesaid Minute No 1 and the corresponding ratification document the Agency has so far taken over only part of the tasks laid down by Legislative Decree No 162/2007, mainly as regards:

- issue of technical rules;
- safety certification of railway undertakings;
- technical approval of rolling stock;
- activity on checking correct application of rules,

and solely within the limits of the RFI network.

In a bid to take over the remaining safety tasks, concerning mainly the ground systems, and to increase the Agency's inspection powers, an enquiry was launched within the State Railways Group ('Gruppo FS') to identify staff with the necessary qualifications.

The Agency's operating rules (which take the form of a Presidential Decree) concerning the Statute, the organisation and the management of the accounts, referred to in Article 4(6) of Legislative Decree No 162/2007, were published in Official Journal No 92 of 21 April 2009 (S.O. No 56/L). The fourth and final regulation, which will also take the form of a Presidential Decree, concerning recruiting, is currently being drawn up.

In the initial application phase, restricted to the tasks taken over under 'Minute No 1', the Agency by Service Order No 1 of 3 October 2008 provided itself with a provisional organisation of activities based on an administrative sector and five technical sectors, viz.:

- administration, legal affairs and finance;
- monitoring, databases and institutional relations;
- operating instructions;
- technical standards;
- authorisation and certification;
- inspection and controls.

The way the Agency is organised at present is shown in the diagram set out in Annex B.1.

The figure in Annex B.2 sets out the scheme of interaction between those involved in the safety of the rail system.

The Investigation body became operational pursuant to Ministerial Decree No 62T of 4 March 2008.

## **PART D – DEVELOPMENT OF RAILWAY SAFETY**

### ***D.1 Initiatives to maintain and improve safety performance***

In the course of 2008 steps were taken to mitigate the following problems:

1. Passengers falling from trains in motion;
2. Protection of train movements;

3. Worksites;
4. Infrastructure upkeep (AUDIT);
5. Division of High-speed Electric Trains (ETR)
6. Rupture of ETR 4xx [*Pendolino*] transmission shaft.

Some steps, such as action on protection of train movements and on passengers falling from trains in motion, are a continuation of activities set in hand in previous years. The other provisions derive from the activities of incident analysis and audit.

The following describes in detail the improvements adopted to address the problems mentioned above.

#### Passengers falling from trains in motion

With regard to accidents due to passengers falling from trains in motion, notwithstanding that these are very much a result of improper behaviour on the part of the passengers, Provision No 30, 18 July 2007, of the Infrastructure Manager obliged the railway undertakings to draw up a plan to bring the doors of passenger cars up to the requirements in force. In particular, Trenitalia has set in hand many initiatives to deal with the problems around the risk of passengers falling from the car access doors, including, in parallel with the programmes to bring rolling stock up to standard technically, specific organisational action, such as:

- passenger information campaigns:
  - printing and distributing at stations brochures for passengers, and erecting safety advice notices;
  - announcements at stations and on board trains;
  - posting messages on the electronic variable-text indicators on stations;
  - awareness campaigns in the 'free press';
- warnings printed on transparencies affixed to carriage doors;
- ad hoc training actions for train crews;
- specific operational instructions to staff accompanying the trains;
- periodic customer satisfaction interview campaigns with passengers, in order to assess the effectiveness of the information provided;
- printing appropriate warnings on rail tickets, placing on-screen messages on the self-service ticket machines at stations as well as on the on-line ticket purchase Internet portal.

A further feature introduced has been the temporary locking of doors, a system whereby the doors are locked shut for 3 minutes from the time when the guard switches them closed. This system is to be installed on medium- and long-distance passenger stock, for which the door locking will take place whenever the train speed exceeds 5 kilometres per hour, in order for the locking to be effective up to the point where the tachometric locking device comes into play. Installation is scheduled for completion at the end of 2009.

The provisions adopted have been communicated to the European Railway Agency (ERA), to find out the position in the other countries and set in hand co-ordinated activities necessary in order to curb the problem.

#### Protection of train movements

Fitting of drivers' cabs with the train movement protection system progressed in 2008. At 31 December, according to the railway undertakings' statements, 70% of vehicles had been fitted.

Again according to the statements made by the railway undertakings, the percentage of protected traffic came to 78% of total traffic.



### Worksites

RFI set up a working group with the task of developing organically a study of possible actions and measures aimed at improving safety in the management, protection and supervision of sites where work takes place in the presence of rail traffic and in the movement and operation of wagons and rail-borne works equipment. This study, which is not yet completed, should in particular reveal:

- possibilities for amending or supplementing the regulations;
- speedier progress towards full acceptance of the integrated Safety Management System for all relevant processes and structures;
- improving the effectiveness of staff training;
- suggestions of new technologies to protect movements of works equipment and to link the clearance of signals to verification that access to the works area is free

The Agency has requested RFI while awaiting completion of the programme in question to adopt appropriate organisational provisions, including protection of sections where a site is in operation, by making the sending on of trains subject to ascertaining that the track section is actually free.

### Infrastructure upkeep

The Agency has requested RFI to pursue verification at national level concerning the implementation of technical specifications and provisions on the use and upkeep of long welded rails and to check the efficacy of the system to monitor the tension in the track in relation to the times of the year when substantial variations in temperature occur. More effective monitoring of the condition of the track temperature gauges is also sought, in order to ensure that they are actually available for use. Based on these indications, RFI has announced that it has set in hand a specific training programme on the subject of the effect of heat on the track and supplementary monitoring in this field to ascertain whether the relevant technical specifications are being observed. In addition, RFI has stated that a phase of the audit procedure will be devoted specifically to documentary checks and observance of technical specifications where the effect of heat on track is concerned.

### High-speed Electric Trains dividing

During 2008 there were two instances of ETR 500 high-speed electric passenger trains (travelling empty) dividing (see following Table D.1.1). This occurred as a result of the on-board sub-system in the driver's cabs at the head and the rear of the train functioning simultaneously. Provisions have therefore been issued to prevent repetition of such incidents. Also, maintenance plans have been updated to include non-destructive testing of the tightening screws and defining their useful life.

### Rupture of ETR 4XX [*Pendolino*] transmission shaft.

In 2008 there were a number of incidents involving ETR 4XX transmission shafts. Appropriate on-board diagnostic measures have therefore been adopted with the intention, in the event of these being activated, of allowing suitable safety procedures to be adopted. Based on these results, action to monitor motors in operation has been undertaken, replacing those falling outside the scores laid down.

Table D.1.1 provides a list of the principal accidents and incidents which led to the adoption of safety measures to prevent and mitigate the risks associated with them. The 'Safety measures provided for' column gives the specific provisions adopted for each accident or a reference to the section which explains them more fully.

<b>Table D.1.1 Safety measures arising from analysis of accidents or incidents</b>			
<b>Place and Date</b>	<b>Particulars</b>	<b>Main causes</b>	<b>Safety measures provided for</b>
Vipiteno 21 June 2008	Train derailment	Defect in thermal condition of track	See Section D.1 – Infrastructure upkeep
Milan Martesana 14 July 2008 22 July 2008	Division of empty Eurostar stock	Coincidence of tractive effort applied by the head locomotive and its sudden interruption owing to application of the rear locomotive emergency brake. This occurred because after the change of interlock board the pneumatic plate of the rear cab STB-SSBAV remained inserted.	See Section D.1 - ‘High-speed Electric Trains Dividing’
Potenza Central 8 August 2008	Collision between shunted stock on a connecting track	Incorrect execution of shunting manoeuvre	Action to ensure correct management of activities between operators, specific training to prevent non-compliance resulting from habitual behaviours.
Motta S. Anastasia 01 September 2008	Operatives run down	Worksite inadequately protected	Protection of worksites and monitoring specifically of the activities of the competent area organisations.
Fasano 24 September 2008	Passengers falling from rolling stock in motion	Improper descent from train in motion	See section D.1 - ‘Passengers falling from trains in motion’
Florence Castello 13 November 2008	Train derailment	Defective track	See section D.1 – ‘Infrastructure upkeep’
Palagiano Bellavista 9 December 2008	Collision between wagons on blocked track	Inadequate programming of activities to be carried out, incorrect make-up of train causing the collision (track profiling vehicle hauling a support wagon not fitted with brake), non-compliant testing of braking action of the train itself and failure to keep watch by sight on movement within the blocked stretch	Training of site operatives responsible for train driving and make-up
Falconara Bufera 11 December 2008	Train derailment	Freak weather conditions	See remark in section D.1 concerning ‘Hydro-geological impairment’ and in section D.3 concerning ‘Land slips and landslides on railway lines’

It is intended in 2009 to examine in greater depth the problem of hydro-geological impairment (see also section D.3 below).

In the context of completing the fitting of systems for the protection of the movement of trains, particular attention is to be given to the problem of protecting movements in shunting operations, which in this regard constitute a risk factor for railway operation (see also section D.3 below).

## ***D.2 Detailed analysis of the progress of common safety indicators***

The table in Annex C.1 sets out the data regarding the *Common Safety Indicators* (CSI) provided for in Directive 2004/49/EC for 2008.

This paragraph analyses only those accidents which took place on the National Railway Infrastructure managed by RFI, reported in Annex C.2.

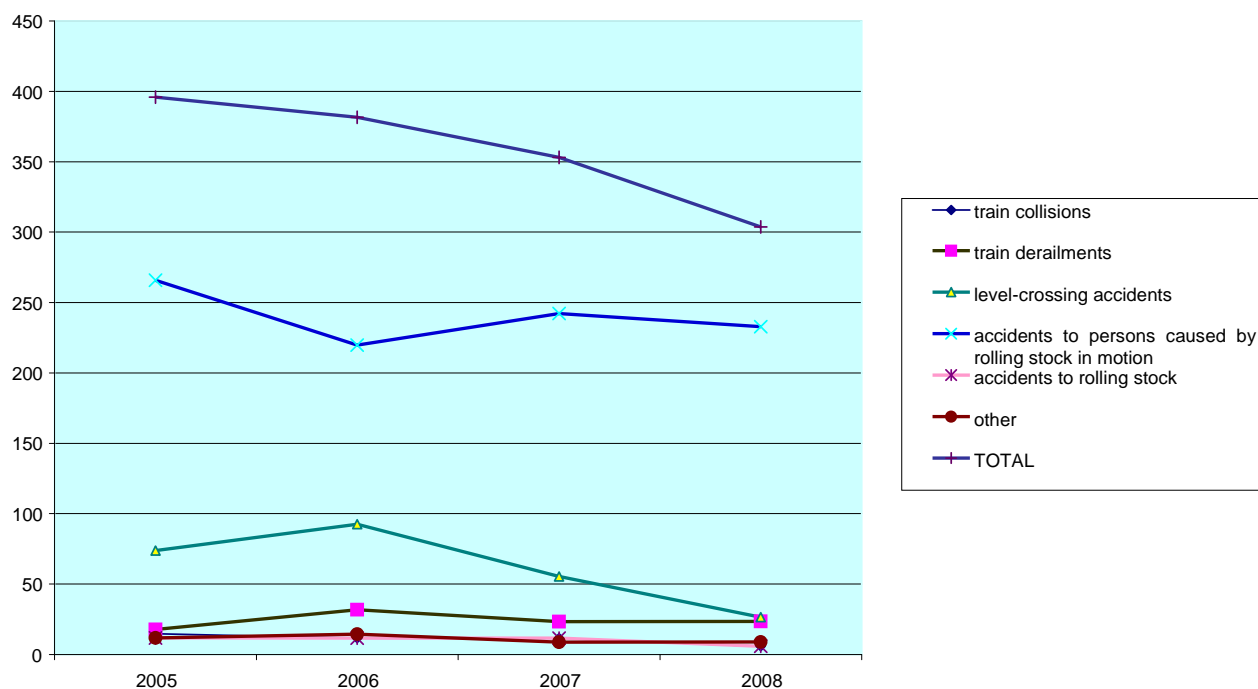
The following two tables D.2.1 and D.2.3 and figure D.2.2 represent the accident trend used to work out the Common Safety Indicators over the period 2005-2008.

The data set out differ slightly from those given during the hearings following the Viareggio accident insofar as the official version of the events is provided together with the annual reports of the Infrastructure Manager and the Railway Undertakings (i.e. by 30 June according to Legislative Decree No 162/2007, Article 13(4)), and this is followed by a match check by the Agency. Completion of this analysis has made it possible to consolidate the data, permitting better classification of the events in line with the indications given in Annex 1 to Legislative Decree No 162/2007 and Directive 2004/49/EC.

Table D.2.1 and the figure reveal the trend in accident numbers over the 2005-2008 period.

<b>Table D.2.1 Trend in accidents over the 2005-2008 period</b>								
	<b>2005</b>		<b>2006</b>		<b>2007</b>		<b>2008</b>	
	<b>n.</b>	<b>per billion (10<sup>9</sup>) train kilometres</b>	<b>n.</b>	<b>per billion (10<sup>9</sup>) train kilometres</b>	<b>n.</b>	<b>per billion (10<sup>9</sup>) train kilometres</b>	<b>n.</b>	<b>per billion (10<sup>9</sup>) train kilometres</b>
<b>ACCIDENTS</b>								
<b>Train collisions</b>	<b>5</b>	<b>14.771</b>	<b>4</b>	<b>11.564</b>	<b>4</b>	<b>11.672</b>	<b>2</b>	<b>5.896</b>
Trains colliding with obstructions	3	8.862	3	8.673	4	11.672	2	5.896
Collisions between trains	2	5.908	1	2.89	0	0	0	0.000
<b>Train derailments</b>	<b>6</b>	<b>17.725</b>	<b>11</b>	<b>31.802</b>	<b>8</b>	<b>23.344</b>	<b>8</b>	<b>23.585</b>
<b>Level-crossing accidents</b>	<b>25</b>	<b>73.853</b>	<b>32</b>	<b>92.515</b>	<b>19</b>	<b>55.441</b>	<b>9</b>	<b>26.533</b>
<b>Accidents to persons caused by rolling stock in motion</b>	<b>90</b>	<b>265.87</b>	<b>76</b>	<b>219.723</b>	<b>83</b>	<b>242.191</b>	<b>79</b>	<b>232.900</b>
Accidents to rolling stock	4	11.816	4	11.564	4	11.672	2	5.896
<b>Other</b>	<b>4</b>	<b>11.816</b>	<b>5</b>	<b>14.45</b>	<b>3</b>	<b>8.754</b>	<b>3</b>	<b>8.844</b>
<b>TOTAL</b>	<b>134</b>	<b>395.851</b>	<b>132</b>	<b>381.625</b>	<b>121</b>	<b>353.073</b>	<b>103</b>	<b>303.655</b>

**Figure D.2.2 Trend in accidents over the 2005-2008 period in billions (10<sup>9</sup>) of train kilometres**



**Table D.2.3. Trend of outcomes for persons of accidents over the period 2005-2008 (fatalities + injured)**

	2005				2006				2007				2008				2005-2008 average			
	Passengers	STAFF	Outsiders	Total	Passengers	STAFF	Outsiders	Total	Passengers	STAFF	Outsiders	Total	Passengers	STAFF	Outsiders	Total	Passengers	STAFF	Outsiders	Total
Train collisions	53	4	1	58	0	2	0	2	0	1	1	2	0	0	1	1	13	1.8	0.8	16
Train derailments	17	5	0	22	0	0	0	0	0	0	0	0	0	0	0	0	4.3	1.3	0	5.5
Level-crossing accidents	0	0	23	23	0	0	31	31	0	0	18	18	0	0	8	8	0	0	20	20
Accidents to persons caused by rolling stock in motion	18	6	68	92	19	8	53	80	14	5	64	83	9	9	65	83	15	7	63	85
Accidents to rolling stock	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0.3
Other	0	6	0	6	0	4	0	4	0	1	0	1	0	0	0	0	0	2.8	0	2.8
TOTAL	88	22	92	202	19	14	84	117	14	7	83	104	9	9	74	92	33	13	83	129

Table D.2.3 shows the combined trend in fatalities and injured occurring over the period under review. The categories of the EUROSTAT statistics were applied in making the classification of persons injured and fatalities as a result of accidents.

Notwithstanding that 2008 generally saw a sharply falling trend in accident rates, attention to certain of the problems described below remains at a high level.

