



MINISTÈRE DU DÉVELOPPEMENT DURABLE
ET DES INFRASTRUCTURES
Département des transports

Administration des chemins de fer

MINISTRY OF SUSTAINABLE DEVELOPMENT
AND INFRASTRUCTURE (MIDDI)

Transport Department

Luxembourg Railway Authority

Annual Report 2010 of the Luxembourg Railway Authority

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CONTENTS

A.1 Object of the report	3
A.2 SUMMARY	3
B. INTRODUCTION	5
1. <i>Introduction to the report</i>	5
2. <i>Information on the railway structure</i>	5
3. <i>Summary - General trend analysis (progress of railway safety, certification, etc.)</i>	6
C. ORGANISATION	7
1. <i>Presentation of the organisation</i>	7
2. <i>Organisational charts</i>	8
3. <i>Activities</i>	9
D. The development of railway safety	11
1. <i>Initiatives to maintain/improve safety performances</i>	11
2. <i>Detailed information on the analysis of the trends</i>	15
3. <i>Results of the safety recommendations</i>	16
E. Important changes in legislation and regulation	18
1. <i>Legislation</i>	18
2. <i>Regulations</i>	19
F. The development of safety certification and authorisation	20
1. <i>National legislation - dates of introduction - availability</i>	20
2. <i>Numerical data (Annex E)</i>	20
3. <i>Procedural aspects</i>	21
G. Monitoring of the railway undertakings and infrastructure managers	24

H. Report on the application of the CSMs to the risk assessment	26
I. Conclusions – Priorities.....	27
J. Sources of information	28
K. Annexes.....	28

A.1 OBJECT OF THE REPORT

This report covers the activities of the **ACF** (**A**dmistration des **C**hemins de **F**er) [Luxembourg Railway Authority] in its capacity as National Safety Authority during the year 2010.

The objectives of the report are defined in Article 5 of the law of 22 July 2009 on railway safety. The report must contain information on:

- a) progress with railway safety, including an inventory of the Common Safety Indicators (CSIs) defined in Annex 1 of Directive 2004/49/CE.
- b) important amendments made to the rules applicable to railway safety,
- c) changes in certification and authorisation as far as safety is concerned, and
- d) results of the monitoring of the infrastructure manager (IM) and railway undertakings (RUs) and the lessons that have been learnt.

As the above mentioned law requires ACF to organise the allocation of the paths and the access charges, this report also covers a brief overview of the services provided by ACF in this area.

A.2 SUMMARY

The National Safety Authority, known as the '**A**dmistration des **C**hemins de **F**er (**ACF**); was set up by the law of 22 July 2009 on railway safety. This law is the transposition of safety Directive 2004/49/EC into Luxembourg legislation.

2010 is the second annual safety report prepared by ACF. Thus a meaningful analysis of trends is not yet possible.

The ACF annual safety report 2010 deals with the activities of ACF and the Common Safety Indicators (CSI).

In 2010, Luxembourg issued one safety certificate (type A and B) according to the safety Directive. Further a request for a safety certificate Part B and a request for a safety authorisation were registered: for both the evaluation process is ongoing.

Also, ACF started to carry out safety audits in 2010, but due to limited human resources only two combined audits (on Part A and B of the certificates of two RUs) were completed.

The following major safety-related events were recorded:

Events	2010	2009
Accidents at level crossings, including accidents involving pedestrians	2	5
Train collisions	1	0
Accidents to unauthorised persons on railway premises hit by moving vehicles (suicide could not be proven reliably)	0	2
Employee died during work caused by rolling stock in motion	0	1
Suicides	3	4
Broken rails	1	12
Track buckles	1	7
Wrong-side signalling failures	3	2
Signal passed at danger	4	1

Hereafter are some safety-related infrastructure characteristics:

Infrastructure characteristics	2010	2009
Tracks equipped with the Automatic Train Protection System MEMOR II+	100%	100%
Main fixed signals and caution fixed signals equipped with the Automatic Train Protection System MEMOR II+	100%	100%
Tracks equipped with ETCS Level 1	80%	59%
Main fixed signals and caution fixed signals equipped with ETCS Level 1	62%	48%
Active level crossings	106	107
Passive level crossings	32	35

B. INTRODUCTION

1. Introduction to the report

The annual report has been prepared in accordance with Article 18 of Directive 2004/49/EC and Article 5 of the law of 22 July 2009 regarding railway safety. The structure of this report is in accordance with the recommendations (model and guide) of the European Railway Agency.

This safety report is the second prepared by the Grand Duchy of Luxembourg.

It has been prepared, first, based on information supplied by the railway undertakings (RUs) which had a safety certificate valid in Luxembourg for the year 2010, and by the infrastructure manager (MI) through their annual reports on safety, and, second, by adding some information produced by ACF as part of its activities.

As ACF was only established during the financial year 2009 and at present is still in the setting-up phase (establishment of the internal organisation and recruitment of staff), It has carried out the first audits of the RUs as far as possible but not with the frequency necessary. Thus the report only contains limited data regarding paragraph d) of Article 5 of the law of 22 July 2009 on railway safety.

