



Report on the safety of the national rail network

2006

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A. FOREWORD

This annual report was drawn up in accordance with Article 18 of Directive 2004/49/EC and in line with the recommendations by the European Railway Agency.

The information and figures provided concern infrastructure management (IM) of the French national rail network and railway undertakings (RUs) operating rail services in 2006.

A summary will be available shortly in English.

B. INTRODUCTORY SECTION

1. Introduction to the report

The Public Rail Transport Safety Body (EPSF) was set up by the Law of 5 January 2006, while its missions and operation were set down in an implementing decree of 28 March 2006. This body is the national rail safety authority within the meaning of European Directive 2004/49. It is under the supervision of the Ministry of Transport which publishes safety regulations. The missions of the EPSF apply to the entire national rail network.

This annual report is the second one drawn up by the National Rail Safety Authority. The first one concerning 2005, when the EPSF was preceded by a body attached to the land transport division of the Ministry of Transport, had also been published in the form recommended by the European Railway Agency.

The EPSF has not been in operation for the whole of 2006, but this report deals with the activities of the infrastructure manager and the railway undertakings operating on the national rail network for the entire year.

The report will be forwarded to the:

- European Railway Agency;
- Ministry of Ecological Affairs, Sustainable Development and Transport;
- Land Transport Accident Investigation Bureau (BEA-TT);
- Infrastructure managers and railway undertakings.

It will be posted on the EPSF's website.

2. Railway structure information

The national rail network consists of 30 283 km of operational lines, including 15 869 km of dual-track railway. Automatic block signalling is found on 15 250 km of railway lines, while ground-to-train radio is available on 13 982 km. The network map for the national rail network is in Annex A.1.

Four new safety certificates were issued in 2006 to railway undertakings. Three were issued by the Ministry of Transport to the Rail4Chem undertaking by the Order of 27 January 2006, to the SNCB by the Order of 3 February 2006 and to the CFL by the Order of 26 March 2006. SECO-RAIL's certificate was issued by post on 1 December 2006 by the EPSF. The EPSF modified the certificates of two other undertakings, VEOLIA and ECR, so that they could extend their activities to the national rail network.

In all, by the end of 2006, eight undertakings could provide a commercial service on the national rail network, however three of them had not yet started operating.

The full list of railway undertakings plus the infrastructure manager is in Annex A.2.

In 2006, total passenger traffic was 78.79 billion passenger-kilometres, in other words 3% more than in 2005. The SNCF's freight traffic was 40.92 billion tonne-kilometres, in other words 0.5% more than in

2005. VEOLIA and ECR achieved traffic of 124 and 142 million tonne-kilometres respectively.

3. Summary – general trend analysis

The general level of safety of traffic on the national rail network can still be regarded, in global terms, as good.

The figures for the total number of accidents, the number of people seriously injured or killed and the number of serious incidents are slightly higher, however, than in 2005. Close to the figure for 2004, they do not undermine the favourable trend observed since 1997.

A detailed analysis of trends is given in Chapter D, point 2.

2006 was marked by serious accidents and incidents:

- the accident at Zoufftgen (11 October 2006), which was a stationary wrong-track running signalling (IPCS) collision between a Luxembourg passenger train and a French freight train. Caused by an error made by a safety agent (failure to apply train dispatch procedures on the stationary wrong-track running signalling), it resulted in six people dead and two seriously injured;
- serious accidents involving staff working on the track (five staff members were killed and ten were seriously injured in 2006);
- several trains were derailed without any injuries or deaths: a passenger train at Saint-Flour (25 February 2006), two freight trains at Margut (13 June 2006) and at Meuse (2 August 2006), and a track renewal train at Culoz (24 July 2006).

It must be noted that, despite the increased number of newcomers and the slight increase in traffic for the SNCF, no serious accidents were caused by railway undertakings.

In 2006, the EPSF set up its safety supervision mechanism for IMs and RUs. It consists of a verification mechanism, a database in which incidents which have occurred on the national rail network are entered, and safety indicators (the common safety indicators plus others defined by the EPSF).

Eight audits were started between July and December: three concerned the IM, two concerned the RUs, and three concerned approved training centres. Only one of the audits was completed during the year (an audit is said to be completed when the final report has been forwarded to the body which was audited).

The IM, *Réseau ferré de France* (RFF), and the SNCF, VEOLIA and ECR, as RUs, each produced a safety report in 2006 within the deadline laid down.

4. The Safety Directive

The transposition into French law of Regulation 2004/881 and of Directives 2004/49/EC, 2004/50/EC and 2004/51/EC forming part of the second rail package on the liberalisation of rail transport was completed in 2006. Three important pieces of legislation have been published in this connection.

Law No 2006-10 of 5 January 2006 on transport safety and development concerns in particular the establishment of the EPSF, a public administrative body under the supervision of the Ministry of Transport. The Law defines its missions, its nature and its financing method.

Implementing Decree No 2006-369 adopted on 28 March 2006 defines the organisation and functioning of the EPSF and sets down its missions in detail. The missions are those envisaged in Article 16 of the European Safety Directive. However the State retains responsibility for publishing legislation on the rail transport sector.

Decree 2006-1279 of 19 October 2006 on the safety of rail traffic and the interoperability of the rail transport system completes the transposition of Directive 2004/49/EC.

It lays down provisions concerning the safety of railway traffic in terms of design, production and operation of public rail transport systems. It also lays down the provisions on the interoperability of the rail transport system.

It specifies the missions of the EPSF as regards the issuing of authorisations and the monitoring of safety:

- the conditions under which the authorisation required for operating rail transport activities are issued: the safety certificate of railway undertakings, the authorisation of the infrastructure manager, authorisation of an expert or body qualified to deal with the national rail network (like the existing authorisation for guided rail transport), authorisation for training centres, the safety certificate for the holder of an operating agreement, the extraordinary authorisation for traffic, and the authorisation for operating systems or sub-systems destined to be integrated into the infrastructure or to be used on it;
- the conditions for monitoring safety on the network, in particular:
 - the carrying out of safety audits and inspections of rail transport players;
 - the restriction or suspension of authorisation issued if the safety conditions are no longer fulfilled;
 - the analysis of the serious accidents and incidents of which it is informed;
 - the annual publication of a safety report on railway traffic.

It establishes the role of all the players involved in safety and their relationships: the State, infrastructure manager and delegated

infrastructure manager, railway undertakings, construction undertakings, project leaders, and supervisory and training bodies.

It defines the provisions incorporated from the European Directives with a view to achieving interoperability of the Community railway system.