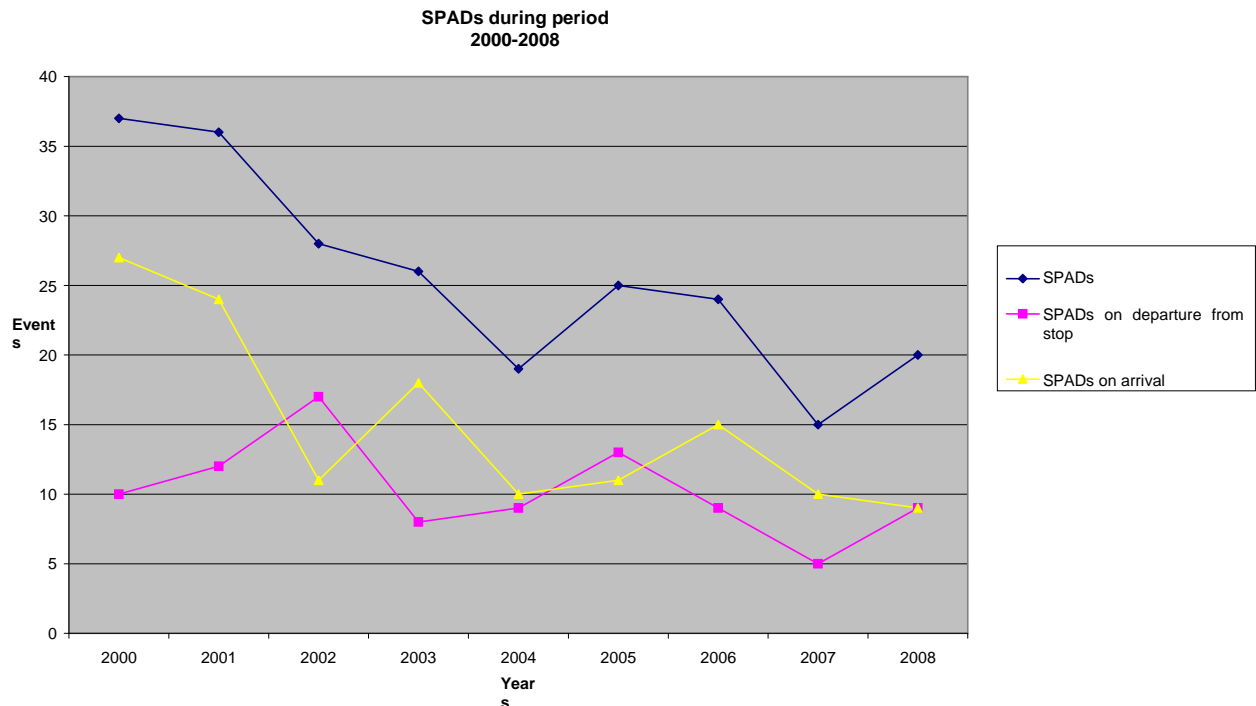
Analysing the ‘accidents to persons caused by stock in motion’, for which there are outcomes to passengers, shows the need for action over the problem of passengers falling from trains in motion. The details of such action are covered in the foregoing section D.1.

Action continues in order to stem the problem of unauthorised crossing of rail lines, which, as was mentioned in the 2007 Report, needs to be tackled by setting a long-term target.

As to level-crossing accidents, which decreased in 2008 in terms both of number and of death and injury to persons, the programme to eliminate them completely continued.

The statistic which needs to be monitored most closely is that of accidents to railway staff or the staff of firms operating on behalf of the railway undertakings. Analysing the accidents which have taken place reveals that they are not due to a lack of specific rules, but to incomplete implementation of the existing rules. The first step which needs to be taken involves developing awareness on the part of the operatives of the importance of systematically adopting behaviours essential to ensure their (own) safety. As to the matter of the protection of worksites, reference should be made to section D1.

With regard to SPADs (signals passed at danger by train) the following graph shows the instances which occurred over the period 2000-2008.



Key to graph above (list at right): blue: SPADs; magenta: SPADs on departure from stop; yellow: SPADs on arrival.

Year	SPADs	Departure from stop	In course of travel	other
2000	37	10	27	-
2001	36	12	24	-
2002	28	17	11	-
2003	26	8	18	-
2004	19	9	10	-
2005	25	13	11	-
2006	24	9	15	-
2007	15	5	10	-
2008	20	9	9	2

An analysis of the graph establishes that, while 2008 saw an increase in the number of events over 2007, the trend of SPADs during the period observed was in decline, since 2007 was a year when the value was particularly low. This was because of efforts made over the entire system to equip the rail network and the stock moving on it with train movement protection systems, as well as care dedicated to staff training.

During 2008 there were no major accidents resulting from trains improperly passing signals barring the route ahead

On the basis of analyses carried out on the SPADs problem, these have been divided into two categories, viz. those occurring on 'departure from stop' and 'in course of travel'. SPADs on 'departure from stop' are chiefly a function of the interrelation between train drivers and staff accompanying the trains. SPADs 'in course of travel', on the other hand, occur on arriving at or passing through stations, and, on the basis of the outcomes of such incidents occurring during the period under review, are the greater cause for concern.

In 2008 the value of SPADs 'in course of travel' declined, (to ½ of that for 2003 and 1/3 of the value in the year 2000), along with that of the outcomes, i.e. damage and loss to property and persons. The effect of progress in installing ground and on-board equipment to protect the movement of trains is clear.

The definition put together by the Common Safety Indicators working group was applied for the first time in 2008. As a result, two SPADs involving incorrect entering of a station by a train approaching from the track on the right were recorded.

The particulars relating to the Common Safety Indicators are set out in Annex C.1.

### ***D.3 Outcomes of the recommendations of the Investigation body***

The recommendations drawn up by the Italian NIB [National Investigation Body] are aligned to the provisions which the Agency adopted after analysing the various incidents. The measures adopted in consequence are described below, divided up according to the type of incident.

Accident which took place between Mileto and Rosarno on 8 March 2005 (collision between works vehicles on section closed to traffic)

See what has already been said in section D.1 regarding protection of worksites.

SPAD on Palermo Central - Punta Raisi line, 13 August 2008

See section D.1 regarding protection of train movements.

Accidents at Ancona on 3 June 2008 (collision with train of stock being shunted) and Livorno Central on 14 December 2008 (shunting collision)

In line with indications received from the Investigation body, this Agency has requested RFI to [ensure that] transfers of rolling stock fitted with systems to protect train movements European Train Control System/Train Movement Control System/Train Driving Support System [ETCS/TMCS/TDSS] from station tracks to depots (locomotive sheds, works etc.), should take place with the protection active.

Currently being assessed are further provisions, such as:

- Shunting carried out in confined areas, so that shunting operations are independent of train movements;
- Extending ground and on-board train movement protection systems to trains in motion for shunting operations.

Land slips and landslides on rail lines

Following the accident which took place on 11 December 2008, RFI has been requested to communicate its programme to identify and monitor those points on its own infrastructure affected by hydro-geological instability, as well as action undertaken to minimise the repercussions of such incidents on railway safety.

In addition to the indications furnished by RFI, the Agency has called for the list of individual points (of which there are 1,100) included in the *In.Rete.2000* information system, the entire programme of mitigating actions, including those focusing on weather, and for this activity to form part of the annual safety plan.

Accident at Potenza on 8 August 2008 (Collision between shunted stock on a connecting track)

Based on conclusions reached in its own enquiry along with the Agency's note No 02653/08 of 19 December 2008, this Agency requested Trenitalia and RFI to monitor more effectively the organisational procedures most influencing the causes of the accident, in particular those involving contact between different operators.

As to the other accidents for which the Investigation body has pursued enquiries, the Agency noted substantial agreement between the conclusions reached with what had been established by RFI's own enquiries. It was therefore felt sufficient for the Infrastructure Manager and the railway undertakings to assess directly whether it would be expedient to take further measures over and above the provisions adopted independently.

**PART E – IMPORTANT CHANGES IN LEGISLATION AND REGULATION**

The main changes to the frame of reference for safety of train movements and railway operation in 2008 are set out in Annex D.

That table gives for each rule:

- the grounds,
- the title,
- the date of entry into force,
- whether it is new or updated existing legislation,
- a brief description.

The table gives a number of provisions and instructions issued in 2007 and brought into effect in 2008, which were not indicated in the 2007 Report.

The entire legislative framework is available on [www.ansf.it](http://www.ansf.it) in the section 'Rules on safety and interoperability' and on [www.rfi.it](http://www.rfi.it) in the section 'Legislative framework'.

European-level legislation issued in 2008 which has particularly impacted Italian national legislation has been:

- ✓ Directive 2008/57/EC of 17 June 2008 on the interoperability of the rail system within the Community, which has not yet been transposed into Italian law. The main innovations are:
  - the introduction of national registers of vehicles according to common specific criteria adopted by the European Commission on the basis of proposals drawn up by ERA, which are as yet still at the 'ad hoc' working group stage;
  - obligation on the part of registration holders to communicate data on rolling stock to the national safety authorities;
  - obligation on the part of each Member State to update national registration lists for as long as the lists of the different Member States are not combined;
  - publishing and updating national infrastructure registers according to common specific criteria adopted by the European Commission on the basis of proposals drawn up by ERA, which are as yet still at the 'ad hoc' working group stage;
  - repeal of Article 14 of Directive 2004/49 and new, far more specific and detailed chapters on 'placing into service of various types of rolling stock' (TSI, non-TSI etc.);
- ✓ Directive 2008/68/EC of 24 September 2008 on the inland transport of dangerous goods, which has not yet been transposed into Italian law. The principal innovations relate to:
  - repeal of Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail, and Directive 94/55/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road, intended to set up a common system covering all aspects of internal carriage of dangerous goods with a single directive including provisions applicable to the transport of goods by internal waterway;
- ✓ Directive 2008/110 of 16 December 2008, not yet transposed into Italian legislation, amending Directive 2004/49. The principal innovations are:
  - the definition of 'holder' of a railway vehicle and 'person responsible for maintaining a vehicle', registered as such with the RIN (Italian National Network);
  - safety certification in evidence of the acceptance of measures adopted by the railway undertaking to meet requirements necessary specifically for providing its services in safe conditions on the network in question;
  - introduction of a new article on the maintenance of rolling stock, especially freight wagons;
- ✓ decisions 231, 232, 284 and 386 on technical specifications for interoperability at high speed;
- ✓ Regulation 2008/1335/EC of 16 December 2008 amending Regulation (EC) No 881/2004 establishing a European Railway Agency.

The principal legislative acts introduced nationally in 2008 were:

- ✓ Legislative Decree No 81 of 9 April 2008 implementing Article 1 of Law No 123 of 3 August 2007 adjusting and reforming the provisions in force on the health and safety of workers in the workplace, by re-ordering and co-ordinating these in a single legislative text;



- ✓ Provision No 178/CSR (Standing Conference of the State, Regions and Autonomous Provinces) of 18 September 2008 introducing 'Procedures to ascertain for health purposes non-dependence on toxic substances or on the taking of narcotic drugs or psychotropic substances by workers performing functions subject to particular risks for security, safety and the health of others';
- ✓ Ministerial Directive No 81/T of 19 March 2008 issued by the Ministry of Transport concerning action in the technological field on the regional networks, completion of the installation of the on-board subsystems of the railway undertakings operating on the network managed by RFI, and access to stations common to networks managed by RFI and regional networks;
- ✓ the Ministerial Directive of 19 March 2008 issued by the Ministry of Transport 'Transposing Commission Directive No 2006/90/EC of 3 November 2006 adapting for the seventh time to technical progress Council Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail';
- ✓ Executive Decree 0001838/23 May 2008-D.G.4 – Div.5 of the Ministry of Infrastructure and Transport, concerning the approval of amendments to the Regulations on train traffic and the Regulations on signals for operating the high-capacity / high-speed Rome-Naples and Turin-Novara lines;
- ✓ Executive Decree No 2043 of 10 June 2008 approving the transfer of tasks in the field of rail transport safety indicated in Minute 1 of 6 June 2008 implementing the 21 May Agreement between the Transport Ministry with the National Railway Safety Agency and FS SpA [State Railways] pursuant to Article 4(8) of Legislative Decree No 162 of 10 August 2007.

Legislative activity in the field of safety was until 15 June 2008 in the hands of the Infrastructure Manager as a result of the concessionary powers for railway services attributed to him by the deed of concession referred to in Ministerial Decree No 138 T of 31 October 2000, Ministerial Provision No 247/VIG.3 of 22 May 2000 and Legislative Decree No 188 of 8 July 2003. From 16 June 2008, pursuant to Executive Decree No 2043 of 10 June 2008 issued by the Ministry of Infrastructure and Transport, the National Railway Safety Agency gradually took over part of the institutional tasks laid down by Legislative Decree No 162/2007. Consequently for the period from June to December 2008 legislative activity was in the hands of both the Infrastructure Manager and the Agency.

The principal legislative acts were the following:

- ✓ Instruction 643 of 13 February 2008 'Simultaneous convergent arrival movements (Article 4/15 of the RCT and the corresponding Article 21/3 of the IPCL): Clarification';
- ✓ Provision No 7/08 of 12 March 2008 'Governing shunting services provided by the Infrastructure Manager';
- ✓ Instruction 1188 of 17 March 2008 'Amending and supplementing Instruction RFI-DTC\A0010\P\2006\0003227 of 6 December 2006 on the subject of 'Specific conditions and rules on the movement of single-manned freight trains';
- ✓ Provision No 8/2008 of 4 April 2008 introducing Volume II of the 'Rules on the Movement of Rolling Stock', entitled 'Rules on the Use of Technical Equipment';
- ✓ Provision No 14/08 of 2 May 2008 laying down 'Operational Guidelines for Safety Certification on high-speed / high-capacity lines';
- ✓ Instruction 2057 of 15 May 2008 concerning the 'Obligation to install an exclusion device (E-VIG)';

- ✓ Provision No 19/08 of 20 June 2008 on 'Testing of type 'D' brake from the leading driver's cab, using appropriate on-board equipment';
- ✓ Directive No 1/2008 of 30 June 2008 of the National Railway Safety Agency on the procedures for utilising the warning device;
- ✓ National Railway Safety Agency note No 00660/08 of 11 August 2008 on 'Targets and critical areas in the field of railway safety for the year 2009';
- ✓ Provision No 32/2008 of 10 November 2008 on 'Speed on the arrival and departure itineraries at terminal and through stations and on stretches of railway line [equipped] with BAcc ['Blocco automatico a correnti codificati'] (*automatic block system with codified currents*) and 3-aspect signalling';
- ✓ National Railway Safety Agency Decree No 1/2008 of 10 December 2008 amending the regulations as necessary for putting into service the Milan – Bologna high-speed stretch equipped with ERTMS/ETCS Level 2 [European Rail Traffic Management System / European Train Control System] without fixed light signals;
- ✓ Instruction 5258 of 13 December 2008 laying down 'Restrictions on power-collecting pantographs at Milan Central, Bologna Central, Florence Santa Maria Novella, Venice Santa Lucia, Rome 'Termini' and Naples Central stations'.

The Agency is currently examining all the measures in force, i.e. legislative texts, provisions, instructions and mandatory circulars, concerning the operating standards for rail traffic, issued up to 16 June 2008, and is re-ordering the legislative framework in connection with this.

The Agency's legislative activities include:

- ✓ analysing the rules governing the operation of high-capacity / high-speed lines equipped with ERTMS/ETCS Level 2 without fixed light signals and the consequent issue of Decree No 1/2008;
- ✓ issue of reference criteria for granting derogations, on the part of the RFI Infrastructure Manager, regarding:
  - visibility of fixed signals
  - installation of advance and starter signals on tall departure indicators positioned ahead of the departure signals,
  - reduced distance between fixed signals,
  - use of red light above the route blocked warning signals at an unusually reduced distance (double yellow),
  - erection of category one signals in stations;
- ✓ issue to the Infrastructure Manager RFI of authorisations to introduce amendments to the regulations in order to start up operation of installations;
- ✓ issue of recommendations to the Infrastructure Manager RFI on ensuring safety at worksites;
- ✓ issue of indications and recommendations to the Railway Undertakings regarding:
  - speeding up the processes of installing train movement protection systems,
  - improving maintenance procedures,
  - reducing risks to passengers on boarding and leaving trains,
  - drawing up wagon loading plans for freight.
- ✓ drawing up a Technical Specification to define the maximum performance of traction units;
- ✓ laying down national technical standards to be applied to 'matters pending' and 'specific cases' of the TSI high-speed rolling stock in response to the request of the

- Ministry of Transport pursuant to the European Commission's notification to the Member States as to TSIs relating to high-speed rolling stock;
- ✓ monitoring implementation of the Programmes for the installation by Railway Undertakings of TMCS/TDSS on-board sub-systems, provided for by Ministry of Transport Directive No 81/T of 19 March 2008 – Information Note to the Ministry of Transport;
  - ✓ setting procedures to reorganise and simplify the procedures inherent in the processes of approval of systems of protection and train movement monitoring, holding relevant meetings with the Railway Undertakings and the Independent Safety Inspectors;
  - ✓ activity preparatory to drawing up Technical Standards for works equipment moving solely on rails.

With regard to implementation of Directive 49/2004/EC, transposed by Legislative Decree No 162 of 10 August 2007 'Implementing Directives 2004/49/EC and 2004/51/EC on the safety and development of the Community's railways', the organisation of the National Railway Safety Agency is nearing completion to take up all the tasks envisaged (as described in Chapter C). Furthermore, 2008 saw the start-up of the activities of the Investigation body, charged with carrying out the enquiries in the event of an accident.

As to the aspects relating to safety certification of Railway Undertakings, a new procedure is being developed to issue part (a) and part (b) certificates. A preliminary document has already been issued and is under discussion.

With regard to the Safety Authorisation issued to the managers, the Agency has not yet taken up the necessary powers, even where RFI is concerned. Application of Legislative Decree No 162/2007 to the regional networks pursuant to Article 27 of that same Decree, has been put back 3 years.