Regarding the common safety indicators ACF has applied Commission Directive 2009/149/EC amending the common safety indicators and the common methods to calculate the costs of accidents of Directive 2004/49/EC of the European Parliament and of the Council.

In accordance with Article 5 of the law of 22 July 2009, ACF has sent a report to the Ministry of Sustainable Development and Infrastructures on the work it has done and a copy to the European Railway Agency. The report can be consulted on its internet site www.railinfra.lu.

ACF also supplied a paper version for a restricted distribution to national stakeholders and other interested people.

2. Information on the railway structure

- Map of the network (see point A.1 of Annex A)

The information in the Annex has been supplied by CFL, [*Société Nationale des Chemins de Fer Luxembourgeois* – Luxembourg National Railways] the manager of the Luxembourg railway infrastructure.

- For the list of the railway undertakings and infrastructure managers (see points A.2; A.2.1 and A2.2 of Annex A)

3. Summary - General trend analysis (progress of railway safety, certification, etc.)

As this is only the second safety report prepared by the Grand Duchy of Luxembourg it is not possible to give details of how railway safety has evolved.

ERA has analysed the common safety indicators supplied to it in 2009. This analysis has not resulted in any recommendations for improvement. Thus, the level of safety can be considered as good. The safety indicators for 2010 remain in the order of magnitude of the preceding year and rail safety remains at a good level. There have been three serious railway accidents without anybody being killed or seriously injured. Among these accidents, there was a sideways collision of two trains following a fixed signal being passed at danger and two accidents on level crossings. During 2010 three suicides were recorded.

Several legal texts have been introduced into Luxembourg law amending or adding to the existing Luxembourg legislation and in particular, transposing the Interoperability Directive.

In 2010 safety certificates Part A and Part B in accordance with Directive 2004/49/EC were issued to an RU. At the end of 2010 two RUs were in possession of certificates A and B.

The Part A and B safety certificates have been prepared on the basis of the files presented by the applicant and discussions carried out with it. For the evaluation ACF has applied the assessment criteria given in the draft regulations of the European Commission for a common safety method for the assessment of conformity with the requirements for obtaining a safety certificate. The draft of this was prepared by ERA.

The two remaining safety certificates, prepared previously and in accordance with Directive 2001/14/EC expired at the end of 2010. One of the RUs concerned has requested a Part B certificate and the evaluation procedure is in progress.

An initial request to obtain a safety approval has been recorded and the evaluation is in progress.

C. ORGANISATION

1. Presentation of the organisation

ACE was created by Article 3 of the law of 22 July 2009 on railway safety. It is placed under the authority of the member of the government having the railway in his remit, at present the Ministry of Sustainable Development and infrastructure (MDDI).

The remits of ACE are defined in Articles 4.1, and 4.2 of the law mentioned above.

Article 4.1. *The Administration is responsible for the maintenance and improvement of the level of safety in the railway industry in conformity with the national and international provisions applicable. For this purpose it must carry out the following tasks in an open, non-discriminatory and transparent manner:*

- a) ensure that the rolling stock is duly registered and that the information relative to safety given in the national register prepared in accordance with Article 14 of the amended Directive 96/48/EC and Directive 2001/16/EC, should be accurate and kept up to date;*
- b) examine the files with a view to the publication, renewal, re-examination, amendment, withdrawal and suspension by the Minister, of safety certificates and authorisations in accordance with the provisions of the current law and the Grand Duchy Regulations, as well as checking that the conditions of validity are fulfilled;*
- c) check the conformity with the interoperability components laid down by the legislation and the regulations in force;*
- d) authorise in application of the legislation and the regulations in force the introduction of the sub-systems of a structural nature that make up the railway system used or operated in Luxembourg and check that they are used and maintained in accordance with the essential requirements that concern them;*
- e) carry out the tasks which are delegated to it in accordance with the current law and the regulations of the Grand Duchy for the introduction into service of the rolling stock used on the Luxembourg railway system, in particular the authorisation of the introduction of new or substantially modified rolling stock which is not yet covered by a TSI, and check that it is operated and maintained in accordance with the essential requirements that relate to it;*
- f) carry out the tasks delegated to it in accordance with the current law and the regulations of the Grand Duchy on the training and certification of the staff allocated to the tasks of safety on the Luxembourg railway system;*
- g) check, promote, apply, develop and publish the regulations regarding railway safety including the system of national safety rules;*
- h) assist and advise the Minister in carrying out his duties regarding railway safety and interoperability;*
- i) provide support to studies and activities connected with railway safety;*
- j) cooperate with its opposite numbers, in particular with a view to the harmonisation of the certification criteria for railway safety.*

Article 4.2. *The Administration has the task of ensuring equitable and non-discriminatory access to the railway infrastructure for all railway undertakings and avoidance of any abuse of the dominant position of one or several railway undertakings to the detriment of others. For this purpose it organises the allocation of paths and the system of tariffs for the railway infrastructure as laid down respectively in Articles 22 and 25 of the amended law of 11 June 1999 on the access to the infrastructure and its use.*

As specified in Article 32 of the law of 22 July 2009 it was officially set up on 1 August 2009.