Lastly, this decree assigns to the infrastructure manager, the RFF, the mission of approving and publishing the documentation concerning the operation of the national rail system drawn up by its delegated infrastructure manager, the SNCF. The EPSF can demand the modification or withdrawal of technical conditions, local operating instructions and specific operating rules which would not allow safety levels to be maintained or which would undermine compliance with interoperability requirements.

C. ORGANISATION

The EPSF was launched in 2006: its director general was appointed by Decree of 6 April 2006, and the first meeting of the board of directors was held on 25 April 2006. The members of the management committee were recruited as of 15 May, and the other members of staff as of June. The organisation of the EPSF and the procedures for carrying out its missions were laid down in the course of the year.

1. Introduction to the organisation

At 31 December 2006, the EPSF employed 77 people.

Its missions are set down in Article 2 of Decree 2006-369, which forms part of the incorporation into French law of Article 16 of Directive 2004/49/EC. For the record, the missions are as follows:

- the issue of safety authorisations and authorisations relating to interoperability;
- monitoring and verification of these authorisations;
- drawing up and publication of technical documents, rules of the trade and recommendations.

The missions are carried out by crosscutting administrative divisions and international relations coordination and steering divisions.

The EPSF's general organisation consists of two technical directorates: 'Authorisations and Monitoring' and 'Reference Systems and European Affairs', and one administrative directorate, the 'General Secretariat'.

A system to ensure that an EPSF director is on-duty all the time has been set up so that certain missions, for instance provision of information, can be carried out in the event of a serious accident or incident.

The missions of each one of the technical directorates of the EPSF are described in the following paragraphs.

Authorisations and Monitoring

The Authorisations and Monitoring Directorate consists of two departments, with each one carrying out one of the missions entrusted to the Directorate.

The Authorisations Department is in charge of investigating:

- the authorisation of cases envisaged in current regulation: investigation and issuing of safety certificates for railway undertakings, and authorisations for commercial operation of rail transport systems and sub-systems;
- the cases involving authorisation of skilled experts or bodies, training centres and the infrastructure manager.

The Monitoring Department is entrusted with the supervision of safety on the national rail network. To this end:

- it carries out audits and inspections;
- it keeps an up-to-date database of accidents and incidents and follows the safety indicators (CSIs plus others defined by the EPSF);
- it publishes monthly newsletters on statistics relating to incidents and draws up the annual safety report.

The Reference Systems and Europe Directorate

The Reference Systems and Europe Directorate also consists of two departments.

The Reference Systems Department has the task of drawing up and publishing technical documents, rules of the trade and recommendations concerning rail safety. It proposes or draws up at the request of the Ministry the safety rules published by the State.

The Europe Department consists of two divisions.

- The main mission of the Safety and Interoperability Division is to organise and steer representation of the EPSF within the European Railway Agency by taking part actively in the drafting and summarising of technical positions to be presented to the European institutions.
- The Benchmark Division initiates and maintains a network in cooperation and partnership with the national rail safety authorities of other European Union Member States. Moreover, this department conducts strategic and technological monitoring for the entire European rail network with a view to creating documentary archives accessible to all. Lastly, it must help represent the EPSF in professional international organisations and events.

The EPSF's organisation chart is in Annex B.

2. Relations between the EPSF and the other national bodies

The most important relations maintained by the EPSF are with the Rail and Public Transport Directorate (DTFC) of the Ministry of Ecological Affairs, Sustainable Development and Transport, as well as with the Land Transport Accident Investigation Bureau (BEA-TT), the body responsible for transport of dangerous goods, the civil defence directorate and the rail transport control body.

The Land Transport Accident Investigation Bureau (BEA-TT) is the body responsible for inquiries into rail transport accidents. It is located at the office of the Vice-President of the Highways Department (CGPC). For administrative purposes, this Department reports to the Minister responsible for Infrastructure.

The BEA-TT must carry out technical inquiries into land transport accidents and incidents which can concern in particular rail transport systems and guided rail systems, road transport and inland waterways, provided that the accident or incident occurred on national territory.

It also gathers, exploits and disseminates information on practices and feedback concerning accidents and incidents in these modes of transport.

The EPSF monitors implementation of the BEA-TT recommendations by the railway undertakings and the infrastructure manager.

The body responsible for the transport of dangerous goods is under the aegis of the Director General of Shipping and Transport (DGMT).

This body is entrusted with the drafting of regulation on the transport of dangerous goods (with the exception of class 7 radioactive material) for the following modes: road transport, rail transport, shipping and inland waterway transport.

It must also monitor and supervise the application of regulations.

The Civil Defence and Safety Directorate (DDSC) is under the aegis of the Ministry of Internal Affairs, Overseas Affairs and Regional Authorities. It is responsible for risk management in France, in relation to both everyday accidents and major disasters.

The EPSF consults this Directorate systematically for its opinion on dossiers relating to safety definition, preliminary safety dossiers and safety dossiers drawn up by promoters with a view to obtaining authorisation of commercial operations.

The body for monitoring rail activities is the national regulatory authority under the responsibility of the Ministry of Transport. It deals with complaints sent to the Ministry relating to:

- the content of the network reference document;
- the procedure for allocating infrastructure capacity and related decisions;
- the charging system and the level and structure of fees for using the infrastructure;
- the safety certificate and the application and monitoring of safety rules and regulations;
- the implementation of framework agreements and infrastructure contracts.

D. THE DEVELOPMENT OF RAILWAY SAFETY

1. Initiatives to maintain/improve safety performances

1.1 The Public Rail Safety Body (EPSF)

The essential objective of the first actions and initiatives by the EPSF was to enable it to assume as soon as possible its role of national rail safety authority. From the start of the summer of 2006, it has issued operating authorisations and safety certificates within the deadlines agreed and has embarked on its first audits, the procedures for which it had already defined. A recommendation to specify the procedures for admitting tractive stock on the national rail network were published in July. Lastly, partnership activities were undertaken with four other national safety authorities.

1.2 The infrastructure manager (RFF and SNCF GID)

In 2006, the steps taken by the infrastructure manager to maintain or improve safety performances on the national rail network essentially concerned the follow-up to the audit on the state of the network. Other measures are in progress, essentially investments in the replacement and improvement of signalling and telecommunications facilities, improvements to make level crossings safer and steps to eliminate and prevent people from being struck by trains. Other investments to improve infrastructure capacity and the regularity of traffic have an indirect beneficial effect on safety.

Follow-up to the audit concerning the state of the national rail network

The report of the audit carried out by the *Lausanne Ecole Polytechnique Fédérale* (Federal Polytech) highlighted the problem of maintaining performances on the lines with the least traffic (lines 7 to 9 in the IUR classification), and more broadly, the problem of maintaining and renovating the network.