## **PART F – DEVELOPMENT OF SAFETY CERTIFICATION AND SAFETY AUTHORISATION**

### ***F.1 National legislation – commencement dates – availability***

So far no safety certificates or safety authorisations pursuant to Articles 10 and 11 of Directive 2004/49/EC, transposed by Legislative Decree No 162/2007, have been issued. In the course of 2008 the tasks in connection with issuing Safety Certificates were transferred from RFI to the National Railway Safety Agency. In 2008 the new Certificates and certificate extensions were issued under the old procedure, hence without being divided into parts (a) and (b).

### ***F.2 Quantitative and qualitative data on the Italian rail system***

The position regarding the issue of Safety Certificates to the Railway Undertakings up to 31 December 2008 is set out below. By that date there were 27 Railway Undertakings certificated on the national rail infrastructure.

In the course of 2008 the following were issued:

- 3 new Safety Certificates (one by RFI, No 119/2008 on 7 March 2008 to Crossrail Italia srl, and two by the Agency, No 1/2008 on 31 July 2008 to Veolia Cargo Italia srl and No 11/2008 on 30 October 2008 to Ferrovie del Gargano srl);
- 26 extensions (of which 11 by RFI and 15 by the Agency).

In the course of 2008 the following Safety Certificates were revoked:

- Azienda Trasporti Collettivi e Mobilità SpA on 6 November 2008 in respect of passenger services;
- Impresa Ferroviaria Italiana SpA on 24 October 2008 in respect of freight services.

In contrast to the stable position as regards new Certificates issued, the extensions have shown a steady increase. This is explained mainly by the fact that the Railway Undertakings have tended to apply for Certificates only for lines or stretches of line over which they have already planned out a particular service, so that their Certificates cover only a limited geographical area. Hence, each time there is an opportunity to acquire a new service, they apply for an extension of the lines certificated.

In order to build up a general picture of the Railway Undertakings' position vis-à-vis safety certification, Annex E sets out the following information:

- Undertakings holding a licence;
- Undertakings holding a safety certificate. The document shows:
  - the types of service provided,
  - the safety certificates held;
- undertakings which have applied for a safety certificate;
- undertakings which have applied for an extension to a safety certificate.

### ***F.3 Procedural aspects***

In 2008 the certificates and extensions were issued according to the existing procedures, hence without the division into parts (a) and (b). Safety authorisations were not issued. Consequently this paragraph has not been completed.

## **PART G – SUPERVISION OF THE INFRASTRUCTURE MANAGER AND RAILWAY UNDERTAKINGS**

### ***G.1 Description of the activities of supervising the railway undertakings and the infrastructure manager***

Supervision of the activities of RFI and the Railway Undertakings, carried out up to 15 June 2008 by the Infrastructure Manager and subsequently by the National Railway Safety Agency and intended so far as the Railway Undertakings are concerned to ensure that the conditions which led to the issue of the safety certificate are maintained, is structured as follows:

- analysing accident rate data and direct enquiry into cases of accidents considered most significant from the point of view of safety;
- auditing the RFI's and Railway Undertakings' Safety Management System and related processes;
- analysing the RFI's and Railway Undertakings' annual reports;
- analysing the results of all the Agency's activities vis-à-vis RFI and the Railway Undertakings.

Inspection of the Railway Undertakings, already carried out by the Infrastructure Manager, is performed by the Agency in the context of audit activity, as described in the following paragraph, and through supervision of the internal audits which the railway operators carry out according to their own safety management systems. For instance, in 2008 a total of 2618 internal audits were carried out by RFI and Railway Undertakings.

In 2008 safety certificates were issued according to the old procedures, without the division into parts (a) and (b). Safety authorisations were not issued.

Consequently, this Chapter does not mention claims from the Infrastructure Managers against Railway Undertakings regarding the conditions in parts (a) and (b) of the Certificate. Similarly, there no claims were reported from Railway Undertakings against Infrastructure Managers concerning the authorisation conditions.

#### ***G.1.1 Audits carried out in 2008***

Audits were carried out pursuant to Provisions 13/2001 and 17/2001 of the Infrastructure Manager, with the aim of assessing:

- progress made in adopting the Safety Management System by the Infrastructure Manager and Railway Undertakings;
- compliance with legislation in force of the Safety Management System adopted;
- implementation of principal national provisions on operational safety;
- whether the organisation is adequate and internal checks are effective.

The 2008 audit was carried out:

1. through inspections at the executive and operational headquarters of the Infrastructure Manager and Railway Undertakings, involving direct verification of processes and operational effectiveness of staff, examination of registers and inspections of infrastructure and rolling stock;
2. analysing the documentation of the safety management system in the Agency's hands, by comparing it with the relevant principal rules and guidelines in force.

**57** actions were accomplished, viz.:

- **4** audits of the Infrastructure Manager's structures:
  - 1 of infrastructure upkeep,

- 2 of train traffic management,
- 1 of the safety management system;
- **12** audits of the upkeep structures of Trenitalia (including 10 specifically regarding the upkeep of doors);
- **15** audits of other Railway Undertakings;
  - 7 within their executive and operational headquarters,
  - 8 on the safety management system documentation held by the Agency;
- **26** *[sic]* follow-up actions, involving checking the implementation of corrective measures adopted in order to eliminate non-compliance brought to light during previous audits:
  - 1 of the RFI upkeep structures,
  - 22 at local offices of Trenitalia;
  - 2 of other Railway Undertakings.

**Audits carried out in 2008 (structures visited and commencement dates)**

<b>AUDIT OF INFRASTRUCTURE MANAGER RFI</b>		
Departmental offices – Infrastructure	Florence	14 January
Departmental offices – Movements	Turin	25 February
	Rome	4 March
Head offices (SIGS [ <i>‘Sistema integrato della gestione della sicurezza’ – Integrated safety management system</i> ])	Rome	8 September
<b>AUDIT OF RAILWAY UNDERTAKING TRENITALIA</b>		
NATIONAL / INTERNATIONAL PASSENGER DIVISION – National / international ongoing maintenance		
IMC ETR [ ETR - <i>elettrotreno rapido - high-speed electric train</i> Ongoing Maintenance Workshop] Milan		19 February
IMC Carriages, Milan (doors)		15 October
Maintenance of ETR500 high-speed train, Rome (doors)		28 October
IMC Carriages, Bari (doors)		10 November
IMC Carriages, Palermo (doors)		3 December
IMC Locomotives, Mestre (doors)		17 December
REGIONAL PASSENGER DIVISION		
OMV[OM = Maintenance Workshop; V = wagons] Foggia (doors)		10 November
IMC Florence Osmannoro (doors)		18 November
OMR [Rolling Stock Maint. Workshop] Catania (doors)		2 December
IMC Naples Central (doors)		10 December
IMC Padua (doors)		16 December
TECHNICAL HEADQUARTERS AND INDUSTRIAL PROCUREMENT – High-speed electric train and light railcar life cycle		
OMC ETR [Maintenance Workshop for ETR carriages] Bologna		22 January
<b>AUDIT OF OTHER RAILWAY UNDERTAKINGS</b>		
Impresa Ferroviaria Italiana		31 March
Rail Traction Company		26 May
SBB Cargo Italia		16 May
Sangritana		4 August
Linea		15 September
Metrocampania Nord Est		22 September
SNCF Fret Italia		7 October
<b>AUDIT OF SAFETY MANAGEMENT SYSTEM DOCUMENTATION (OTHER RAILWAY UNDERTAKINGS)</b>		

Ferrovie Centrali Umbre	14 March
Rail Traction Company	30 April
SBB Cargo Italia	8 May
Rail One	26 May
Impresa Ferroviaria Italiana	13 June
Ferrovie Emilia Romagna	11 November
Railion (now DB Schenker)	3 December
Ferrovie Udine Cividale	22 December

**Follow-up pursued in 2008**

<b>FOLLOW UP OF INFRASTRUCTURE MANAGER RFI</b>	
Departmental Office – Infrastructure – (Rome)	21 April
<b>FOLLOW UP OF RAILWAY UNDERTAKING TRENITALIA</b>	
<b>NATIONAL / INTERNATIONAL PASSENGER DIVISION</b>	
National / international production	
National / international production, Lombardy	7 April
National / international production, Basilicata / Calabria	13 May
National / international production, Liguria	21 May
Marche / Abruzzo / Molise production	23 July
Emilia Romagna production	2 September
Lazio Umbria production	26 November
National / international ongoing maintenance	
IMC Carriages, Milan	18 March
IMC Locomotives, Milan	9 April
IMC ETR, Naples	29 April
IMC Carriages, Reggio Calabria	14 May
IMC Carriages, Rome	26 August
IMC ETR500, Milan, Florence	14 October
IMC ETR400, Rome	24 November
<b>REGIONAL PASSENGER DIVISION</b>	
Abruzzo Regional Office	29 January
Bolzano Regional Office	5 February
<b>CARGO DIVISION</b>	
Venice / Verona Area	26 March
<b>TECNICAL AND INDUSTRIAL PROCUREMENT OFFICE</b>	
High-speed electric train and light railcar lifecycle	
OMC Light Railcars, Foggia	12 February
IMC Carriages, Florence Osmannoro	21 July
OMC Carriages, Voghera	21 October
OMC ETR, Vicenza	23 October
OMC ETR, Bologna	4 November
OMC Locomotives, Rimini	6 November
<b>OTHER RAILWAY UNDERTAKINGS FOLLOWED UP</b>	
Impresa Ferroviaria Italiana	9 July



Railion (now DB Schenker)	16 April
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Encounters after following up were not always positive. In those instances it became necessary for those in charge of the organisations audited to take on additional duties and take further action to resolve ongoing difficulties.

The table below summarises the percentages as to the outcomes of the follow-ups.

Structures followed up in 2008		% non compliances brought to an end
RFI	Departmental Offices - Infrastructure	57 %
Trenitalia	National / International Passenger Divisione Passeggeri N/I	73 %
	Regional Passenger Division	
	Cargo Division	
	Technical Management and Industrial Procurement and Office	
Follow-up actions subsequent to the first (2 of Trenitalia and 1 of other railway undertakings)		81% *
*This figure excludes one railway undertaking whose safety certificate was revoked in the course of the year.		

### ***G.1.2 Investigations by the National Railway Safety Agency***

Pursuant to Legislative Decree No 162/2007 and Article 5.3.1 of Decree No 1/2009 of 6 April 2009, the National Railway Safety Agency carries out investigations, when it considers this is necessary, to acquire data in good time for the purpose of identifying the causes of what has taken place, in order to adopt any immediate rules or technical measures which might contribute to avoiding a repetition of such events.

The investigations pursued in 2008 are set out in the following table.

N°	Date	Location	Particulars
1	13 June 2008	Roccella Jonica	Fire on electric locomotive forming part of IC 750 train
2	21 June 2008	Vipiteno	Train 43812 derailment
4	12 July 2008	Genoa Brignole	Train 1621 derailment
5	14 July 2008	Milan Martesana	Dividing of train 9427
6	22 July 2008	Milan Martesana	Dividing of train 9452
7	08 Aug 2008	Potenza Central	Derailment of multiple-unit train during shunting
8	01 Sept 2008	Motta S. Anastasia	Fatal running down of two RFI operatives by train 3832
9	24 Sept 2008	Fasano	Fatal running down of female traveller while leaving train 9753
10	13 Nov 2008	Florence Castello	Train 55595 derailment
11	09 Dec 2008	Palagiano - Bellavista	Collision between two mechanised worksites wagons during interruption of operations
12	11 Dec 2008	Falconara - Butera	Train 8715 derailment
13	14 Dec 2008	Livorno Central	Collision between two empty wagons during shunting

With regard to the incident at Potenza Central, the Agency considered it appropriate, in view of its magnitude, to conduct its own enquiry, even though the accident occurred in an area which, according to Article 2(4)(c) of Legislative Decree 162/07, falls outside the Agency's jurisdiction.

The main conclusions of the investigations are given in sections D.1 and D.3.

### ***G.1.3 Follow-ups on major aspects by the National Railway Safety Agency in the course of its supervisory activities***

Action arising from the recommendations following supervisory activity on the part of the Agency have been constantly monitored and re-assessed by the Agency itself. For the most important aspects specific critical areas have been defined and these need to be matched by action which the Infrastructure Manager and the Railway Undertakings will have to include in their safety plans.

Following are the principal critical areas flowing from the supervisory activities:

1. To introduce procedures for 'Safety planning and re-examination by safety analyses and assessments' (compare Provision 13/01), setting out clearly the arrangements, instruments and techniques adopted to define the scale and function of the service and relevant modifications;
2. Relevance of projects contained in the Safety Plans to quantitative targets and their traceable connection with risk analyses carried out in conformity with rules in force (Provision 13/01, EN Standard 50126);
3. To introduce Training and Qualification Refresher Programmes for staff performing safety tasks, particularly works staff, support staff from other establishments and operatives from third-party undertakings, taking into account all the proactive and reactive checking and control tasks of the Safety Management System, e.g. risk analysis, operational monitoring, feed-back and audit;
4. Assigning to third parties activities connected with operational safety following sound assessment of the safety performance to be guaranteed at the stages of preparing and providing the service, through risk analysis, allocating responsibilities, monitoring standards and quality control of the tasks assigned;
5. Ongoing and effective monitoring of the procedures for carrying out maintenance work at units which are important for safety purposes, in particular those assigned to third parties – as well as the contractual peculiarities governing them – along with their implications for the legality and safety of the railway operation;
6. Correct implementation of processes for starting up new plant and modifying existing plant;
7. Observance of time periods laid down, monitoring of deadlines and traceability of rolling stock maintenance procedures;
8. To adopt specific projects to ensure safety at active worksites, especially where rail traffic is present;
9. Reducing interference with railway safety from instances of hydro-geological disturbance;
10. Mitigating risks related to crossing the railway track, both at level crossings and at hot spots for improper crossing by persons outside the rail service;
11. Implementing specific projects and analysing both the causes of passenger trains dividing and other aspects of maintaining rolling stock in good working order.

12. Traceability and validity of the approval of rolling stock in service with particular reference to stock approved outside the safety procedures in force;
13. Adopting a system for control of the processes involved in the carriage of dangerous goods (internal procedures, supplier audits etc.);
14. Active management of all procedures of the legislative framework (e.g. fitting ground and on-board sub-systems with TMCS and TDSS , rail operation on high-speed lines) with particular reference to identifying and managing new critical areas.

More detailed aspects are pursued by the Agency in the context of its specific activities.

Further specific action to improve implementation of safety management systems is in hand, including:

- Introduction of the qualification of Person in Charge of Safety Management Systems (introduced by the ANSF Decree No 1/2009);
- Guidelines on issuing part (a) and part (b) Safety Certificates;
- Periodic meetings with Railway Undertakings on particular matters relating to retention of a safety certification.

## ***G.2 Annual safety reports by the infrastructure operator and the rail undertakings***

With the aim of harmonising the data and information which the Railway Undertakings and the Infrastructure Manager are required to provide, as well as ensuring that uniform criteria are applied to the measurement and assessment of safety management systems, the Agency drew up and on 17 June 2009 issued the Guidelines on compiling annual safety reports.

By virtue of these Guidelines the Agency - apart from grounds set out in Article 13 of Legislative Decree No 162/2007 - introduced various specific elements of concern to itself. With a view to facilitating presentation of the report and calculation of the indicators, the Agency has added a requirement to compile certain specific tables.

Since the report for the year 2008 was drawn up using the guidelines, nearly all the reports reached the Agency after the 30 June submission deadline laid down by Legislative Decree No 162/2007.

Even though all the undertakings provided the required tables, not every one of them gave a summary report commenting on the data set out in the tables themselves.

Examination of the documents submitted by RFI and the Railway Undertakings has revealed the following.

### Data on the procedures for achieving internal safety targets and results obtained from the safety plans

The Railway Undertakings and RFI were asked to describe in an appropriate section of the Annual Report dealing with achievement of the targets and the results of the Safety Plans the process of safety planning, and to set out in a table a list of activities and projects brought on in 2008, correlating these with the areas of critical concern which they were intended to affect, both those identified by the organisation putting them forward on the basis of their own analyses, and those of the railway system, formulated by the Infrastructure Manager for the 2008 safety plans.

For each critical area the safety indicators taken as reference for identifying and measuring the area, there were to be stated the starting value of the indicators and the quantitative targets

defined for improving the critical area and a verification of the efficacy of the action under the plan in relation to how far the targets had been met.

Also to be provided for each activity or project were a final statement of the stage reached in implementation as at 31 December 2008 and particulars of the reasons for any deviation from plan.

Checking the data has revealed that the projects have generally adhered to the critical areas defined for the year 2008 by the Infrastructure Manager. Only in a few cases have the organisations putting forward the safety plans defined critical areas for themselves.

As to the indicators for identifying and measuring the critical areas, in some instances these are missing or else not particularly effective, while others have been incorrectly provided as indicators of the state of implementation of the planned actions. These cases make unreliable the resulting definition of the measurable improvement targets and the case-by-case verification of the extent to which those targets have been achieved, as well as the Agency's assessment of the effectiveness of the actions and the resources provided.

The requested final statement of the stage reached in implementing the projects and actions planned in 2008 and of the reasons for any deviation from plan was by and large provided in accordance with the guidelines issued.

The process of defining the indicators of the critical areas and using these to measure the effectiveness of the actions planned and improve the performance of the safety management system is an aspect calling for improvements in method.

#### National safety indicators and Common Safety Indicators (CSI)

The safety indicators introduced by Provision No 13/2001 of the Infrastructure Manager were adopted as the national safety indicators required under Article 13(4)(b) of Legislative Decree 162/07, which make up the minimum set of indicators for internal use in the safety management systems.

With the guidelines for drafting the Annual Report on safety the Infrastructure Manager and the Railway Undertakings, by producing these indicators, were requested to provide an overview of safety performance, enabling the result achieved in the year in question to be assessed by comparison with parallel previous periods or, in the alternative, with a predetermined reference value.

The response of the Railway Undertakings has been to the point. All in all, it can be said that the national safety indicators have not thrown up any problems further to those identified from the other instruments for supervising the activities of the Railway Undertakings and the Infrastructure Manager. Analysing the data reveals the need to act on harmonising the procedures for preparing the indicators on the part of the Railway Undertakings and, in general, to review the set of indicators to ensure that gains from maturing experience are properly taken into account.

As regards gathering data necessary for working out the Common Safety Indicators, it is to be noted that:

- the costs sustained by the Railway Undertakings for accidents remained in large measure undeclared;
- not all the Railway Undertakings concerned stated their hours worked and hours lost through accidents;
- there are difficulties in accounting for the data referred to contract service providers.

### Results of internal audits

As required by the procedures of the Safety Management System, the Infrastructure Manager and Railway Undertakings carried out internal audits on the operational and organisational aspects affecting the safety of operations.

In general, the accounts given by the Reports were highly summarised.

From the data on the number of audits planned or carried out, it is noteworthy that resources allocated to the internal audits have not always been sufficient for the organisations being checked.

Furthermore, it would appear that these checks need to be made more penetrating - the amount of non-compliance noted was very small.

In a few cases the non-compliances noted were not matters of rail traffic safety.

### Remarks on deficiencies in and malfunctioning of railway operations

No remarks were made concerning deficiencies and malfunctioning noted in the operation of the railways and infrastructure management which would apply to the entire rail system in general. Observations concentrated on the outcomes of internal monitoring and control activities.

From analysing the data communicated, it is evident that some operators have identified instances of non-compliance in detail, while others have confined themselves to giving an overall indication without delving into detailed analysis.

Generally, it can be said that auditing is the control instrument which has been the most indicative. Only in a small number of cases have results flowed from monitoring the safety indicators and from the other possible instruments.

Finally, as regards corrective action to eliminate or reduce the abovementioned non-compliance, it should be pointed out that only a small number of operators have properly fitted such action to the projects in the safety plan.

## **PART H – REPORT ON THE APPLICATION OF COMMON SAFETY METHODS TO RISK IDENTIFICATION AND ASSESSMENT**

Regarding application of the methods of risk identification and assessment (risk management), the principal references at present in force in Italy are:

- Provision No 13/2001, 26 June 2001, of the Infrastructure Manager, laying down ‘Requirements governing the adoption by the Railway Undertakings and Infrastructure Division of a Safety Management System’;
- Provision No 15/2004, 19 April 2004, ‘Amending Provision No 13/2001, 26 June 2001, of the Infrastructure Manager’;
- Provision No 51/2007, 12 November 2007, of the Infrastructure Manager, ‘Amending Provision No 13/2001, 26 June 2001, of the Infrastructure Manager’;
- Provision No 32/2002, 12 November 2002, of the Infrastructure Manager, ‘Applying the CENELEC standards for the sector to the development of electronic safety products and systems for railway signalling’;
- Provision No 52/2007, 12 November 2007, of the Infrastructure Manager, ‘Amending Provision No 32/2002, 12 November 2002, of the Manager of the National Rail Infrastructure’;
- RFI Procedure TC PR IS 00 011 B of 25 October 2007 on the Methodology for risk analysis to be applied in the development and implementation of railway signalling systems;
- Provision No 60/2007, 17 December 2007, of the Infrastructure Manager, ‘Implementing the Ministerial Decree of 28 October 2005 of the Ministry of Infrastructure and Transport laying down safety standards for railway tunnels’;
- Ministerial Decree of 28 October 2005 of the Ministry of Infrastructure and Transport laying down safety standards for railway tunnels;
- ICE Standard EN 50126 on railway, tramway, trolley car and metro applications. The specification and demonstration of reliability, availability, maintainability and safety (RAMS).

Although not entirely in line with the requirements of Regulation 352/2009 on risk evaluation and assessment, risk identification and assessment, the application of risk analysis methods is mandatory in the following situations:

1. development and substantial modification of electronic safety products and systems for railway signalling;
2. construction of railway tunnels which, notwithstanding the Ministerial Decree of 28 October 2005, call for Extended Risk Analysis to ensure that the ‘safety objectives’ in Annex III to that Ministerial Decree are met;
3. risk analysis and assessment of the processes of train movements and railway operation which are relevant to the safety management system of a Railway Undertaking and the Infrastructure Manager.

As regards point 1, the interoperable innovative electronic systems, such as the ground-based ERTMS/ETCS subsystem in use on the high-capacity / high-speed Bologna to Milan line, have undergone structured risk analysis as laid down in the rules referred to above.

With regard to point 2, the new tunnels which have entered service have undergone structured risk analysis in the cases and in the manner provided for in the aforesaid Ministerial Decree of 28 October 2005. These analyses have been developed by a qualified

person external to the Infrastructure Manager and validated by the Ministerial Board on the Safety of Tunnels.

The tunnels of the national rail network for which the Decree requires an Extended Risk Analysis to be carried out are those which have the following features:

- tunnels of a length between 1,000 and 9,000 metres not fitted to the minimum requirements mentioned in Annex II to the MINISTERIAL DECREE and not having the following parameters:
  - length not exceeding 2 km,
  - traffic volume not exceeding 220 trains per day,
  - type of traffic such that passenger trains and trains carrying dangerous goods are not present in the tunnel simultaneously,
  - course free of inversions of gradient,
  - absence of specific area risks at the approaches to the tunnel mouths;
- tunnels more than 9,000 metres long;
- tunnels in which either the presence simultaneously of trains carrying dangerous goods and passenger trains or else specific area risks at the approaches to the tunnel mouths cannot be excluded;
- in all cases where it cannot be demonstrated that the measures applied are adequate.

As to point 3, the Railway Undertakings and the Infrastructure Manager are required to demonstrate in the context of their own safety management systems that for each risk identified the risk acceptance criteria laid down in the rules are met.

The safety management systems of the operators indicate the approach taken towards risk analysis, but the documentation flowing from the application of the procedures adopted is not sufficient to furnish the evidence needed for the whole analysis process. In particular, a greater level of detail is required in order to demonstrate that the list of risks identified and the accident scenarios envisaged, as well as the arguments to support the assigned levels of gravity and frequency, are exhaustive and complete.

The principal points of deviation between the provisions of Regulation 352/2009 and what is required according to the rules currently in force relate to the possibility of recourse to codes of practice or similar systems of reference with due justification, and systematic extension to all substantial modifications connected with safety in all the technical areas, as well as at operational, procedural and organisational levels.

## **PART I – CONCLUSIONS, PRIORITIES AND SAFETY RECOMMENDATIONS**

The supervision of the railway system as carried out by the National Railway Safety Agency reveals positive progress in railway safety over the network managed by RFI. Nonetheless, there is a clear need to continue efforts to overcome the problems noted as early as 2007, by pursuing the following macro-targets:

- to reduce technical and structural incoherence both within the railway system itself and at its interface with the world outside it;
- to reduce non-compliances ascribable to the human element;
- to reduce non-compliances ascribable to inadequacies in maintaining the infrastructure and rolling stock.

In order to achieve these macro-targets, the Agency has identified these critical aspects, relating either to the railway system or to the start of action on the part of the Agency itself, which it appears necessary to eliminate in order to enable the railway system to develop, preserving and reinforcing its safety level.

Absolute priority must go to completing the fitting of the technology to protect train movements. At present these systems are fully functional on the high-speed / high-capacity lines, fitting of on-board TMCS equipment is still ongoing, while the stages preliminary to issuing admissions for TDSS s for fitting on board the trains to carry on the 'dialogue' with the TMCSs are not yet completed. This position is out of line with the ministerial directives issued in 2006 and 2008, which laid down a June 2009 deadline for completion of the on-board equipment.

Hence every step must be taken to hasten the procedures now under way to finish the fitting now under way.

In addition, the arrangements for handling railway vehicles crossing the State frontier must be identified in relation to the different train movement protection systems.

Network maintenance vehicles, which are the property either of RFI or of private undertakings, and shunting vehicles, in so far as the technological systems developed so far has been worked out with trains in mind, are not included in the programmes for installing train movement protection systems.

Where works vehicles are concerned, the technical difficulty is due to the variety of the vehicles themselves and of the existing on-board equipment. Pending determination of an installation programme, appropriate mitigating measures in relation to the traffic procedures will need to be adopted, having been worked out with the network manager.

Similarly, with regard to shunting, it must be remembered that the existing movement protection systems may not always be effective (e.g. where rolling stock is shunted by being pushed). While waiting for shunting vehicles to be fitted with the equipment, mitigating measures need to be put in place, such as double manning of the cab or the attendance of a shunter, or moving the vehicles coupled to other vehicles fitted with movement protection systems, paying particular attention to wagons containing dangerous goods. Furthermore, steps will need to be taken to ensure that shunting itineraries are independent of train itineraries.

The need to equip the regional networks which are connected to the national network, as well as the stock operating on them, must also be borne in mind. It was to ensure that the rules on operation and on the level of technology and safety on the regional networks and the national network managed by RFI would be similar, that Legislative Decree No 162/2007 provided for a three-year deferment period for the Agency to take on authority for those networks. Within the deadlines laid down, uniform management of safety aspects will need to be established on the regional and national networks.

The safety management systems of the Railway Undertakings also need to be rendered effective. In particular, the need has emerged to adopt safety designing and re-examination procedures through safety analysis and assessment, in order to define clearly the procedures, means and techniques for determining the scale and function of the service and related modifications.

In addition, the actions and projects contained in the Railway Undertakings' Safety Plans need to be re-focused on quantitative targets and flow in a traceable manner from risk analyses carried out in accordance with the rules in force.

Finally, there is a need to improve aspects relating to the use and training of staff, amounting to a re-evaluation of a fundamental component of guaranteeing railway safety.

The activity of supervising the railway system has laid bare continuing problems of maintenance, both of the infrastructure and of the rolling stock.



There needs to be ongoing and effective monitoring of the procedures for carrying out maintenance work at units which are important for safety purposes, in particular those assigned to third parties – as well as the contractual peculiarities governing them – along with their implications for the legality and safety of the railway operation.

On rolling stock maintenance it has also emerged that there has been misalignment between the maintenance work and the periods laid down, as well as failure to monitor the deadlines and difficulty in ensuring traceability of the maintenance procedures.

Another aspect revealed as critical concerns safety of worksites, which can interfere with train movements. On this point the Agency has called for specific projects to be adopted to ensure the safety of active worksites, especially where rail traffic is present.

Analysis of ‘accidents to persons caused by rolling stock in motion’ for which there are outcomes to passengers, shows the need for action over the problem of passengers falling from trains in motion. The Agency remains highly attentive to this problem, inter alia by constantly monitoring the implementation of programmes of action on carriages and verifying the impact of the technical and organisational measures undertaken, in terms of reducing accident rate.

In 2008 there was a further increase in the problems related to carrying dangerous goods, i.e. mainly minor escapes of substances caused by loading difficulties and defects in the tanks. There is therefore a need to adopt a system for the control of the processes involved in the carriage of dangerous goods (internal procedures, supplier audits etc.).

As to the more critical aspects relating to the start of action on the part of the Agency, it is necessary to point out the need for prioritising action already undertaken to reorganise the – varied and complex - national legislative framework, which is the fruit of the developing order of the Italian railway system through the years, plus the arrival of Community legislation. In addition, it is worth making certain that processes with innovative aspects correspond to amendments to the legislative framework, e.g. fitting of ground and on-board sub-systems with TMCS and TDSS , rail operation on high-speed lines, ensuring that new critical areas are identified and managed.

Furthermore, the Italian railway system is in the midst of a period of transition of authority on safety matters, involving takeover, which is not complete, by the Agency of certain tasks, above all relating to the ground systems, for which the Infrastructure Manager (RFI) remains responsible.

No analysis of the trend in railway safety can leave out of consideration the accident which occurred at Viareggio on 29 June 2009, in the knowledge that the limited number of railway accidents enables a trend to be discerned only in the very long term. Activity should, however, be constantly directed towards ensuring that the accident trend is downward, [through] the identification and systematic elimination of the underlying causes of accident.

## **ANNEXES**

- Annex A: Information on the structure of the rail system
  - Annex A.1: Extent of the national rail infrastructure
  - Annex A.2: Information on the Infrastructure Manager and Railway Undertakings
- Annex B: Organisation of the Italian rail system
  - Annex B.1: Organisation of the National Railway Safety Agency
  - Annex B.2: Structure of the national rail system
- Annex C: Data on the Common Safety Indicators
  - Annex C.1: The Common Safety Indicators according to Directive 2004/49/EC
  - Annex C.2: List of accidents on the National Rail Infrastructure, compiled in order to prepare the Common Safety Indicators pursuant to Directive 2004/49/EC - 2008
- Annex D: Principal changes in legislation and regulation
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Annex A: Information on the structure of the rail system

Annex A.1: Extent of the national rail infrastructure

Annex A.2: Information on the Infrastructure Manager and Railway Undertakings

## Annex A.1: Extent of the national rail infrastructure

**Network in use**

MAP

Key

Blue: Main lines

Azure: Secondary lines

Yellow: Connecting lines

***RFI***

Rete Ferroviaria Italiana [Italian Rail Network]

STATE RAILWAYS GROUP

Train Movements Department

***PRACTICAL ENGINEERING***

*Practical Specifications and Analysis*

Updated 31 December 2008

Annex A.2: Information on the Infrastructure Manager and Railway Undertakings

Infrastructure Manager													
Name	Address	Website	Safety authorisation	Date of commencement of trading	Total length of network (km)	Length of electrified lines / voltage		Length of lines		Total length of high-speed lines (km)	ATP equipment		Number of level crossings
						Voltage	km	Double-track	Single-track		Type	km	
RFI S.p.A.	Piazza della Croce Rossa, 1 00167 Rome	www.rfi.it	Concession Deed 31 Oct 2000 Ministerial Decree No 138-T	31 Oct 2000	16529	3000	17888.5	14611.8	9223	1063.6	TMCS (*)	11411.9	5763
						25000	1063.6				TDSS (*)	4.807.5	
											ERTMS	503.3	

(\*) Approximately 400 kilometres of line are equipped with TMCS and TDSS

‘Regulations concerning the international carriage of dangerous goods by rail, usually known as ‘the RID’, as applicable from 1 July 1999’ (Commission Directive 2001/6/EC of 29 January 2001)

Railway Undertakings														
Name	Address	Website	2001/14/EC Safety Certificate (number and date)		Date of commencement of trading	Type of service			Number of traction units, railcars and multiple units	Number of wagons	Number of carriages	Number of staff performing safety tasks	Traffic volume – passenger (train kilometres)	Traffic volume – goods (train kilometres)
						Passenger	Goods	Dangerous goods (RID)						
TRENITALIA S.p.A.	Piazza della Croce Rossa, 1 00161 Rome	<a href="http://www.trenitalia.com">www.trenitalia.com</a>	129/2008	13 June 2008	30 May 2000 <sup>1</sup>	✓	✓	✓ all classes	4573	42214	8164	37809	273,860,000	52,311,000
LeNORD s.r.l.	Piazzale Cadorna, 14 20123 Milan (MI)	<a href="http://www.lenord.it">www.lenord.it</a>	12/2008	13 Nov 2008	1 January 2004	✓	✓	✓ classes 1 and 7	60	0	234	543	581406	0
Rail Traction Company S.p.A.	Via Brennero, 7 39100 Bolzano (BZ)	<a href="http://www.railtraccompany.it">www.railtraccompany.it</a>	8/2008	9 Oct 2008	16 Oct 2001		✓	✓ class 7	38	0	0	146	0	2,450,000
Gruppo Torinese Trasporti S.p.A.	Corso Turati 19/6 10128 Turin (TO)	<a href="http://www.comune.torino.it/gtt">www.comune.torino.it/gtt</a>	83/2006	5 June 2006	27 July 2001	✓			20	0	0	110	332,000	0
SERFER – Servizi Ferroviari S.r.l.	Via Rolla, 22/R 16152 Genoa (GE)	<a href="http://www.serferonline.com">www.serferonline.com</a>	117/2007	21 Dec 2007	6 June 2003	✓	✓	✓ classes 1 and 7	22	0	0	155	29750	790,824
HUPAC S.p.A.	Via Dogana 8 21052 Busto Arsizio (VA)	<a href="http://www.hupac.it">www.hupac.it</a>	115/2007	21 Dec 2007	Date not stated by Railway Undertaking		✓	✓ class 7	3	0	0	60	0	55,000