Based on the comments made in the audit, the RFF and SNCF GID devised an action plan to renovate the network, which they presented in March 2006. It concerns the following aspects:

- introduction of reinforced supervision
- confirmation of speed restriction measures installed for preventive purposes
- application of new multi-criteria indicators concerning the state of the tracks on IUR lines 7 to 9 in order to best determine maintenance policies regarding the state of tracks (in particular, implementation of a detailed Major Maintenance Operation policy)
- commencement of an initial programme to renovate passenger lines 7 to 9.

Telecommunications installations

The programme to replace analog ground-train radio communications launched in 2003 has entered the operational phase, which will be completed in 2013. In 2006, the GSM-R system was introduced on the Paris-Chalons line in the Champagne region, and then on the Aulnay

Bondy tram-train line. The next step is to bring the LGV Est installations into operation on 10 June 2007.

The replacement of signalling installations

An inventory of the state of signal boxes was launched in 2006 and will be completed in 2007. The inventory will make it possible to plan necessary replacement operations. A first list of priority signal boxes had been established in previous years. The EUR 70 million for the work carried out in 2006 was defined on the basis of this list.

Level crossings

Forty-three public level crossings and sixteen private passages located on lines were eliminated in 2006. Other measures to improve safety on level crossings were continued: EUR 4.8 million was earmarked for this in 2006. New equipment aimed at improving safety on level crossings was tested during the year.

Prevention of collisions involving pedestrians

To reduce the number of accidents when pedestrians cross tracks in stations, the RFF and SNCF GID produced plans to equip halts, depending on traffic and risk levels, with a signalling system, a pictogram (29 devices, including signalling installations), an overhead bridge or an underground passage (in four cases).

To limit the number of malicious acts and accidents when pedestrians cross tracks in stations, the RFF stepped up its programme to set up protective enclosures in sensitive areas; the regional authorities joined in these investments where possible.

Making sites for dangerous goods safer

Developments in regulation (publication of two orders, that of 8 July 2005 amending the Order concerning international transport of dangerous goods by rail (the 'RID' Order), and that of 13/09/2005 concerning special response plans) and the need to take account of the possible presence of several railway undertakings on the same site induced the RFF to take measures to ensure increased safety of sites for transporting dangerous goods. The necessary investments were determined by means of a study of existing procedures and resources, and by a general study of the danger per type of site, covering eight main sites.

1.3 The railway undertakings

1.3.1 The SNCF

The SNCF railway undertaking has developed and applied an emergency stop device on trains operating on single-track lines that have no radio. This application uses general public mobile telephones handed over to each driver and configured as part of a closed-user group. One simple control makes it possible to link a train number to a mobile phone number. Where necessary, a call made by a sedentary staff member is translated by the mobile phone as an 'emergency stop' ringtone.

Significant progress was made in the approach launched in 2005 whereby human factors mentioned in feedback are taken into account. A national seminar on 'Prevention of risks and human factors' was organised in May. The dissemination of an 'information collection guide' on human factors improved the quality of analyses and the relevance of steps to improve safety.

Other measures launched in previous years were continued, for instance action undertaken to comply with BEA recommendations and feedback on major accidents (fire on train 261 at Nancy in 2002 and near-miss at Villeneuve Triage in 2003), the safety classification of establishments and the partnership agreements with other railway undertakings.

1.3.2 VEOLIA

2006 was a year of expansion for VEOLIA. In relation to safety, the action taken concerned the quality of the feedback and training. The undertaking set up a railway training centre which was authorised to train staff members carrying out essential tasks for the safety of the rail system.

1.3.3 EWSI, which became ECR (Euro Cargo Rail)

This undertaking started operating on the national rail network in June 2006. Its work in relation to safety therefore concerned preparations for the launch and for the commencement of the authorised services.

2. Detailed data trend analysis

The main accidents in 2006 are mentioned under point B.3

2.1 Indicators relating to accidents

The trend observed over the past ten years concerns a regular decrease in the number of people seriously injured or killed and in the total number of accidents. The 2006 figures, while slightly higher than those for 2005 and 2004, are better than those for 2003, and they do not undermine the favourable evolution observed since 1997. These figures are analysed below.

- An increase in the number of trains derailed (23 in 2005, 42 in 2006) and in the number of people falling from a train (6 in 2005, 16 in 2006) are the main reasons for the increase in the total number of accidents with the exception of suicides, which rose from 321 in 2005 to 366 in 2006. The maintenance problems on the tracks with the least traffic partly explain the rise in the number of derailments, however no explanation was found for the increase in the number of falls.
- The total number of people killed, with the exception of suicides, rose from 79 in 2005 to 100 in 2006. This increase mainly concerns accidents involving third parties and passengers:
 - the number of third parties killed rose from 33 in 2005 to 44 in 2006;

- the number of users of level crossings killed was the same in 2005 and 2006 (38);
 - the number of passengers killed rose from 5 in 2005 to 13 in 2006 (the accident at Zoufftgen caused the death of 3 passengers);
 - the number of railway undertaking staff members killed rose from 3 in 2005 to 5 in 2006.
- The number of people seriously injured rose from 42 in 2005 to 70 in 2006. All the indicators for the number of people seriously injured rose, with the exception of that concerning level crossings.
- As a result, there was an increase in the total number of people seriously injured and killed. While this figure stood at around 200 between 1997 and 2003, it was 134 in 2004 and 121 in 2005. The figure for 2006 – 170 – is still lower than the average for the years prior to 2004.
- There were fewer accidents relating to electrical traction installations in 2006. There were 13 in 2006, including three fatal accidents, whereas the average annual number of such accidents was higher than 20 in the past five years.
- The number of collisions at level crossings (127) increased slightly compared with 2004 (111) and 2005 (118), but was considerably lower than in the years 2000 to 2003.
- There were approximately 3300 malicious acts which had an impact on rail safety (placing of objects on tracks, throwing objects on trains, damage to installations, etc.). This indicator has been falling significantly since 2002: -5% from 2003 to 2004, -3% from 2004 to 2005 and -13% from 2005 to 2006. In addition to providing human and technical protection for installations, the SNCF organises preventive campaigns for schools (600 officers for 130 000 pupils) to limit the number of malicious acts.

2.2 Indicators relating to precursors

The indicators taken into account are those set down in point 2 of Annex I of Directive 2004/49.