<sup>1</sup> Railway Undertaking born out of ‘Ferrovie dello Stato’ (FS) [State Railways]



Railway Undertakings														
Name	Address	Website	2001/14/EC Safety Certificate (number and date)		Date of commencement of trading	Type of service			Number of traction units, railcars and multiple units	Number of wagons	Number of carriages	Number of staff performing safety tasks	Traffic volume – passenger (train kilometres)	Traffic volume – goods (train kilometres)
						Passenger	Goods	Dangerous goods (RID)						
Ferrovie Emilia Romagna s.r.l.	Via S. Donato, 25 40127 Bologna (BO)	<a href="http://www.fer-online.it">www.fer-online.it</a>	107/2007	10 Sept 2007	1 Jan 2001	✓	✓	✓ class 7	104	0	0	463	1,360,000	0
Trasporto Ferroviario Toscano S.p.A.	Via G. Monaco, 37 52100 Arezzo (AR)	<a href="http://www.trasportoferroviario Toscana.it">www.trasportoferroviario Toscana.it</a>	112/2007	22 Nov 2007	1 July 2004	✓	✓	✓ class 7	6	0	0	47	0	83,172
NORDCARGO s.r.l.	Piazzale Cadorna, 14 20123 Milan (MI)	<a href="http://www.nordcargo.it">www.nordcargo.it</a>	13/2008	13 Nov 2008	30 July 2003		✓	✓ class 7	21	0	0	157	0	1,054,396
Ferrovia Adriatico Sangritana S.p.A.	Via Dalmazia, 9 Lanciano (CH)	<a href="http://www.sangritana.it">www.sangritana.it</a>	09/2008	9 Oct 2008	4 Feb 2004	✓	✓		17	0	0	80	650,000	31,000
Sistemi Territoriali S.p.A.	Viale degli Alpini, 23 35028 Pieve di Sacco (PD)	<a href="http://www.sistemiterritoriali.it">www.sistemiterritoriali.it</a>	126/2008	6 June 2008	August 2003	✓	✓	✓ classes 1 and 7	23	0	3 × series Bp 663 SI	118	0	226,000
DB SCHENKER RAIL ITALIA S.r.l.	Via Umberto Giordano, 35 15121 Alessandria (AL)	<a href="http://www.rail.dbschenker.it">www.rail.dbschenker.it</a>	81/2006	23 March 2006	12 Dec 2004		✓	✓ class 7	16	0	0	81	0	528,836

Railway Undertakings														
Name	Address	Website	2001/14/EC Safety Certificate (number and date)		Date of commencement of trading	Type of service			Number of traction units, railcars and multiple units	Number of wagons	Number of carriages	Number of staff performing safety tasks	Traffic volume – passenger (train kilometres)	Traffic volume – goods (train kilometres)
						Passenger	Goods	Dangerous goods (RID)						
SBB Cargo Italia s.r.l.	Via Damiano Chiesa, 2 21013 Gallarate (VA)	www.sbbcargo.com	14/2008	9 Dec 2008	14 Dec 2003		✓	✓ class 7	43	0	0	233	0	1,824,347
Azienda Consorziale Trasporti A.C.T.	Viale Trento e Trieste, 11 42100 Reggio Emilia (RE)	Information not provided by Railway Undertaking	43/2004	25 Oct 2004	Information not provided by Railway Undertaking		✓	✓ class 7	Information not provided by Railway Undertaking					
METRO CAMPANIA NORDEST	Via Don Bosco ex scalo merci 80141 Naples (NA)	www.mene.it	45/2004	30 Nov 2004	2005	✓			34	0	0	80	396,559	0
Ferrovia Centrale Umbra s.r.l.	Piazzale Bellocci, 16/A Perugia (PG)	www.fcu.it	120/2008	9 Apr 2008	December 2002	✓			44	0	0	94	756,096	0
Rail One S.p.A.	Viale Abruzzo, 410 66013 Chieti (CH)	Information not provided by Railway Undertaking	125/2008	6 June 2008	2 <sup>nd</sup> half-year 2006		✓	✓ classes 1, 7 and 9	1	0	0	9	0	13,965
ATC S.p.A.	<b>Via Saliceto, 3</b> 40128 Bologna (BO)	Information not provided by Railway Undertaking	73/2005	22 Dec 2005	Information not provided by Railway Undertaking	✓			Information not provided by Railway Undertaking					

Railway Undertakings														
Name	Address	Website	2001/14/EC Safety Certificate (number and date)		Date of commencement of trading	Type of service			Number of traction units, railcars and multiple units	Number of wagons	Number of carriages	Number of staff performing safety tasks	Traffic volume – passenger (train kilometres)	Traffic volume – goods (train kilometres)
						Passenger	Goods	Dangerous goods (RID)						
SNCF Fret Italia S.r.l.	Via Pergolesi, 23 20124 Milan (MI)	www.fretitalia.com	16/2008	9 Dec 2008	8 Feb 2006		✓	✓ class 7	20	0	0	65	0	367,838
SAD - Trasporto Locale S.p.A.	Corso Italia 13/N 39100 Bolzano (BZ)	www.sad.it	02/2008	5 Aug 2008	5 May 2005	✓			20	0	0	80	270,000	0
Ferrovie Udine Cividale S.r.l.	Via Peschiera, 30 33100 Udine (UD)	www.ferrovieudinecividale.it	10/2008	30 Oct 2008	8 July 2008		✓		1	0	0	16	0	27,080
Linea Ferroviaria S.p.A.	Strada della Marcona, 2 15068 Pozzolo Formigaro (AL)	www.lineaferroviaria.it	17/2008	23 Dec 2008	Information not provided by Railway Undertaking		✓	✓ class 7	5	0	0	57	0	188,000
Fertramviaria S.p.A.	Piazza Winkelmann 12, 00162 Rome	www.fertramviaria.it	114/2007	14 Dec 2007	Information not provided by Railway Undertaking		✓		0	0	0	8	0	0
Ferrovie del Gargano S.r.l.	Via Zappetta, 7/D 70121 Bari (BA)	www.ferroviedelgargano.com	11/2008	30 Oct 2008	31 Oct 2008	✓			12	0	0	38	43,320	0
Crossrail Italia S.r.l.	Scalo Ferroviario Domo 2 28851 Beura Cardezza (VB)	www.crossrail.it	06/2008	26 Sept 2008	9 April 2008		✓	✓ classes 1 and 7	3	0	0	27	0	54,786

Railway Undertakings														
Name	Address	Website	2001/14/EC Safety Certificate (number and date)		Date of commencement of trading	Type of service			Number of traction units, railcars and multiple units	Number of wagons	Number of carriages	Number of staff performing safety tasks	Traffic volume – passenger (train kilometres)	Traffic volume – goods (train kilometres)
						Passenger	Goods	Dangerous goods (RID)						
Veolia Cargo Italia	Piazza della Vittoria, 15 16121 Genoa (GE)	<a href="http://www.veolia-cargo.it">www.veolia-cargo.it</a>	15/2008	9 Dec 2008	13 Dec 2008		✓	✓ class 7	2	0	0	10	0	3,000

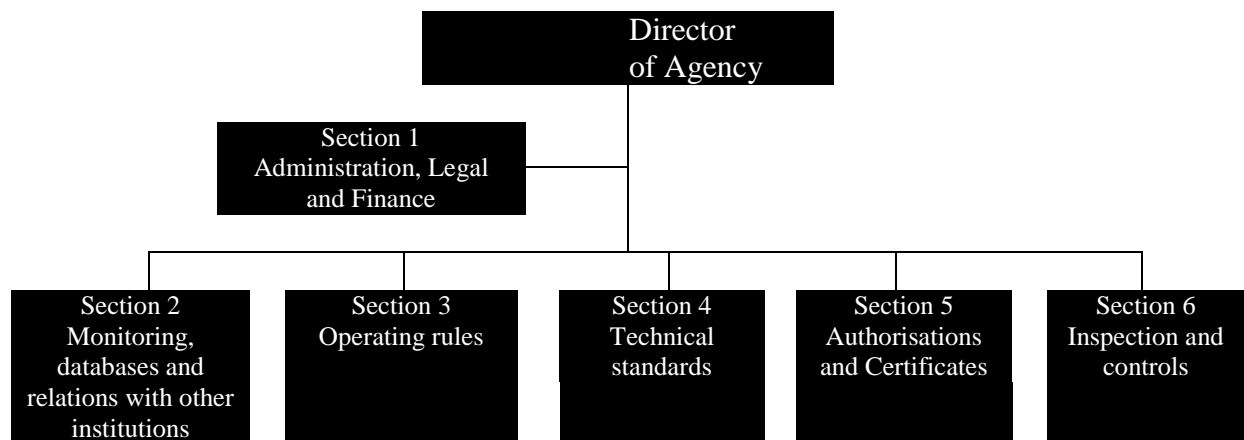
Annex B: Organisation of the Italian rail system

Annex B.1: Organisation of the National Railway Safety Agency

Annex B.2: Structure of the national rail system

## Annex B.1: Organisation of the National Railway Safety Agency

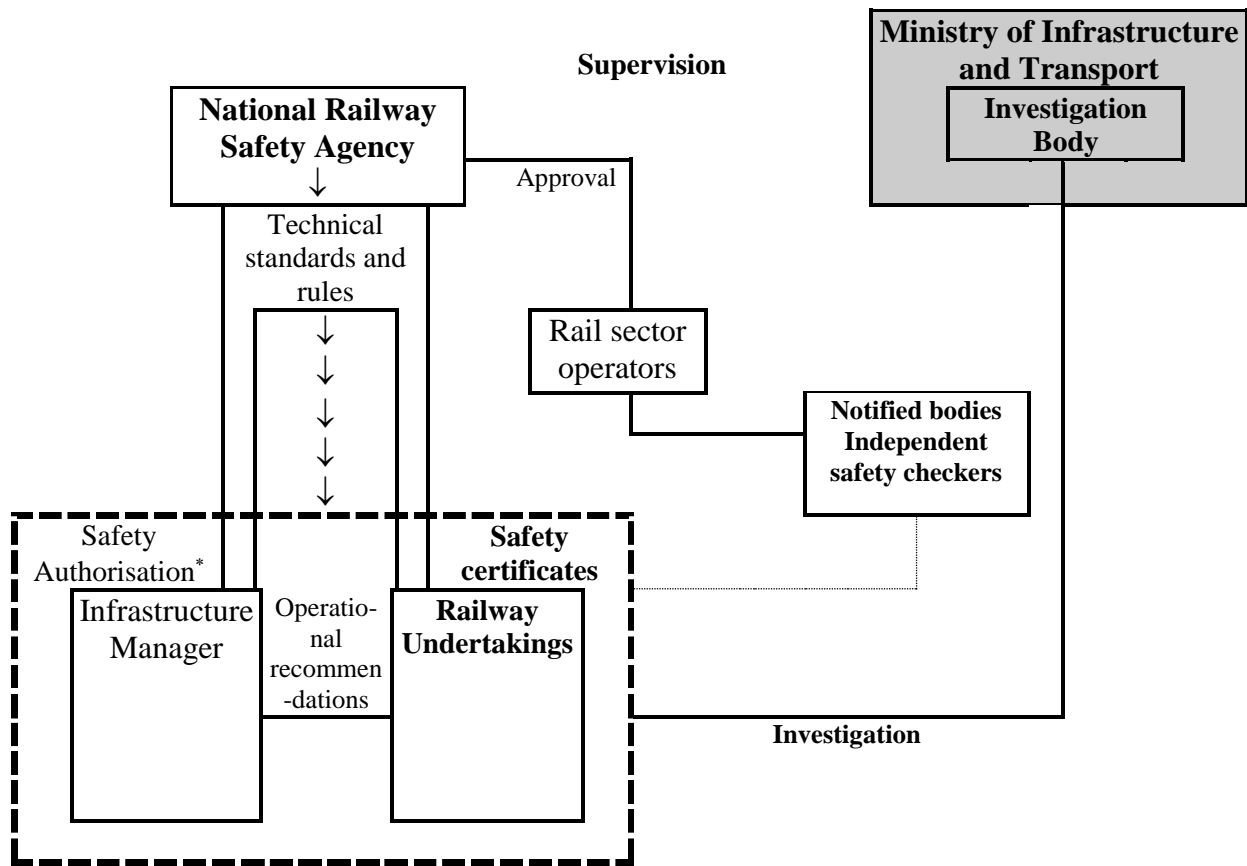
### Organisation of the National Railway Safety Agency



## Annex B.2: Structure of the national rail system



## The Italian National Rail System



\* Up to 31 Dec 2008 Safety Authorisations had not been issued by the National Railway Safety Agency.

Annex C: Data on the Common Safety Indicators

Annex C.1: The Common Safety Indicators according to Directive 2004/49/EC

Annex C.2: List of accidents on the National Rail Infrastructure, compiled in order to prepare the Common Safety Indicators pursuant to Directive 2004/49/EC - 2008

Annex C.1: The Common Safety Indicators according to Directive 2004/49/EC

**Particulars relating to the Common Safety Indicators (CSI)**

This Annex sets out the data relating to the Common Safety Indicators – CSIs – provided for in Directive 2004/49/EC, for the year 2008. With the guidelines on drawing up the annual safety report, the Agency has adopted the definitions finalised by the CSI working group and disseminated them to operators with the task of communicating the relevant data.

The Agency has obtained direct from the Railway Undertakings the data required to generate the Common Safety Indicators which apply to the national rail infrastructure managed by RFI. In order to present a complete picture of accident rates and traffic data, including what has taken place on the regional networks, data obtained from ISTAT [Italian National Statistics Institution] has been used.

It should be noted that the data given in the following lines of the table in Annex C.1 and the figures derived from these refer only to the RFI network:

- 8;
- 199-205;
- 223;
- 230. 231;
- 235.

The section on ‘National safety indicators and Common Safety Indicators’ (G.2) deals with the problems associated with gathering the data required for building up the common safety indicators.

As the table in Annex C.1 has not been updated, in order to arrive at the figures in line 229 automatic level crossings have been taken to be:

- those provided with a safety linkage, e.g. where a lineside signal indicates the track is clear only when the level crossing is closed;
- half-barrier automatic level crossings not linked to a lineside signal but closing automatically when a train passes.

[The following table ‘Guidelines for data transmission and file formats ver. 2009’ and the Safety Directive 2004/49/EC – Annex 1 CSIs, are in English in the source text and are not reproduced here.]