- Tracks and signalling
- In 2006, the total number of broken rails was considerably lower than in 2005, dropping from 419 to 346. The moderate weather in the winter of 2006 is the reason for this drop.
 - On the high-speed lines, the number of track buckles which reached a level requiring a speed-restriction measure was 0.13 per 1000 km. On traditional lines, IUR 1 to 6, this indicator showed a value of 1.27. This indicates deterioration compared with 2004 (0.91) and 2005 (0.99). The result is better, however, than that observed in the spring (1.40), which was improved in the second half of the year following the action taken. Lastly, the number of track buckles on lines 7 to 9 which

reached a level requiring a speed-restriction measure was high (5.44 per 1000 km): this reflects the state of the network.

- The number of incidents undermining the safety of signalling installations fell considerably compared with 2005, from 244 to 195. The number of incidents on level crossings (failure of crossing to close) rose from 78 to 95. The total number of signalling breakdowns undermining safety fell by roughly 10%.

➤ Total number of signals passed when closed.

- 110 signals were passed when closed by railway undertakings in 2006 compared with 108 in 2005 and 106 in 2004. The use of beacon-speed control devices has lowered the number of signals passed when closed to a level that seems difficult to lower further at the present time.
- The total number of collisions into the back of the train in front was 45 in 2006 for all railway undertakings and the infrastructure manager, the average for the past five years being 48 per year.

➤ Total number of broken wheels and axles on rolling stock in service:

- There were no incidents of this kind in 2006.

E. IMPORTANT CHANGES IN LEGISLATION AND REGULATION

The laws transposing the second rail package are presented in part B.4. Other major changes in legislation and regulation relating to rail transport are mentioned below.

Decree No 2006-212 of 23/02/2006 on the safety of activities of vital importance reforms the system of monitoring and protecting the most sensitive installations for the defence of the nation and state security, including the national rail network.

Decree No 2006-1534 of 6 December 2006, adopted by virtue of the application of Articles 1, 1-1 and 1-2 **of Law No 97-135** of 13 February 1997 establishing the public body '*Réseau Ferré de France*' (rail network of France) with a view to regenerating rail transport, specifies the respective missions and responsibilities of the RFF and SNCF.

The Order of 5 January 2006 on the information necessary for the drafting of special response plans (PPI), adopted by virtue of the application of Article 4 of Decree No 2005-1158, specifies the information to be provided to the prefect in charge of drawing up the special response plans and preparing emergency plans.

The Order of 5 January 2006 on the consultation of the general public concerning the special response plans for certain installations, adopted by virtue of the application of Article 8-II of Decree No 2005-158, states what procedure must be introduced for consultations prior to the drafting of a special response plan.

The Order of 7 December 2006 amending the Order of 23 June 2003 on the safety regulation applicable to the national rail network. This Order withdraws over thirty pieces of legislation from the previous list which are henceforth placed under the responsibility of the RFF pursuant to Article 10 of Decree No 2006-1279. This Order also modifies the regulation on braking and composition of trains. The normal rules on braking of trains are now based on their mass, and no longer on the number of axles.

F. THE DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

1. National legislation – starting dates – availability

1.1 Issuing of safety certificates according to Article 10 of Directive 2004-49.

Decree 2006-1279 sets the starting date for issuing these certificates at 19 October 2006 (date of adoption of the decree), but undertakings holding a safety certificate at this date may, up to 01/05/2007 only, apply for the renewal or modification of the certificate in accordance with the provisions in force before the publication of Decree 2006-1279.

1.2 Issuing of safety authorisations according to Article 11 of Directive 2004-49.

Decree 2006-1279 sets the starting date for issuing this authorisation at 19/10/2006. The infrastructure manager must lodge its application for authorisation by 31/10/2007.

1.3 National safety rules concerning Railway Undertakings and Infrastructure Managers.

Decree 2006-1279 on the safety of rail traffic and the interoperability of the rail system distinguishes between operators assigned to safety tasks and those assigned to essential tasks for safety. The former must receive training suited to these tasks, with no further explanations. The latter, a list of whom is established by the Order of 30/07/2003 known as the 'Aptitudes Order', must be trained in centres approved by the EPSF and accredited in accordance with the provisions in this Order. In all there are 23 approved training centres, including three approved in 2006.

Article 10 of this same Decree entrusts to the RFF the mission of approving and publishing the documents concerning the national rail network drawn up by the SNCF-GID.

Lastly, the Order of 7 December 2006 amending the regulation order of 23 June 2003 updates the list of legislative texts applicable to the rail network, approved by the Ministry of Transport.

2. Numerical data

The SNCF still takes care of all passenger transport and most freight transport. In 2006, however, after investigating the technical dossiers submitted to it, six railway undertakings were either issued with or obtained a modification of their safety certificates: VEOLIA CARGO, ECR, SECO-RAIL, CFL, RAIL4CHEM and B-CARGO.

The numerical data are given in Annex E.

Issuing of authorisations for commercial operation

In 2006, the EPSF also issued authorisations for the commercial operation of new infrastructure systems or rolling stock, both traction and trailer vehicles. It also authorised exceptional traffic for the purpose of testing rolling stock. These authorisations are listed below per type.

The systems:

- tram-train T4 line (Aulnay-sous-Bois / Bondy)
- relevant section of the national rail network of line 2 of the Montpellier tramway.

The traction stock:

Sixteen authorisations for commercial operation were issued, including the following:

- stock which was not the subject of authorisation for commercial operation on one of the rail networks mentioned in Article 1 of the Decree: Avanto (tram-train), PRIMA 3U15-B;
- stock which was the subject of a substantial modification: BB 827300, BR 185 with EDG bogie, RBDe 560 (Swiss stock in the context of the re-opening of the Delle-Boncourt border line);
- installation of multiplexing in a series of 4400 kW locomotives;
- stock already authorised in the EU: Class 66, G 1000/F.

The trailer stock:

The system for the acceptance of wagons on the network was radically changed on 1 July 2006 with the end of the RIV (*Regolamento Internazionale Veicoli*) agreements governing exchanges between networks. Under the new system, considerable responsibility is entrusted to the railway undertakings, in particular in relation to performance and monitoring of maintenance of these wagons. They have been asked to explain to the EPSF the mechanism they are setting up in this respect. The responses demonstrate the existence of real problems in this domain.

Under this regulatory framework currently being established, the EPSF has:

- continued to issue authorisations for the commercial operation of new or modified wagons (six cases dealt with between July and December 2006, including two for new structures and four for substantial modifications; 19 other applications were received and were being examined at 31 December);
- examined and developed the prototype for a database which will enable the EPSF to keep a register of the type of rolling stock (eventually all types) as well as a register for this stock if this mission is entrusted to it;
- set up in conjunction with the representatives of the profession two working groups on:
 - the establishment of a wagon reference system based on the STI wagon, the Order of 01/07/04 and the RIV;
 - the definition of the substantial nature of a modification to wagons;
- embarked on discussions with the EBA (the German Federal Rail Transport Office) to achieve mutual recognition of wagon authorisations.