Annex C.2: List of accidents on the National Rail Infrastructure, compiled in order to prepare the Common Safety Indicators pursuant to Directive 2004/49/EC - 2008

ANSF Agenzia Nazionale per la Sicurezza delle Ferrovie [National Railway Safety Agency]

2008 Annual Report on Railway Safety - Annex B

**List of accidents on the National Rail Infrastructure, compiled in order to prepare the Common Safety Indicators in compliance with Directive 2004/49/EC - 2008**

1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
1	8 Jan 2008	PALO LAZIALE - TORRE IN PIETRA-PALIDORO	Persons run down level (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
2	8 Jan 2008	ROME FIDENE (MARSHALLING)	Derailment of traction unit or rolling stock forming part of train	Track geometry irregularity (jolting / buckling / broken rail) or irregular trackbed or infrastructure	train derailment	0	0	0	0	0	0	0	0	0	0
3	8 Jan 2008	ANGRI-SCAFATI	Persons run down at closed level crossings (incl. cyclists)	Level crossing (persons or cyclists improperly crossing)	level-crossing accidents	0	0	0	0	1	0	0	0	0	0
4	14 Jan 2008	ROVATO-OSPITALETTO TRAVAGLIATO	Persons run down level (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
5	15 Jan 2008	BARI CENTRAL - BARI PARCO NORD	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
6	15 Jan 2008	SERRADIFALCO-S.CATALDO	Persons run down level (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
7	20 Jan 2008	CECCHINA	Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
8	22 Jan 2008	PESCHIERA DEL GARDA	Persons run down level (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
9	26 Jan 2008	GARGAZZONE - LANA-POSTAL	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
10	30 Jan 2008	CARRARA-AVENZA - LUNI	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
11	29 Jan 2008	CAMPODARSEGO-VIGODARZERE	Train collisions with road vehicles at closed level crossing	Level crossing (improper crossing / forcing by vehicles)	level-crossing accidents	0	0	0	0	0	0	0	0	0	0
12	2 Feb 2008	VIAREGGIO	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
13	3 Feb 2008	VIAREGGIO-CAMAIORE LIDO CAPEZZANO	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
14	8 Feb 2008	ANCONA	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	1	0	0	0	0	0	0	0	0	0
15	12 Feb 2008	TAVAZZANO	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
16	16 Feb 2008	MONTECOSARO-MORROVALLE MONTE S.GIUSTO	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
17	16 Feb 2008	MILAN S.CRISTOFORO-MILAN PORTA ROMANA	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
18	28 Feb 2008	SESTO FIORENTINO	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	1	0	0
19	1 Mar 2008	MONTEVARCHI TERRANUOVA	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
20	3 Mar 2008	TRIUGGIO-PONTE ALBIATE-CARATE-CALO`	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
21	6 Mar 2008	RHO-MILANO CERTOSA	Company staff carrying out duties run down or harmed	Irregularities over gangs or works sites	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	1	0	0	0	0	0	0	0
22	6 Mar 2008	TIVOLI	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
23	7 Mar 2008	PRATA CAMPORTACCIO-S. CASSIANO VALCHIAVENNA	Persons run down at closed level crossings (incl. cyclists)	Level crossing (persons or cyclists improperly crossing)	level-crossing accidents	0	0	0	0	0	1	0	0	0	0
24	10 Mar 2008	CASABIANCA-CIAMPINO	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
25	10 Mar 2008	TERMOLI-CAMPOMARINO	Collision between train and special vehicle	Special vehicle obstructing clearance	trains in collision	0	0	0	0	0	0	0	0	0	0
26	13 Mar 2008	CASTELLANETA MARINA PALAGIANO CHIATONA	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0



1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
27	16 Mar 2008	MAGLIANA VILLA BONELLI	- Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
28	17 Mar 2008	SESTO S. GIOVANNI MONZA	- Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
29	21 Mar 2008	NOGARA	Forcing of points / chock	Incorrect routing / shunting movements	other types of accident	0	0	0	0	0	0	0	0	0	0
30	26 Mar 2008	FLORENCE CASTELLO - LA ZAMBRA	Derailment of traction unit or rolling stock making up train	Mechanical or electrical defect or wear in rolling stock or traction unit	train derailment	0	0	0	0	0	0	0	0	0	0
31	29 Mar 2008	CREMONA	Persons run down at closed level crossings (incl. cyclists)	Level crossing (persons or cyclists improperly crossing)	level-crossing accidents	0	0	0	0	0	1	0	0	0	0
32	4 Apr 2008	PADUA	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
33	7 Apr 2008	LEGNANO BUSTO ARSIZIO	- Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
34	9 Apr 2008	FELTRE	Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
35	16 Apr 2008	PONTECAGNANO-SALERNO	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
36	20 Apr 2008	MODENA	Persons run down level (excl. crossings)	<b>Improper crossing of track</b>	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
37	1 May 2008	CERVIGNANO (MARSHALLING YARD F.PART.)	Collision between rolling stock being shunted	Incorrect overriding of V.I. ground signal	other types of accident	0	0	0	0	0	0	0	0	0	0
38	22 Apr 2008	CORONELLA-POGGIO RENATICO	Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
39	25 Apr 2008	PIACENZA	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	1	0	0	0	0	0	0	0	0
40	7 May 2008	VITERBO PORTA ROMANA	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
41	23 May 2008	ROME TIBURTINA	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
42	23 May 2008	SALETTO OSPEDALETTO EUGANEO	Train collisions with vehicle at private level crossing	Road vehicle on railway track	level-crossing accidents	0	0	0	0	0	1	0	0	0	0
43	23 May 2008	BESANA - RENATE-VEDUGGIO	Train collision with other obstacles	Road vehicle on railway track	train collision	0	0	0	0	0	0	1	0	0	0
44	25 May 2008	CAPO BONIFATI - SANGINETO	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
45	26 May 2008	VICENZA - LERINO	Persons run down level (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
46	26 May 2008	CAVA-CARBONARA - PAVIA	Fire in traction unit	Defective electrical plant	fires in rolling stock	0	0	0	0	0	0	0	0	0	0
47	27 May 2008	NUSCO - CAMPO DI NUSCO	Train collisions with road vehicles at closed level crossing	Level crossing (improper crossing / forcing by vehicles)	level-crossing accidents	0	0	0	0	0	1	0	0	0	0
48	8 May 2008	PALERMO NOTARBARTOLO	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
49	19 May 2008	TARQUINIA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
50	5 Jun 2008	TURIN PORTA NUOVA	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	1	0	0	0	0	0	0	0	0
51	31 May 2008	FIDENZA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
52	13 Jun 2008	OLGIATE-CALCO-BRIVIO	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
53	16 Jun 2008	ASTI	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
54	21 May 2008	MILAN CERTOSA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
55	21 Jun 2008	VIPITENO	Derailment of traction unit or rolling stock forming part of train	Track geometry irregularity (jolting / buckling / broken rail) or irregular trackbed or infrastructure	train derailment	0	0	0	0	0	0	0	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
56	24 Jun 2008	PADUA - PADUA INTERPORTO	Derailment of traction unit or rolling stock forming part of train	Mechanical or electrical defect or wear in rolling stock or traction unit	train derailment	0	0	0	0	0	0	0	0	0	0
57	26 Jun 2008	CONTURSI TERME - SICIGNANO DEGLI ALBURNI	Derailment of traction unit or rolling stock forming part of train	Track geometry irregularity (jolting / buckling / broken rail) or irregular trackbed or infrastructure	train derailment	0	0	0	0	0	0	0	0	0	0
58	28 Jun 2008	CASALNUOVO - DOPPIO BIVIO CASSINO	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
59	9 Jul 2008	VILLA SAN GIOVANNI	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
60	12 Jul 2008	GENOA BRIGNOLE	Derailment of traction unit or rolling stock forming part of train	Combination of factors not individually transgressing the rules	train derailment	0	0	0	0	0	0	0	0	0	0
61	19 Jul 2008	SELLIA MARINA - SIMERI CRICHI	Persons run down level (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
62	20 Jul 2008	BARI S. SPIRITO - BARI PALESE MACCHIE	Persons run down at closed level crossings (incl. cyclists)	Level crossing (persons or cyclists improperly crossing)	level-crossing accidents	0	0	0	0	1	0	0	0	0	0
63	20 Jul 2008	BOLOGNA CENTRAL	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	1	0	0	0	0	0	0	0	0	0
64	28 Jul 2008	MONTELLA GORLAGO CHIUDUNO	Derailment of traction unit or rolling stock forming part of train	Investigation still in progress	train derailment	0	0	0	0	0	0	0	0	0	0

1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
65	23 Jul 2008	SANTHIA - CARISIO	Train collisions with road vehicles at closed level crossing	Level crossing (improper crossing / forcing by vehicles)	level-crossing accidents	0	0	0	0	1	0	0	0	0	0
66	7 Aug 2008	MODENA	State Railways staff carrying out duties run down or harmed	Railway staff carelessness / fall / harm	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	1	0	0	0	0	0	0
67	14 Aug 2008	ACERRA CANCELLO	- Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
68	4 Aug 2008	PADUA INTERPORTO	State Railways staff carrying out duties run down or harmed	Railway staff carelessness / fall / damage	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	1	0	0	0	0	0	0
69	19 Aug 2008	TORRE DEI PASSERI - TOCCOCASTIGLIONE	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
70	24 Aug 2008	FUSCALDO	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
71	21 Aug 2008	STAZZANO SERRAVALLE CASSANO SPINOLA	- Harm to persons leaning out of windows	Passenger carelessness	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	1	0	0	0	0	0	0	0	0
72	1 Sept 2008	MOTTA SANT'ANASTASIA	State Railways staff carrying out duties run down or harmed	Irregularities over gangs or works sites	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	2	0	0	0	0	0	0	0
73	29 Aug 2008	BOLOGNA FIERE - BIVIO ARCOVEGGIO	- Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
74	16 Sept 2008	CASTELBOLOGNESE - IMOLA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
75	24 Sept 2008	FASANO	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	1	0	0	0	0	0	0	0	0	0
76	29 Sept 2008	ASTI	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
77	5 Oct 2008	CIVITAVECCHIA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
78	4 Oct 2008	GENOA BRIGNOLE	Fire in traction unit	Mechanical or electrical defect or wear in rolling stock or traction unit	fires in rolling stock	0	0	0	0	0	0	0	0	0	0
79	6 Oct 2008	LONGOBARDI - BELMONTE CALABRO	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
80	24 Sept 2008	BRINDISI	Persons harmed through handling doors / windows	Passenger carelessness	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	1	0	0	0	0	0	0	0	0
81	7 Oct 2008	LIVORNO CALAMBRONE - LIVORNO CENTRAL	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
82	10 Oct 2008	S. GIORGIO DI PIANO - S. PIETRO CASALE	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
83	19 Oct 2008	TREVISO CENTRAL - PAESE	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
84	19 Oct 2008	MORBEGNO	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	1	0	0	0	0	0	0	0	0
85	31 Oct 2008	LODI	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
86	12 Nov 2008	MOLFETTA	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
87	23 Nov 2008	MANTUA - MANTUAFRASSINE	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
88	21 Nov 2008	MILAN S.CRISTOFORO - MILAN PORTA ROMANA	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	0	1	0	0
89	28 Nov 2008	TORTORETO LIDO - GIULIANOVA	Persons run down (excl. crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
90	29 Nov 2008	GIULIANOVA - MOSCIANO SANT'ANGELO	Persons run down (excl. crossings)	Persons on line or not at safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
91	11 Dec 2008	FALCONARA BUTERA	- Derailment of traction unit or rolling stock forming part of train	Track geometry irregularity (jolting / buckling / broken rail) or irregular trackbed or infrastructure	train derailment	0	0	0	0	0	0	0	0	0	0

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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
92	16 Dec 2008	SESTO FIORENTINO	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
93	16 Dec 2008	ROCCA IMPERIALE	Company staff carrying out duties run down or harmed	Irregularities over gangs or works sites	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	1	0	0	0	0	0	0	0
94	19 Dec 2008	TRENTO RONCAFORT	Derailment of rolling stock being shunted	Incorrect manœuvres	other types of accident	0	0	0	0	0	0	0	0	0	0
95	18 Dec 2008	VIGEVANO-ABBIATEGRASSO	Persons run down at closed level crossings (incl. cyclists)	Level crossing (persons or cyclists improperly crossing)	level-crossing accidents	0	0	0	0	0	1	0	0	0	0
96	15 Dec 2008	MILAN ROGOREDO - BIVIO/PC MELEGNANO	Persons run down (excl. level crossings)	Improper crossing of track	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
97	25 Dec 2008	CALTANISSETTA CENTRAL	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
98	17 Dec 2008	PALMI - BAGNARA	Persons falling from rolling stock in motion	Improper exit or descent from train	accidents to persons caused by rolling stock in motion (with the exception of suicides)	1	0	0	0	0	0	0	0	0	0
99	22 Dec 2008	BOVALINO BIANCO	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
100	26 Dec 2008	SIMERI CRICHI - SELLIA MARINA	Persons run down (excl. level crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0



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1	2	3	4	5	6	7		8		9		10		11	
No	Date	Location	Type of accident or incident	Cause of event	European Railway Agency (ERA) classification	passengers		staff, incl. company staff		level crossing users		unauthorised persons		others	
						fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured	fatalities	injured
101	14 Oct 2008	MILAN LAMBRATE	Persons run down (excl. crossings)	Persons on line or not at a safe distance	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
102	29 May 2008	CANCELLO	Persons run down (excl. crossings)	Irregularities over gangs or works sites	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	0	0	0	0	1	0	0	0
103	2 Oct 2008	FLORENCE CASTELLO	State Railways staff carrying out duties run down or harmed	Irregularities over gangs or works sites	accidents to persons caused by rolling stock in motion (with the exception of suicides)	0	0	1	2	0	0	0	0	0	0

Annex D: Principal changes in legislation and regulation

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUND FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
<b>NATIONAL LEGISLATION RELATING GENERALLY TO RAILWAY SAFETY</b>				
<b>National legislation relating generally to railway safety</b>	Ministerial Directive 81/T issued by the Minister for Transport	19 March 2008	New – requirement to fit ground and on-board train movement protection systems	Concerns train movement protection systems, specifying technical measures to be taken on the regional networks to bring these into line with the networks managed by RFI and, similarly, parallel measures which the Railway Undertakings need to introduce on board the trains
	Ministerial Directive of the Minister for Transport of 19 March 2008	19 March 2008	Amendment - Transposing Commission Directive No 2006/90/EC of 3 November 2006 adapting for the seventh time to technical progress Council Directive 96/49/EC on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail	Amends the Annex to Legislative Decree No 41 of 13 January 1999 as finally replaced by the Decree of the Minister for Transport of 7 November 2006
	Executive Decree No. 0001838 of 23 May 2008 issued by the Ministry of Infrastructure and Transport, DG 4 – DIV 5	23 May 2008	Amendment – Approving the amendments to the Regulation on Train Traffic and the Regulation on Signals for operating the high-capacity / high-speed Rome-Naples and Turin-Novara lines	Supplements Executive Decree No. 0002683 of 3 August 2007 amending the Regulation on Train Traffic and the Regulation on Signals for operating the high-capacity / high-speed Rome-Naples and Turin-Novara lines
<b>Legislation on the national authority with responsibility for safety</b>	Executive Decree No. 2043 of 10 June 2008	16 June 2008	New - approving the transfer of tasks in the field of safety of rail transport indicated in Minute 1 of 6 June 2008 implementing the 21 May Agreement between the Transport Ministry with the National Railway Safety Agency and FS SpA [State Railways] pursuant to Article 4(8) of Legislative Decree No 162 of 10 August 2007	Approves Minute 1 of 6 June 2008 and the associated annexes on entrusting to the Agency some of the tasks previously carried out by RFI and the Ministry
<b>Legislation regarding bodies notified, assessors, third-party bodies responsible for</b>	NONE			

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUND FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
registration, inspection etc.				
<b>NATIONAL RULES ON RAILWAY SAFETY</b>				
<b>Rules in force at national level on safety methods and targets</b>	National Railway Safety Agency note No 00660/08 of 11 August 2008 on 'Targets and critical areas in the field of railway safety for the year 2009'	11 August 2008	New – Sets out the targets for the 2009 Safety Plans	Contains the safety and critical-area targets enabling selection of projects and activities for inclusion in the plans on the safety of train traffic and railway operations for 2009
<b>Rules as to requirements governing the system of safety management and certification of the Railway Undertakings, and on the requirements of the system of safety management of the Infrastructure Managers</b>	RFI Provision No 14/2008 of 30 April 2008	1 June 2008	New – Guidelines for Safety Certification on high-speed lines	Contains operational guidelines for safety certification on the high-speed / high-capacity lines of the national rail infrastructure
<b>Rules as to requirements governing holders of wagons</b>	NONE			
<b>Rules as to requirements governing maintenance works</b>	NONE			
	RFI Instruction No 1572/2008 of 8 April 2008	19 March 2008	New – Requirement to fit ground and on-board train movement protection systems	Implementing Ministry of Transport Directive 81/T
<b>Rules as to the requirements for placing into service and maintaining new or substantially modified rolling stock, including rules on the exchange of rolling stock between Railway Undertakings, the registration systems and the</b>	RFI Provision No 19/2008 of 20 June 2008	23 June 2008	New - Testing of type 'D' brake from the leading driver's cab, using appropriate on-board equipment'	States the conditions in which testing of the type 'D' brake can be carried out from the leading cab using appropriate equipment, if authorised by the Infrastructure Manager
	RFI Instruction No 2030/2008 of 13 May 2008	13 May 2008	New – Reference documentation for TDSS BL3 On-Board Sub-System	States the Reference documentation for TDSS BL3 on-board sub-system, where such documentation can be obtained, and the product suppliers holding the Preliminary Certificate of Fitness

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUNDS FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
requirements for acceptance procedures				
	RFI Instruction No 2057/2008 of 15 May 2008	15 May 2008	New – Requirement to install the E-VIG exclusion device	With reference to Ministerial Directive 0044725 of 20 <sup>th</sup> October 2006, what is envisaged is the fitting of a vigilant exclusion system to maintain the train movement protection system in active mode
	RFI Instruction No 2060/2008 of 15 May 2008	15 May 2008	Amendment – Upgrading rolling stock to meet the requirements of Provision 30/2007	The Railway Undertakings are required to produce definitive programmes to upgrade passenger stock in service in accordance with Provision 30/2007 and to adopt the mitigation measures provided for
Common rules on the operation of the railway network, including rules on signalling systems and traffic management	National Railway Safety Agency Decree 1/2008	9 December 2008	Amendment of operating rules of the high-speed line to incorporate the characteristics of the high-speed stretch from Milan to Bologna in the context of the line entering commercial service	Rules of operation for staff of the Railway Undertakings and Infrastructure Manager to work high-speed / high-capacity lines equipped with the ERTMS/ETCS Level 2 System
	National Railway Safety Agency Directive 1/2008	30 June 2008	New – Refers to Ministerial Directive DG4/DIV5 44725 of 20 October 2006 (Directive on the Safety of Rail Traffic)	Extends deadlines for installing the vigilant device and specifies the types of train for which the device will be compulsory
	RFI Provision No 32/2008 of 30 October 2008	10 November 2008	Amendment to the Regulation on Train Traffic, the General Preface to the Service Timetable, the Service Instructions to Locomotive Drivers, the Service Instructions to Staff accompanying Trains and the Service Instructions for Shunting Staff	Speed on arrival and departure itineraries at terminal stations on lines [equipped] with BACC and 3-aspect signalling
	RFI Provision No 38/2007 of 23 October 2007	1 July 2008	Amendments to the Regulation on Train Traffic and the Regulation on Signals	Amends the Regulation on Train Traffic and the Regulation on Signals
	RFI Provision No 41/2007 of 23 October 2007	1 July 2008	Amendments to the Service Instructions to Locomotive Drivers	Amends the Service Instructions to Locomotive Drivers
	RFI Provision No 43/2007 of 23 October 2007	1 July 2008	Amendments to the Instructions for operating on double-track lines with two-way working for the use of train staff and to the Instructions on operating by remote control for use of train	Amends the Instructions for operating on double-track lines with two-way working for the use of train staff, the Instructions on operating by remote control for use of train

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUNDS FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
			staff, the Provisions on the use of remote control and the Provisions for operating on double-track lines with two-way working	staff, the Provisions on the use of remote control and the Provisions for operating on double-track lines with two-way working
	RFI Provision No 46/2007 of 23 October 2007	1 July 2008	Amendments to the Provisions for Service under Central Management, the Provisions for Service under a Single Manager, the Operating Instructions for Level Crossings, the Instructions for the Protection of Worksites, the Service Instructions for Shunting Staff, the General Preface to the Service Timetable, the Instructions on Telecommunications, and Provision 27/2006	Amends the Provisions for Service under Central Management, the Provisions for Service under a Single Manager, the Operating Instructions for Level Crossings, the Instructions for the Protection of Worksites, the Service Instructions for Shunting Staff, the General Preface to the Service Timetable, the Instructions on Telecommunications, and Provision 27/2006
	RFI Provision No 42/2007 of 23 October 2007	1 July 2008	Amendments to the Service Instructions to Pointsmen	Amends the Service Instructions to Pointsmen
	RFI Provision No 49/2007 of 23 October 2007	1 July 2008	Amendments to the General Preface to the Service Timetable, the Service Instructions to Staff accompanying Trains and the Rules on the Operation of Electric Traction Units	Amends the General Preface to the Service Timetable, the Service Instructions to Staff accompanying Trains and the Rules on the Operation of Electric Traction Units
	RFI Provision No 40/2007 of 23 October 2007	1 July 2008	Amendments to the Instructions to Staff accompanying Trains	Amends the Instructions to Staff accompanying Trains
	RFI Provision No 55/2007 of 29 November 2007	1 July 2008	Amendments to the Regulation on Train Traffic, the Regulation on Signals, the Service Instructions to Locomotive Drivers and to Provision No 41/2007	Amends the Regulation on Train Traffic, the Regulation on Signals, the Service Instructions to Locomotive Drivers and Provision No 41/2007
	RFI Provision No 7/2008	12 September 2008	New – Rules governing operation of shunting services	Regulates shunting services provided by the Manager
	RFI Provision No 8/2008 of 4 April 2008	1 August 2008	Introduction of Volume II of the ‘Rules on the Movement of Rolling Stock’, entitled ‘Rules on the Use of Technical Equipment’	Introduces Volume II of the ‘Rules on the Movement of Rolling Stock’, entitled ‘Rules on the Use of Technical Equipment’
	RFI Provision No 29/2008 of 22 September 2008	30 September 2008	Amendment to RFI Provision No 51/2005 of 10 August 2005	Special rules governing units for recording the temperature of axle boxes on the Milan – Bologna high-speed / high-capacity line equipped with ERTMS/ETCS Level 2
	RFI Provision No 35/2008 of	14 December	Amendments to the Service Instructions to	Amends the Service Instructions to

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUNDS FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
	10 December 2008	2008	Pointsmen and the Instructions on operating with ETCS Level 2 Radio Block system without fixed light signals, concerning the operation of high-speed / high-capacity lines equipped with ERTMS/ETCS Level 2 system	Pointsmen and the Instructions on operating with ETCS Radio Block system without fixed light signals, concerning the operation of high-speed / high-capacity lines equipped with ERTMS/ETCS Level 2 system
	RFI Instruction No 1188/2008 of 17 March 2008	17 March 2008	Amendment and supplement to RFI Instructions 3227/2006 on the use of GSM-R telephony in circumstances of single-manned driving	Amends and supplements the RFI Instructions 3227/2006 on the use of GSM-R telephony in circumstances of single-manned driving
	RFI Instruction No 643/2008 of 13 February 2008	13 February 2008	Amendment to 'Simultaneous convergent arrival movements (Article 4/15 of the RCT and the corresponding Article 21/3 of the IPCL): Clarification	Provides clarification on simultaneous convergent arrival movements
	RFI Instruction No 3855/2008 of 22 September 2008	22 September 2008	Amendments to RFI Instruction 371/2006 of 17 February 2006	Train rescue using units not equipped with ERTMS/ETCS Level 2 on the Milan – Bologna high-speed / high-capacity line
	RFI Instruction No 5162/2008 of 5 December 2008	5 December 2008	Supplement to RCT Article 24 and corresponding IPCL Article 41	Rescue of passenger trains with other passenger trains on high-speed / high-capacity lines with ERTMS/ETCS Level 2 as well as on relevant stretches of conventional line
	RFI Instruction No 5214/2008 of 10 December 2008	10 December 2008	Amendment to a part of RFI Provisions 51/2005, 69/2005 and 29/2008	Management of overheating warning on the high-speed / high-capacity line equipped with ERTMS/ETCS Level 2 system
	RFI Instruction No 5258/2008 of 13 December 2008	13 December 2008	New - Restrictions on power-collecting pantographs at Milan Central, Bologna Central, Florence Santa Maria Novella, Venice Santa Lucia, Rome 'Termini' and Naples Central stations.	Contains restrictions on power-collecting pantographs at certain locations
<b>Regulations determining the requirements on supplementary internal operating (firms') rules to be drawn up by Infrastructure Managers and</b>	RFI Provision No 10/2008 of 21 <sup>st</sup> April 2008	1 August 2008	Amendments to RFI Provision No 24/2005	Amends the Instructions on operating with the Central Computerised Equipment for the high-speed / high-capacity lines fitted with Level 2 ETCS without fixed light signals – Technical Specifications and Regulatory

	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUNDS FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
<b>Railway Undertakings</b>				Provisions
	RFI Provision No 11/2008 of 21 <sup>st</sup> April 2008	1 August 2008	Amendments to RFI Provision No 49/2003	Amends the Instructions on operating with the Central Computerised Equipment – Technical Specifications and Regulatory Provisions
	RFI Provision No 31/2008 of 15 October 2008	14 <sup>th</sup> December 2008	New – Modules to be carried on board trains	Requirement to provide train staff with Modules M.40 TELECOM/1 and M.40 D.L.
	RFI Instruction No 816/2008 of 22 February 2008	22 February 2008	Amendment to RFI Instruction DTC/A0011/P/2006/0002370 of 25 September 2006	Starting second phase of putting the new procedure for computerised production of M3/M40 modules into operation
	RFI Instruction No 1477/2008 of 2 April 2008	2 April 2008	Amendment to RFI Instruction DTC/A0011/P/2006/0000174 of 5 February 2007	Extends the ‘Special rules on management of the requirements on movement of a permanent nature’ to the entire network
<b>Rules determining requirements for staff assigned to essential safety tasks, including selection criteria, medical suitability, professional training and certification</b>	RFI Provision No 15/2008 of 23 June 2008	1 <sup>st</sup> August 2008	Amendments to RFI Provision No 10/2006	Concerns maintenance activities at TDSS plant
<b>Rules concerning investigations into accidents and incidents, including recommendations</b>	NONE			
<b>Rules setting the requirements for national safety indicators, including rules on gathering and analysing the indicators</b>	NONE			
<b>Rules setting the requirements for putting the infrastructures (rails, bridges, tunnels, energy, ATC, radio, signalling systems, central equipment, level crossings, platforms etc.) into service</b>	NONE			
<b>Rules governing instructions to</b>	NONE			



	LEGISLATION	DATE LEGISLATION ENTERED INTO FORCE	GROUNDS FOR INTRODUCING (STATE WHETHER NEW LAW OR AMENDMENT TO EXISTING LAW)	PARTICULARS
staff carrying out safety tasks				

Annex E: Certification of the Railway Undertakings – 2008

This Report summarises the position up to 31 December 2008 on Safety Certificates issued to the Railway Undertakings.

During the course of that year authority for issuing the Safety Certificates passed from RFI / Cesifer to the National Railway Safety Agency. Nonetheless, during the wait for the Agency to set in motion the new procedure on Safety Certificates pursuant to the provisions of European Directive No 2004/49/EC, new Certificates and extensions were in 2008 issued under the old rules and hence without the division into part (a) and part (b). This, moreover, explains why extensions were applied for only for extensions of the lines [already] certificated.

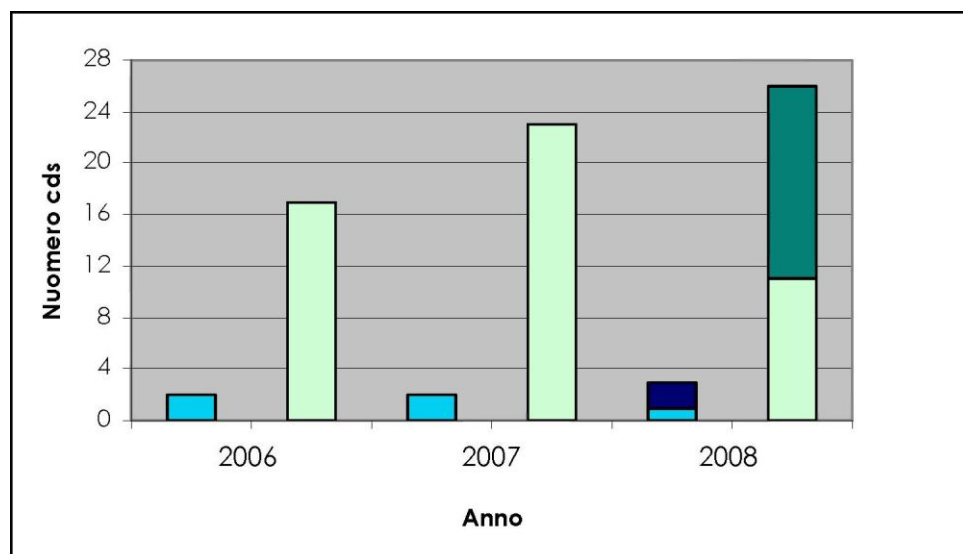
In 2008 the following were issued:

- 3 new Safety Certificates (one by RFI, viz. No 119/2008 on 7 March 2008 to Crossrail Italia srl, and two by the Agency, viz. No 1/2008 on 31 July 2008 to Veolia Cargo Italia srl and No 11/2008 on 30 October 2008 to Ferrovie del Gargano srl)
- 26 extensions (of which 11 by RFI and 15 by the Agency).

These data are set out in the following graph, showing the trend in certification over the last 3 years.

It will be observed that in contrast to the static position as regards new Certificates issued, the extensions show a steady increase. This is explained mainly by the fact that the Railway Undertakings have tended to apply for Certificates only for lines or stretches of line over which they have already planned out a particular service, and therefore their Certificates cover only a limited geographical area. Hence, each time there is an opportunity to acquire a new service, they apply for an extension of the lines certificated.

[Key:]



Horizontal axis:

Year

Vertical axis:

Number of certificates

Light blue / mid grey:

RFI new certificates

Light green / very light grey:

RFI extensions

Dark blue / black:

Agency new certificates

Dark green / dark grey:

Agency extensions

In order to build up a general picture of the Railway Undertakings' position vis-à-vis safety certification, the pages hereunder set out the following information:

- ✓ UNDERTAKINGS HOLDING A LICENCE;
- ✓ UNDERTAKINGS HOLDING A SAFETY CERTIFICATE. The document shows:

- the types of service provided,
- the safety certificates held;
- ✓ UNDERTAKINGS WHICH HAVE APPLIED FOR A SAFETY CERTIFICATE;
- ✓ UNDERTAKINGS WHICH HAVE APPLIED FOR AN EXTENSION TO A SAFETY CERTIFICATE.

## Undertakings holding a Rail Service Licence

<b>Railway Undertaking</b>	<b>Licence No</b>	<b>Date of issue</b>	<b>Extension (*)</b>
Trenitalia SpA	1	23 May 2000	YES
LeNord srl (ex Ferrovie Nord Milano Trasporto srl) (ex Ferrovie Nord Milano Esercizio SpA)	2	23 June 2000	YES
Impresa Ferroviaria Italiana SpA (ex Del Fungo Giera Servizi Ferroviari SpA)	3 (Revoked)	23 June 2000	YES
Rail Traction Company SpA	4	23 June 2000	YES
Rail Italy srl	5 (Revoked)	03 July 2000	-
MET.RO SpA (ex Metroferro)	6	20 Dec 2000	YES
Metronapoli SpA	7	21 Dec 2000	YES
Trasporto Ferroviario Toscano SpA (ex La Ferroviaria Italiana SpA)	8	14 March 2001	YES
Interjet srl	9	06 April 2001	YES
Ferrovia Adriatico Sangritana srl	10	08 May 2001	YES
Hupac SpA	11	14 May 2001	YES
Azienda Consorziale Trasporti di Reggio Emilia	12	18 May 2001	YES
GETRAS srl	13 (Revoked)	17 July 2001	YES
Ferrovia Centrale UMBRA srl	14	23 July 2001	YES
CEMAT SpA	15 (Revoked)	24 July 2001	YES
G.T.T. SpA (ex S.A.T.T.I. SpA)	16	27 July 2001	YES
Ferrovia Emilia-Romagna srl	17	03 August 2001	YES
Ferrovie del Gargano srl	18	28 Nov 2001	YES
Sistemi Territoriali SpA (ex-Ferrovie Venete srl)	19	4 Dec 2001	YES
DB Schenker Rail Italia srl (ex Railion Italia Srl) (ex Strade Ferrate del Mediterraneo srl)	20	20 Dec 2001	YES
SNCF Fret Italia srl (ex Monferail srl)	21	20 Dec 2001	YES
SAD – Trasporto locale SpA	22	28 Dec 2001	YES
Decotrain SpA	23 (Revoked)	23 January 2002	YES
ATCM SpA	24	17 March 2002	YES
SERFER – Servizi Ferroviari Srl	25	13 May 2002	YES
Azienda Trasporti Milanese SpA	26	13 May 2002	YES
CAT SpA	27 (Revoked)	28 May 2002	YES
MetroCampania Nord Est srl (ex Ferrovia Alifana e Benevento Napoli Srl)	28	13 Dec 2002	YES
Italiana Coke SpA	29 (Revoked)	17 Dec 2002	YES
Ventarail srl	30 (Revoked)	20 Feb 2003	YES
Ferrovie del Sud Est	31	26 March 2003	YES

<b>Railway Undertaking</b>	<b>Licence No</b>	<b>Date of issue</b>	<b>Extension (*)</b>
SBB Cargo Italia srl (ex Swiss Rail Cargo Italy srl)	32	26 March 2003	YES
NordCargo srl (ex Ferrovie Nord Cargo srl)	33	23 May 2003	YES
Ferrottramviaria SpA	34	19 Feb 2004	YES
GNER Italia srl	35 (Revoked)	25 Feb 2004	YES
Ignazio Messina SpA	36	22 Dec 2004	YES
Ferrovie Udine Cividale srl	37	02 Feb 2005	YES
ATC SpA	38	02 Feb 2005	YES
RailOne SpA	39	08 July 2005	YES
C-Rail srl	40	12 October 2005	YES
Linea srl (ex Tiber.Co srl)	41	11 August 2006	YES
InRail srl	42	09 October 2006	YES
S.E.P.S.A. SpA	43	04 Dec 2006	-
Nuovo Trasporto Viaggiatori SpA	44	06 Feb 2007	YES
Crossrail Italia srl	45	22 March 2007	YES
Mediterranean Railways srl	46	31 May 2007	YES
Arenaways srl	47	06 July 2007	YES
G.M.C. International Trade Spa	48	12 Sept 2007	YES
Ferrovie della Calabria srl	49	21 Sept 2007	YES
G.T.S. General Transport Service	50	21 March 2008	YES
C.F.I. Compagnia Ferroviaria Italiana srl	51	21 March 2008	YES
Orione srl	52	19 May 2008	-
OCEANOGATE Italia srl	53	01 June 2008	-
CONSORZIO SPEED RAIL WAYS	54	04 Sept 2008	-
RAIL ITALIA srl	55	11 Sept 2008	YES
BLS CARGO ITALIA srl	56	26 Sept 2008	-

(\*) Licence 'extended' to transport services at national level pursuant to Article 131 of Law No 388/2000.

### **List of undertakings holding a Safety Certificate**

The following section lists in bold type the Certificates issued by ANSF. It should be noted that the last Safety Certificate issued to each Railway Undertaking is the one which is valid (in fact each new Safety Certificate cancels those previously issued) and can be consulted on the ANSF website ([www.ansf.it](http://www.ansf.it)) in the Certifications and Authorisations section.