'Exceptional' traffic:

104 authorisations for tests were issued, including those relating to the reduced bi-standard TVM (*transmission-voie-machine* - track to train transmission) on TGV-POS train sets.

3. Procedural aspects

The safety certificates issued in 2006 do not distinguish between parts A and B.

No safety authorisations were issued in 2006.

G. SUPERVISION OF RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS

1. Description of the supervision of RUs and IMs

Supervision by the EPSF of the infrastructure manager and railway undertakings is exercised in several ways: by everyday monitoring of events that place safety at risk, by regularly analysing safety indicators, and by audits and inspections planned or triggered by warning signs (shift in an indicator, specific incidents, etc.).

- Everyday monitoring of events that place safety at risk.
The infrastructure manager communicates almost in real time to the EPSF all events observed by its national traffic monitoring centre traffic (CNO). Significant events from the point of view of safety are recorded in an EPSF database. This makes it possible to produce statistical studies on events identified by date, type of event, location, nature, key word, undertaking, etc. It also makes it possible to identify worrying events not yet detected by indicator monitoring. In some cases, the EPSF asks for additional information and, where this proves necessary, the application of suitable measures.
- Regular analysis of safety indicators.
The indicators used are the common safety indicators defined by the European Railway Agency plus other indicators defined by the EPSF. The indicators provided by the infrastructure manager are discussed every quarter by its representatives (RFF and SNCF GID) and those of the Ministry of Transport. In addition to the evolution of indicators and the examination of certain incidents, the measures taken to remedy malfunctioning and the monitoring of the implementation of these measures, are examined systematically.
- The audits and inspections¹ planned or triggered by warning signs.
The EPSF has defined an audit process based on the ISO 19011 standard 'Guidelines for auditing quality and/or environmental management systems'. This process deals with the planning of audits, training of auditors and the carrying out of audits. The audit procedure is posted on the website of the EPSF.

The audit programme provides for a first audit for each entity holding authorisation or a certificate after six months of operation and then, throughout the period of validity of the certificate or authorisation, annual audits covering all the fields in each particular case. The theme of the first audit is always the safety management system. In addition to these planned audits, the EPSF conducts unplanned audits which it may launch depending on incident statistics or the evolution in safety indicators. In every case, the audit themes are defined in specifications communicated to the interested parties before the audit starts.

The auditors are rail system experts, trained in auditing techniques from their recruitment. They are certified by the EPSF Director General after having conducted a certain number of audits with the support of an experienced auditor.

The audit procedure includes daily reviews of measures with the representatives of the entity being audited, plus two synthesis meetings. The first such meeting, at the end of the audit interviews, is intended to communicate observations to the audited entity which were already communicated during the daily reviews, and to inform them of the evaluation by the EPSF. All instances of malfunctioning observed

¹ EPSF inspections correspond to the definition of GERA 'controls'.

must be the subject of proposals for precautionary measures, if necessary, and corrective measures. The second synthesis meeting is the meeting closing the audit. During this meeting, the comments by the body being audited concerning the draft audit report are examined, the precautionary or corrective measures are either validated or amended by the EPSF, and the timetable for implementation as well as the procedures for monitoring by the ESPF are adopted. The minutes of this meeting are attached to the final audit report, which is confidential.

At 31 December 2006, the Monitoring Department had 21 auditors.

2. Presentation of the RU/IM annual reports

The IM, *Réseau ferré de France* (RFF), and the railway undertakings, the SNCF, VEOLIA and ECR, each presented a 2006 safety report within the deadline laid down. These reports contained the essential information expected, with the exception of certain indicators currently not available.

3. Number of RU/IM inspections

In 2006, the EPSF did not just conduct audits. The first inspections were carried out from February 2007.

4. Number of RU/IM audits

Eight audits were initiated in 2006 and, apart from the first one, were completed in 2007. The establishments concerned and the themes are given below.

Establishment	Period	Theme
SNCF Freight	24/07 14/09	The Alpine rail motorway: to assess this service promoter's grasp of rail safety.
RFF and SNCF-GID	06/11 21/02	To check that the main maintenance principles and objectives for tracks defined and implemented by the IM guarantee rail and infrastructure safety.
RFF and SNCG-GID	27/09 16/01	To check that the infrastructure manager and its representatives can control and operate effectively the process of reception of trains.
RFF and SNCF-GID	16/10 30/01	To check that the process of temporary speed limitation is complied with and is efficient.
EWSI	07/11 10/01	To check that certain measures on rail safety control are being respected.
EUROTUNNEL Training Centre	21/11 23/01	To check that all the measures necessary for the smooth running of

VEOLIA Training Centre	28/11 23/01	the training centre are adopted to ensure the basic training or continuing training of authorised officers in the performance of safety tasks on the national rail network. To assess the effectiveness of these measures.
IFTIM Training Centre	13/12 26/01	

5. Summary of relevant corrective measures/actions

With these audits it has been possible to check that the audited bodies are effectively complying with the observations relating to a large number of the points examined. On principle, the points complied with are set down in the audit reports. It was possible to check that some of the BEA's recommendations were taken into account, but these verifications were not systematically conducted in 2006

These audits also made it possible to pinpoint instances of malfunctioning, the extent and the number of which differed according to the topics and the audited bodies. The most frequent ones concerned:

- the accreditation of the staff members assigned to essential safety tasks relating to traffic and compliance with the provisions in the Order of 30/07/2003 known as the 'Aptitudes Order';
- documentation management;
- the conducting of checks;
- the definition and monitoring of the implementation and effectiveness of the corrective measures taken to remedy the malfunctioning identified by the internal audit and control mechanism or the feedback.

For each case of malfunctioning, corrective measures together with an implementation schedule were proposed by the undertakings concerned. The EPSF validated these measures after having amended them in some cases, and monitored their implementation (compliance with deadlines and effectiveness).

H. CONCLUSIONS – PRIORITIES – RESULTS OF SAFETY RECOMMENDATIONS

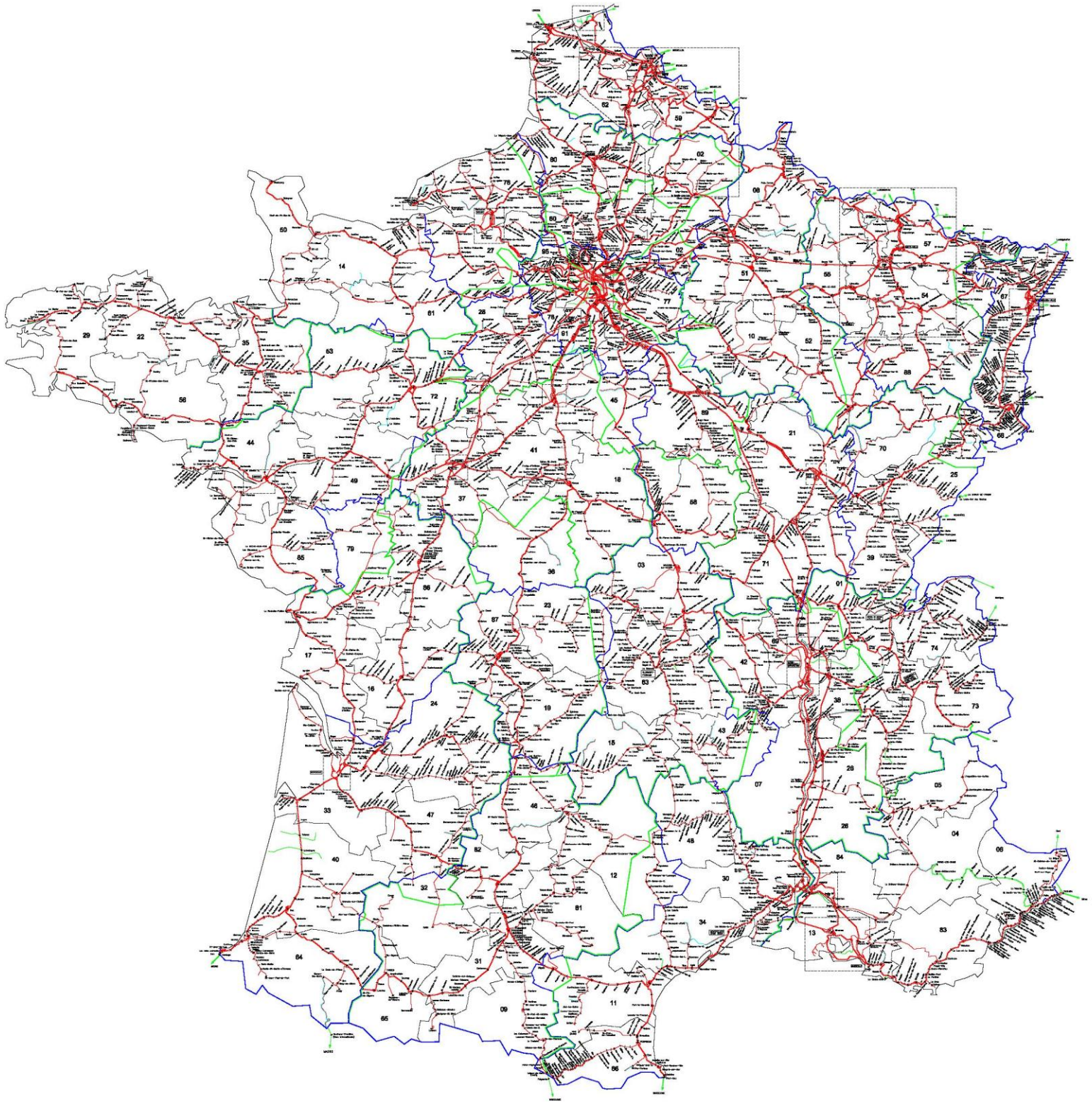
This report is the second report published by the EPSF; it must be remembered that the EPSF was set up in 2006. Preparatory work lasting roughly one year and carried out by the Ministry of Transport enabled the EPSF to come into operation very quickly, to assume all its missions and to be recognised by all the actors in the rail system from the end of the year. The speed of its integration into the railway landscape indicates that the right organisational and work decisions were taken which contributed to the liberalisation of the national rail network without undermining safety levels. Now, however, these initial results must be consolidated in three essential ways:

- Internally, to improve our functioning thanks to the quality approach launched in the summer of 2007.
- In France, to guarantee the continuing coherence of the rail system by promoting exchanges between all the rail operators and by monitoring in particular the safety of activities carried out at interfaces.
- In Europe, to step up exchanges of information and good practices with the other national safety authorities and with GERA, and to develop in particular mutual recognition agreements.

The EPSF should also continue to be careful in relation to fragile aspects of network operation, and it should where necessary act as a force to ensure improvement by making proposals. In this respect, there are two particular concerns that were still valid at the time of publication of this report:

- The new mechanism to control the safety of traffic comprising wagons has not been completed. With its many open points, the STI wagon cannot for the moment constitute a sufficient reference for acceptance. Moreover, the application in July 2006 of the 1999 Convention concerning International Carriage by Rail (COTIF) raises problems in relation to monitoring maintenance which must be solved quickly. In fact, Directive 2004/49 states that railway undertakings are responsible for the safety of their trains, but they are now experiencing problems in obtaining assurance of the good condition, in safety terms, of the wagons making up their trains. Solutions that are at least transitional must therefore be found and implemented urgently until a mechanism that provides sufficient guarantees of both the manufacture and operation of wagons can be devised.
- During the audit carried out by the Lausanne *Ecole Polytechnique fédérale* on the national rail network, at the joint request of the RFF and the SNCF, it emerged that a considerable part of the network was showing signs of ageing. The derailment which occurred at Saint-Flour also highlighted the problem of maintaining lines in IUR groups 7 to 9 and of maintaining safety despite compliance with maintenance rules. A common action plan was proposed by the RFF and SNCF. The implementation of the plan to renovate the network will permit the gradual upgrading of the oldest infrastructure. However, because the work is staggered over time, increased vigilance will be required still for several years and, where appropriate, the maintaining of certain operating restrictions in order to be able to continue guaranteeing the safety of traffic.