<b>UNDERTAKINGS CERTIFIED FOR PASSENGER AND FREIGHT TRANSPORT</b>		
<b>Railway Undertaking</b>	<b>Certificate No</b>	<b>Date of issue</b>
Ferrovie dello Stato s.p.a.	1/2000	23 May 2000
Trenitalia s.p.a.	2/2000	30 May 2000
	74/2006	20 January 2006
	76/2006	03 February 2006
	123/2008	29 April 2008
	129/2008	13 June 2008
LeNord (ex Ferrovie Nord Milano Trasporti srl) (ex Ferrovie Nord Milano Esercizio s.p.a.)	4/2001	25 July 2001
	10/2001	22 November 2002
	11/2002	19 December 2002
	18/2003	20 June 2003
	24/2003	28 October 2003
	33/2004	24 February 2004
	49/2004	09 December 2004
	58/2005	16 June 2005
	80/2006	07 March 2006
	91/2006	22 September 2006
	95/2007	12 January 2007
	108/2007	12 September 2007
	128/2008	06 June 2008
	130/2008	13 June 2008
	<b>3/2008</b>	<b>05 August 2008</b>
	<b>12/2008</b>	<b>13 November 2008</b>
SERFER – Servizi Ferroviari Srl	13/2003	28 April 2003
	42/2004	26 August 2004
	56/2005	27 April 2005
	60/2005	05 August 2005
	65/2005	07 November 2006
	88/2006	22 September 2006
	100/2007	02 February 2007
	105/2007	10 July 2007
	117/2007	21 December 2007
Ferrovia Emilia-Romagna s.r.l.	16/2003	29 May 2003
	31/2004	02 February 2004
	35/2004	27 April 2004
	55/2005	18 April 2005
	67/2005	09 December 2005
	84/2006	05 June 2006
	107/2007	10 September 2007
Trasporto Ferroviario Toscano S.p.A. (ex La Ferroviaria Italiana S.p.A.)	19/2003	30 June 2003
	52/2005	31 January 2005
	64/2005	07 October 2005
	98/2007	02 February 2007

UNDERTAKINGS CERTIFIED FOR PASSENGER AND FREIGHT TRANSPORT		
Railway Undertaking	Certificate No	Date of issue
	112/2007	22 November 2007
Ferrovie Adriatico Sangritana S.p.A.	21/2003	01 October 2003
	30/2004	02 February 2004
	41/2004	26 August 2004
	63/2005	07 October 2005
	89/2006	22 September 2006
	<b>9/2008</b>	<b>09 October 2008</b>
Sistemi Territoriali S.p.A.	22/2003	01 October 2003
	32/2004	02 February 2004
	48/2004	09 December 2004
	85/2006	12 June 2006
	93/2006	22 December 2006
	116/2007	21 December 2007
	126/2008	06 June 2008

UNDERTAKINGS CERTIFIED FOR FREIGHT TRANSPORT		
Railway Undertaking	Certificate No	Date of issue
Rail Traction Company s.p.a.	5/2001	11 October 2001
	9/2002	06 September 2002
	15/2003	06 May 2003
	37/2004	03 June 2004
	40/2004	26 August 2004
	51/2004	09 December 2004
	62/2005	07 October 2005
	82/2006	02 May 2006
	94/2007	09 January 2007
	110/2007	14 September 2007
	127/2008	06 June 2008
	<b>5/2008</b>	<b>05 August 2008</b>
	<b>8/2008</b>	<b>09 October 2008</b>
Impresa Ferroviaria Italiana SpA (certificates revoked 24 October 2008)	7/2002	15 July 2002
	17/2003	13 June 2003
	23/2003	01 October 2003
	36/2004	06 May 2004
	44/2004	11 November 2004
	53/2005	01 February 2005
	57/2005	26 May 2005
	66/2005	06 December 2005
Rail Italy s.r.l. – Certificates revoked by RFI Note DTC\A0011\P\2004\0000728 of 3 August 2004	99/2007	02 February 2007
	8/2002	30 July 2002
Hupac s.p.a.	26/2003	28 October 2003
	14/2003	06 May 2003
	47/2004	09 December 2004
Nordcargo srl	115/2007	21 December 2007
	20/2003	30 July 2003
	25/2003	28 October 2003
	34/2004	24 February 2004

<b>UNDERTAKINGS CERTIFIED FOR FREIGHT TRANSPORT</b>		
<b>Railway Undertaking</b>	<b>Certificate No</b>	<b>Date of issue</b>
(ex Ferrovie Nord Cargo S.r.l.)	39/2004 59/2005 71/2005 79/2006 87/2006 96/2007 109/2007 121/2008 <b>4/2008</b> <b>13/2008</b>	26 August 2004 16 June 2005 19 December 2005 07 March 2006 13 July 2006 12 January 2007 12 September 2007 10 April 2008 <b>05 August 2008</b> <b>13 November 2008</b>
DB Schenker Rail Italia Srl (ex Railion Italia srl) (ex Strade Ferrate del Mediterraneo)	27/2003 46/2004 54/2005 69/2005 81/2006	28 October 2003 30 November 2004 18 April 2005 19 December 2005 23 March 2006
SBB Cargo Italia srl (ex Swiss Rail Cargo Italy srl)	28/2003 38/2004 50/2004 61/2005 86/2006 101/2007 113/2007 122/2008 <b>14/2008</b>	20 November 2003 26 August 2004 09 December 2004 05 August 2005 12 June 2006 02 May 2007 30 November 2007 29 April 2008 <b>09 December 2008</b>
Azienda Consorziale Trasporti A.C.T.	43/2004	25 October 2004
Rail One SpA	70/2005 77/2005 90/2006 92/2006 104/2007 125/2008	19 December 2005 28 February 2006 22 September 2006 18 December 2006 10 July 2007 06 June 2008
SNCF Fret Italia srl (ex Monferail srl)	75/2005 97/2007 102/2007 118/2007 <b>16/2008</b>	28 December 2005 26 January 2007 16 May 2007 21 December 2007 <b>09 December 2008</b>
Ferrovie Udine Cividale srl	103/2007 <b>10/2008</b>	09 July 2007 <b>30 October 2008</b>
Linea srl	106/2007 111/2007 124/2008 <b>7/2008</b> <b>17/2008</b>	26 July 2007 24 October 2007 09 May 2008 <b>29 September 2008</b> <b>23 December 2008</b>
Ferrotramviaria SpA	114/2007	14 December 2007
Crossrail Italia srl	119/2008 <b>6/2008</b>	07 March 2008 <b>26 September 2008</b>
Veolia Cargo Italia srl	<b>1/2008</b> <b>15/2008</b>	<b>31 July 2008</b> <b>09 December 2008</b>



<b>UNDERTAKINGS CERTIFIED FOR PASSENGER TRANSPORT</b>		
<b>Railway Undertaking</b>	<b>Certificate No</b>	<b>Date of issue</b>
GTT (ex - S.A.T.T.I.)	12/2002 83/2006	19 December 2002 05 June 2006
Metronapoli s.p.a.	3/2001 6/2002 29/2003	31 January 2001 13 June 2002 02 December 2003
MetroCampania NordEst srl (ex Ferrovia Alifana e Benevento Napoli srl)	45/2004	30 November 2004
Ferrovia Centrale Umbra srl	68/2005 120/2008	19 December 2005 09 April 2008
ATCM SpA (certificate revoked on 6 <sup>th</sup> November 2008)	72/2005	22 December 2005
ATC SpA	73/2005	22 December 2005
SAD - Trasporto Locale S.p.A.	78/2006 <b>02/2008</b>	07 March 2006 <b>05 August 2008</b>
Ferrovie del Gargano srl	11/2008	30 October 2008

### **UNDERTAKINGS WHICH HAVE APPLIED FOR A SAFETY CERTIFICATE**

<b>Railway Undertaking</b>	<b>Date of application</b>	<b>Service</b>	<b>Lines</b>
<b>G.M.C. International Trade Spa</b>	27 March 2008	Freight	Alcamo – Palermo Palermo – Messina Catania – Messina
<b>ARENAWAYS srl</b>	08 April 2008	Freight	Alessandria Central – To Lingotto – ToP.S. – Chivasso – Vercelli – Novara – Milan Certosa – Milan Lambrate – Milan Rogoredo – Pavia - Voghera – Tortona – Alessandria Central Alessandria Central – Mortasa – Novara Mortasa . Milan S.Cristoforo – Milan P.Romena – Milan Rogoredo Milan P.Romena – PM Trecca – Milan Lambrate Alessandria Central – Valenza – Casale – Chivasso Alessandria Central – Arquata - Tortona
<b>GTS SpA</b>	08 April 2008	Freight	Bari – Foggia – Pescara – Ancona – Bologna – Piacenza – Milan – Como – Chiasso Bari Taranto – Sibari – Paola - Lamezia Terme – Gioia Tauro
<b>ORIONE srl</b>	29 April 2008	Freight	Trento – Verona – Bologna S.Donato
<b>In Rail Srl</b>	14 August 2008	Freight	Tarvisio Boscoverde – Gemona . Osoppo Gemona – Udine – Gorizia Udine – Palmanova – Cervignano Gorizia – Ronchi Nord – Monfalcone Monfalcone – Trieste Campo Marzio – Trieste Aquilina Monfalcone – Villa Opicina Trieste Campo Marzio – Villa Opicina Ronchi Nord – Ronchi Sud – Cervignano Cervignano – S.Giorgio Nogaro – Portogruaro Portogruaro – Venice Mestre – Padua Padua – Vicenza – Verona Porta Nuova Scalo
<b>NTV</b>	20 Oct 2008	Passenger	Rome – Florence (Slow line [ <i>‘Linea Lenta’</i> ] and Direct line [ <i>‘Direttissima’</i> ])
<b>Rail Italia</b>	20 October 2008	Freight	Gioia Tauro – Rosario – Eccellente – Lamezia Terme – S.Lucido – Paola – Sapri – Battipaglia Battipaglia–Salerno–Bv S.Lucia–NoceraInf.-Torre Ann.Central–Bv Mar.–Naples Salerno – Bv S.Lucia – PM Torricchio – Bv Sarno – Sarno Sarno – Cannello Naples – Cannello – Bv Maddaloni – Caserta – Vairano – Rocca d’Evandro – Cassino Granturco – Villa Literno Naples – Aversa – S.Marcellini – Villa Literno – Formia S.Marcellino – Gricignano – Marcianise Marshalling yard – Cannello Aversa – Gricignano – Marcianise Marshalling yard – Cannello Aversa – Gricignano – Caserta Bivio Maddaloni – Marcianise Marshalling yard Formia – Priverno – Campoleone – Rome Casilina – Rome Tiburtina Cassino – Roccasecca – Ciampino – Rome Casilina - Rome Tiburtina Rome Tiburtina – Settebagni – PC Bassano – Florence Campo di Marte (Direct line) Rome Tiburtina – Settebagni – Orte – Attigliano – Chiusi – Terontola – Arezzo – Florence Campo di Marte (Slow line) Florence Campo di Marte – Florence Rifredi – Florence Castello – Prato Prato – Bologna S.Ruffillo – Bologna Central

<b>Railway Undertaking</b>	<b>Date of application</b>	<b>Service</b>	<b>Lines</b>
			Bologna Central – PM Lavino – Modena – Parma – Piacenza Bologna S.Ruffillo – PM Lavino (orbital) Bologna Central – Castelmaggiore – Bologna Interporto Bv Trebbio – Bivio Bertalia Piacenza-Cotogno-Casalpusterlengo-Gavazzano-Milan Rogoredo-Milan Lambrate Milan Lambrate – Milan Greco – Monza – Seregno – Bivio Rosales – Chiasso (via Monte Olimpino 1 and 2) Milan Lambrate – Segrate – Pioltello – Treviglio – Brescia Milan Lambrate – Milan Marshalling yard – Pioltello Milan Rogoredo – PM Trecca – Milan Marshalling yard Milan Rogoredo – PM Trecca – Milan Lambrate Bivio Mella – Brescia Scalo – Brescia Central Brescia Central – Bivio/PC Fenilone – Verona Porta Nuova Bivio/PC Fenilone – Verona Porta Nuova Scalo – Verona Porta Nuova Bivio/PC Fenilone – Verona Q.Europa Verona Porta Nuova – Vicenza – Padua Mestre Padua – Padua Interporto
<b>BLS Cargo Italia</b>	30 October 2008	Freight	Domodossola - Novara (RoLa 'rolling motorway') Domodossola - Novara – Alessandria Domodossola II - Novara (UCT [unaccompanied combined transport]) Domodossola II - Turin Orbassano Domodossola II - Gallarate
<b>CFI</b>	31 October 2008	Freight	Maddaloni Marcianise Marshalling yard – Caserta – Vairano – Rocca d'Evandro – Cassino Cassino – Roccasecca – Ciampino – Rome Casilina Maddaloni Marcianise Marshalling yard – Gricignano – S. Marcellino – Villa Literno – Formia Formia – Priverno – Campoleone – Rome Casilina Rome Casilina – Rome Tiburtina Rome Tiburtina (Slow line) – Rome Marshalling yard – Settebagni – Orte – Attigliano – Chiusi – Terontola – Arezzo – Florence Campo di Marte Florence Campo di Marte – Florence Rifredi – Florence Castello Florence Castello – Prato Central Prato Central – Bologna S. Ruffillo Bologna interchange – Lavino – Modena – Fiorenzuola – Piacenza

**UNDERTAKINGS WHICH HAVE APPLIED FOR AN EXTENSION TO A SAFETY  
CERTIFICATE**

<b>Railway Undertaking</b>	<b>Date of application</b>	<b>Service</b>	<b>Lines</b>
<b>Ferrovia Emilia Romagna srl</b>	21 November 2007	Freight	<p>Fornovo – Vezzano L.  S. Stefano M. – Bv/PC Arcola  La Spezia Migliarina – La Spezia Marittima  La Spezia Marittima – Vezzano L.  La Spezia Migliarina – Vezzano L.  La Spezia Central – Livorno Central  Pisa S. Rossore – Pisa Central  Pisa Central – Bv Mortellini  Livorno Calambrone – Livorno Central  Pisa S. Rossore – Lucca  Viareggio – Prato  Florence Rifredi – Pisa Central  Bv/PC Renai – Bv/PC Samminiato  Bv Crociani – Prato  Prato – Florence Castello – Florence Rifredi  Tarvisio – Gemona – Udine – Cervignano  Gemona – Sacile  Venice Mestre – Treviso – Sacile – Casarsa – Udine  Casarsa – Portogruaro</p>
		Passenger	<p>Fidenza – Salsomaggiore  Ravenna – Russi – Lugo – Castelbolognese  Ravenna – Russi – Granarolo – Faenza  Lavezzola – Lugo – Granarolo</p>
<b>Ferrotramviaria</b>	06 November 2008	Passenger	<p>Pescara - S.Vito - Termoli - S.Severo - Foggia - Barletta - Bari  Parco Nord - Bari Central - Bari Parco Sud - Brindisi - Surbo -  Lecce  Bari Central - Gioia del Colle - Taranto  Foggia - Benevento - Caserta - Bivio Nola - Nola</p>
<b>DB SCHENKER RAIL ITALIA Srl</b>	30 July 2008	Freight	<p>Brescia S.Zeno  Brescia [sic] – Verona Porta Nuova ‘Scalo’ – Verona Q.E.  Reggio Emilia – Modena  Cantalupo – Nizza M. – Castagnole – Bra – Cavallermaggiore  Bra - Carmagnola</p>
<b>Trenitalia SpA</b>	11 August 2008	Freight, Passenger	<i>Ferrovie Nord Milano S.p.A</i> Milan Central/ Malpensa

<b>Railway Undertaking</b>	<b>Date of application</b>	<b>Service</b>	<b>Lines</b>
<b>Serfer</b>	11 November 2008	Freight, Passenger	PC S.Massimo - Bv S.Lucia Bv Fenilone - Bv S.Lucia Verona Porta Nuova 'Scalo' - Bv S.Lucia Bv S.Lucia Modena Cremona - Piadena - Mantua – Nogara Bv S.Lucia - Bv Tavernelle Fidenza - Cremona - Olmeneta –Treviglio Olmeneta - S.Zeno Folzano Padua - Padua Interporto Savona – Ventimiglia Ventimiglian [ <i>sic</i> ] - Ventimiglia P.Roja Savona PD - Bivio Doria Parma - S. Stefano Fidenza – Forno Bo Central - Bv Crociali Florence Rifredi - PM Florence Osmannoro Florence Campo di Marte - Orte (Direct line and slow line) Padua Interporto - Fascio Secondario - Padua Campo di Marte Padua C.Marte - Dev. Ing. Di Padua Nova Gorica – Gorizia Venice Marghera 'Scalo' - Treviso
<b>Crossrail</b>	12 November 2008	Freight	Modena - PM Lavino - Bivio Calderara - Bivio Bertalia - Bivio Trebbo - Castelmaggiore - Bo interporto Bivio Bertalia - Triplo Bivio Beverara - Bivio Arcoveggio – Bivio S.Donato - Bologna S.Donato Triplo Bivio Beverara - Bivio Trebbo Doppio Bivio Rimesse - Bologna S.Donato Bivio S.Donato - Doppio Bivio Rimesse - Bivio S.Vitale - PM Mirandola Ozzano - Castelbolognese RT – Faenza Novara - Mortara