Annex A – Railway Structure Information
Annex A.1. Map of the national rail network



Annex A.2. – List of Railway Undertakings (newcomers) and the Infrastructure Manager

Railway Undertaking	Address Website	Safety Certificate (date of the order)	Commercial Service in 2006	Type of traffic	Number of locomotives (1)	Number of wagons (1)	Number of drivers (1)	Volume of freight transport (1)
CFL	9, place de la gare L-1616 – Luxembourg Luxembourg www.cfl.lu	29/03/2006	No commercial service					
CONNEX CFTA Cargo VEOLIA Cargo France	 15, rue des Sablons 75016 – Paris France www.veolia-transport.com	29/12/2004 Avt 21/09/2005 28/11/2006	13/06/2005 between Verdun and Dillingen	 All types of freight y/c MD	 9	 193 (rented)	 39	 124 000 000 of Tkm

EUROPORTE 2	37, rue des Mathurins 75008 – Paris France www.eurotunnel.com	22/10/2004	No commercial service					
Railway Undertakings	Website address	Safety Certificate (date of the order)	Commercial service in 2006	Type of traffic	Number of locomotives	Number of wagons	Number of drivers	Volume of freight transport
EWSI		03/10/2005 Avt 03/02/2006 Avt 19/04/2006	12/05/2006					
ECR	60, avenue Hoche 75008 – Paris France www.eurocargorail.com	01/12/2006	01/12/2006	All types of freight	13 (Diesel)	600 (customers or rented)	31	142 000 000 of de Tkm

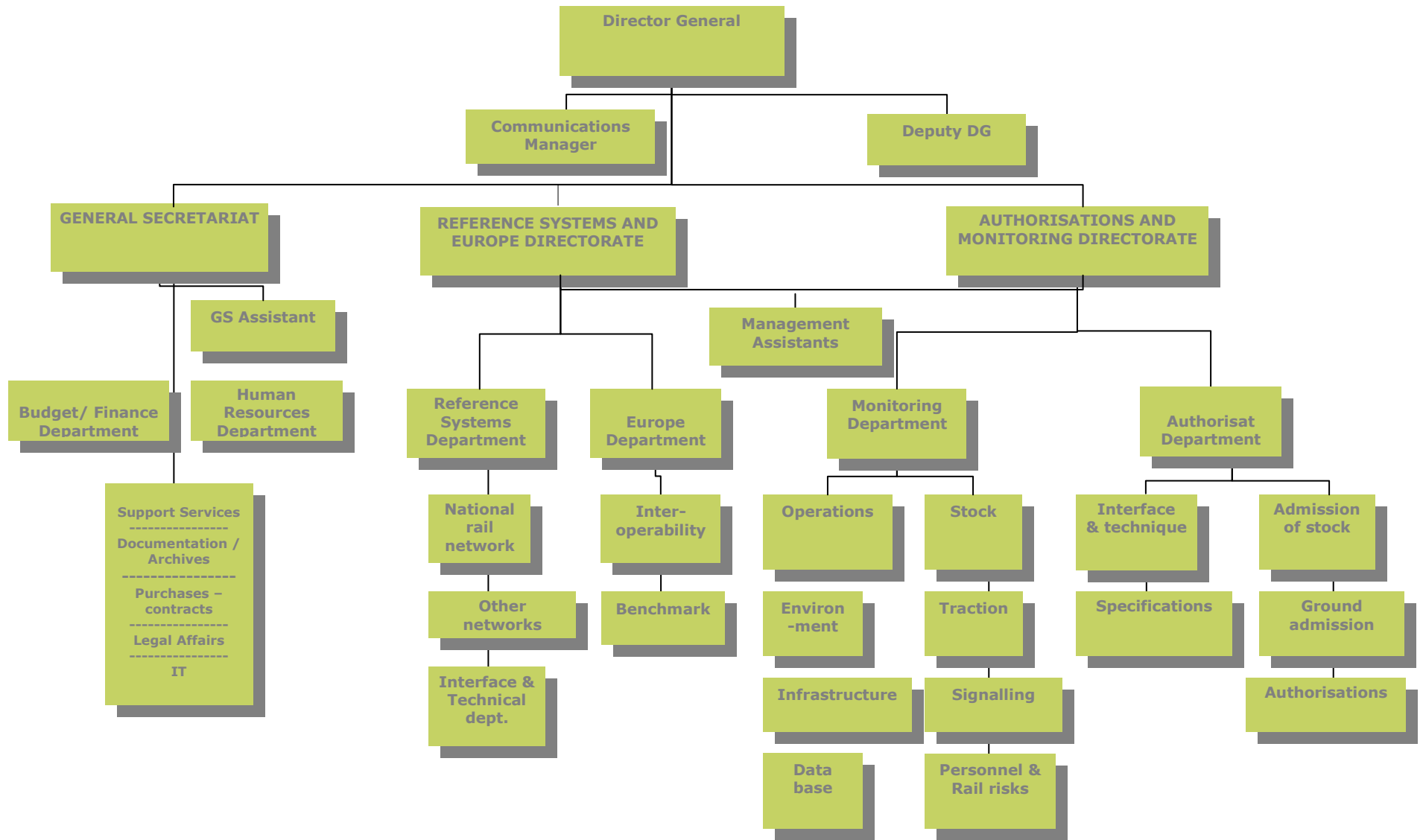
SNCB, B-CARGO	80, rue des deux gares B1070 – Brussels Belgium www.bcargo.be	03/02/2006	No commercial service					
SNCF	34 rue du Commandant Mouchotte 75699 Paris Cedex 14 France www.sncf.com	/	Commercial service prior to 2006	All types	6577	Wagons, networks: 32770 Wagons P: 59059	Approx. 18000	40.92 billions Tkm
RAIL4CHEM	Schützenbahn 60 D-45127 – Essen Germany www.rail4chem.com	27/01/2006	Pas de service commercial					
SECORAIL	3, rue des Beaunes 78400 – Chatou France www.seco-rail.com	01/12/2006	Pas de service commercial					

(1): figures supplied by the undertakings

A single infrastructure manager runs the national rail network: the RFF (*Réseau Ferré de France*) which has the support of the SNCF as the delegated infrastructure manager for carrying out maintenance and operating activities.

The IM operating the national rail network does not yet have safety authorisation.

Annex B – Organisation Chart of the EPSF



Annex C – CSIs data – Definitions applied

C.1. Indicators relating to accidents

Accidents	2000	2001	2002	2003	2004	2005	2006
Train collisions including with obstacles (with exception of level crossings)	65	54	65	54	45	43	48
Derailments of trains	26	25	27	26	20	23	42
Accidents at level crossings							
- without pedestrians	151	157	162	174	111	118	127
- with pedestrians	20	17	15	24	16	12	13
Accidents involving persons caused by the rolling stock in operation							
- falls from trains	38	33	30	31	13	6	16
- hit by a train (not at level crossings)	66	78	61	62	57	56	58
Suicides and attempted suicides	358	368	374	422	323	415	351
Fires in the rolling stock	54	51	56	50	45	63	62
Total accidents not including suicides	420	415	416	421	307	321	366

Total number of people seriously injured and killed (not including suicides)

		2000	2001	2002	2003	2004	2005	2006
Passengers	Seriously injured	24	22	19	27	6	8	17
	Killed	15	11	24	6	6	5	13
	Total	39	33	43	33	12	13	30
Members of staff of all undertakings including subcontractors	Seriously injured	4	4	7	5	3	1	10
	Killed	6	3	5	5	5	3	5
	Total	10	7	12	10	8	4	15
Users of level crossings	Seriously injured	20	22	19	14	13	18	13
	Killed	49	45	38	61	38	38	38
	Total	69	67	57	75	51	56	51
Third parties (unauthorised persons on the tracks)	Seriously injured	18	35	32	32	19	15	30
	Killed	52	54	37	34	44	33	44
	Total	70	89	69	66	63	48	74
All categories	Seriously injured	66	83	77	78	41	42	70
	Killed	122	113	104	106	93	79	100
	Total	188	196	181	184	134	121	170

Indicators relating to incidents which occurred and near-misses

	2005	2006
Broken rails	419	346
Track buckles	/	171
Signalling breakdowns	322	290
Passing of signals when closed	108	110
Breaking of rolling stock wheel or axle	/	0
Premature arrival on occupied tracks	58	49
Collision into back of train (work site)	/	28
Dispatching without written order	/	33
Authorisations to cross without checking	/	15
Irregular entry into occupied block	6	1
Runaways	11	6
Serious braking breakdown	7	3
Serious incidents involving dangerous goods	4	1

Cost of all accidents, working hours lost as a result of accidents

Indicators not available

Equipment underpinning the technical safety of infrastructure and implementation

Tracks equipped with an ATP system	2003 total	2003 %	2004 total	2004 %	2005 total	2005 %	2006 total	2006 %
Automatic block	14800	47.75%	14967	48,46%	15191	50.66	15245	50.95
Track-machine transmission	1447	4.66%	1447	4.68%	1447	4.83	1447	4.84
Total	16247	52.42%	16414	53.15%	16638	55.49	16692	55.79

Level crossings	2003 total	2003 per km	2004 total	2004 per km	2005 total	2005 per km	2006 total	2006 per km
Automatic	15207	0.49	15092	0.49	15034	0.50	14952	0.50
Guarded	1862	0.06	1905	0.06	1866	0.06	1852	0.06
Total	17069	0.55	16997	0.55	16900	0.56	16804	0.56

Safety management, RUs and IM

Indicators not available

C2. National definitions used

Type	Conditions
Collisions between types of rail vehicles (including in terms of cargo)	On the track: all In stations (including in yards and on service tracks): in case of serious consequences
Collisions with an obstacle (or animal)	On the track: all In stations (including in yards and on service tracks): in case of serious consequences
Collisions, derailment of other rail vehicles (rail inspection trolleys, push-car, engineers' train for work on the track ...)	On the track: all In stations (including in yards and on service tracks): in case of serious consequences
Derailments	On the track: all In stations (including in yards and on service tracks): in case of serious consequences
Accidents on level crossings	Collisions between rail vehicles and level crossing users (including pedestrians): all Other cases: in case of major disruptions
Individual accidents (staff members, passengers or other persons), caused by moving rail vehicles: falls, hits (including coupling operations)	In case of physical injuries
Suicides or attempted suicides if hit by a rail vehicle	All
Fires in a train (in case of fire brigade intervention)	Train transporting passengers: all Other types of traffic: in the case of major breakdowns
<p>Physical injuries = Death or serious injury</p> <ul style="list-style-type: none"> • All persons (staff members, passengers or third party) killed instantly or who die within thirty days as a result of a rail accident must be regarded as killed (European definition applied since 2004); • All persons injured who were hospitalised for more than 24 hours as a result of an accident must be regarded as seriously injured (European definition applied since 2004). 	
<p>Staff member: staff member employed or subcontracted (European definition applied since 2004) Passenger: person in possession of a ticket Third party: all other persons</p>	

Annex D – Important changes in rail legislation and regulation

<p>Law No 2006-10 of 5 January 2006 on transport safety and development</p> <p>(also concerns other modes of transport)</p>	<p>Establishment of the EPSF: membership of the board of directors, staff employment and clearance, resources.</p> <p>Provisions on the organisation of rail transport and provisions applicable to investments in the national rail network: clarifications concerning RFF.</p>
<p>Decree No 2006-369 of 28 March 2006 on the missions and articles of association of the EPSF</p>	<p>Missions, organisation and functioning of the EPSF.</p> <p>Financial and accounting provisions.</p>
<p>Decree No 2006-1279 of 19 October 2006 on the safety of rail transport and the interoperability of the rail transport system</p>	<p>Provisions on the safety of rail traffic, relating to design, production and operation.</p> <p>Provisions on documentation, the management of emergency situations, information obligations, authorisations, safety certificates and declarations, and the training and abilities of staff members.</p> <p>Provisions on the interoperability of the rail transport system, and on the design and production of public rail transport systems.</p>
<p>Decree No 2006-1534 of 6 December 2006 adopted by virtue of the application of Articles 1, 1-1 and 1-2 of Law 97-135 of 13 February 1997 setting up the public body 'Réseau Ferré de France', with a view to regenerating the rail transport system</p>	<p>Provisions on the missions of the SNCF and RFF.</p>
<p>Order of 7 December 2006 amending the Order of 23 June 2003 on the safety regulation applicable to the national rail network</p>	<p>List of regulations and laws</p>
<p>Decree No 2006-212 of 23 February 2006 on the safety of activities of vital importance</p>	<p>Reform of the surveillance and protection regime for the most sensitive installations in the defence of the Nation and State security.</p> <p>Harmonisation of provisions applicable to installations of vital importance and to sensitive points and networks.</p> <p>Clarifications concerning the concept of operator of vital importance and identification of sectors of activity of vital importance.</p>
<p>Order of 5 January 2006 on the information required for the drafting of the special response plans</p>	<p>Explanations concerning the information to be provided to the prefect responsible for drawing up the special response plans and for preparing emergency plans.</p>
<p>Order of 5 January 2006 on the consultation of the general public concerning the draft special response plans of certain installations</p>	<p>Clarification of the procedure to be implemented.</p>

Annex E – The development of safety certification and authorisation

E.1. Safety certificates according to Directive 2001/14/EC

Number of safety certificates issued according to Directive 2001/14/EC, held by railway undertakings licensed during 2006	in your Member State	
	in another Member State	

E.2. Safety certificates according to Directive 2004/49/EC

Not applicable.

E.3. Safety authorisations according to Directive 2004/49/EC

Not applicable.

E.4. Procedural Aspects – Safety Certificates Part A

Not applicable.

E.5. Procedural Aspects – Safety Certificates Part B

Not applicable.

E.6. Procedural Aspects – Safety Authorisations

Not applicable.