At 31 December 2010, ACF was made up of a Director and three divisions.

- **The General Affairs Division** which has one member of staff doing the job of secretariat and finance.
- **The Interoperability and Safety Division** which has five members of staff:
 - Two are involved with the authorisation and introduction of railway rolling stock and associated subjects,
 - One ensures the coordination in matters of railway interoperability and safety between the European Commission (DG Move), ERA, MDDI and ACF as well as with other railway organisations,
 - One works on the preparation and revision of the various registers
 - One deals with the certification of railway undertakings, the infrastructure manager and the entities responsible for maintenance,
- **The Paths Division** has nine member of staff to deal with the allocation of paths and the charging thereof.

At the end of 2010 the number of staff had increased to 15.

The recruitment of other railway experts and the setting up of an organisation that meets national and international obligations continue to be among the principle objectives of ACF.

2. Organisational charts

Annex B

3. Activities

General Affairs Division

Management of administrative matters regarding staff, mail, purchase of office material, the telephone exchange, organisation of ACF staff travel arrangements, as well as the financial affairs of ACF.

Interoperability and Safety Division

a) European organisations

Participation in the plenary meetings of the European national safety authorities with ERA and in the related 'workshops'.

Participation in the meetings of the various working groups (TSI Wagons, TSI Locomotives and Passenger Vehicles, Mutual Acceptance of Rolling Stock, National Register of Vehicles, National Safety Rules, Entity in Charge of Maintenance) at the ERA at Lille. The decision of whether or not ACF should participate in the working groups depends on the importance of the subject compared with the availability of human resources.

Participation at the meetings the subject of which was the amendment of the BeNeFLuCh protocol for the numbering imposed by the ERA in application of the decision 2009/956 of the European Commission.

Signature of the protocol for the introduction of procedures for mutual recognition of conventional and high speed locomotives and rolling stock between the national railway safety authorities of Germany, Belgium and Luxembourg of 19 January 2010.

Signature of the protocol for the introduction of procedures for mutual recognition of conventional and high speed locomotives and rolling stock between the national railway safety authorities of Switzerland and Luxembourg of 18 October 2010.

Participation in the meetings of the Railway Interoperability and Safety (RISC Committee) at the European Commission on behalf of MDDI. This committee, composed of representatives of Member States of the European Commission and ERA, was set up by Directive 96/48 and deals with all the subjects concerned with railway interoperability and safety.

Active participation in different 'workshops' dealing with railway interoperability and safety organised by the European Commission.

b) National organisations

Participation in the MDDI working group for the transposition into Luxembourg law of Directive 2008/110/EC regarding the safety of the communities' railways.

c) Authorisation of sub-systems

Management of the file related to the request by a builder for authorisation to put a new class of locomotives into service built for the account of a railway undertaking.

Analysis of the files and taking decisions regarding requests for authorisation of rolling stock to run exceptionally on the Luxembourg railway system (176 cases dealt with).

Preparation of an authorisation to introduce an initial batch of nine locomotives acquired by the infrastructure manager to carry out maintenance work on the railway network.

Assessment of two files regarding approval as competent organisations in accordance with the Grand Ducal regulation of 1 June 2010 regarding railway interoperability.

Preparation of five authorisations to introduce a total of nine three car railcars.

Completion of the procedure opened in 2009 regarding an authorisation to introduce and register an initial batch of 60 special wagons for the railway motorway Bettembourg – Le Boulou and preparation of the authorisations to introduce and register a second batch of 45 wagons.

d) Certification regarding safety

Preparation of a guide for the application for a Part B safety certificate in accordance with Article 7-2 of the law of 22 July 2009 regarding railway safety.

Finalisation of the examination of the file regarding the application for the renewal of the certification of a railway undertaking.

Examination of the file for the application for the renewal of the certification of a railway undertaking (in progress) as well as the application regarding the safety approval of the infrastructure manager (in progress).

Paths Division

Allocation for the 2010 timetable valid from 13.12.2009 to 12.12.2010, of 1 515 paths of which 1 027 were for passenger traffic and 244 for freight traffic. 240 paths were for running empty trains and 4 paths were for service trains. These 1 515 paths represent 340 806 trains planned to run 8 007 842 km.

29 advice timetables regarding 833 amendments, creations or cancellations of paths have been published during the monthly updates of the 2010 timetable.

Preparation of 568 traffic advices concerning 19 110 modifications, creations or cancellations of trains at short notice (request up to day 5).

Preparation of the 2011 timetable, beginning on 13.12.2010 and remaining in force until 11.12.2010. 1 625 paths have been allocated of which 1 165 are for passenger trains, 237 for freight trains and 223 for empty trains.

Publication of 2 982 traffic advices (short term) by post 24h/24h between October and December.

Amendment and publication of the network reference document (DDR) 2011.

Participation at the General Assembly of RailNetEurope (RNE) in Vienna on 1 December, as well as in various working groups of RNE.

Participation in the meetings of the Forum Train Europe (FTE).

D. THE DEVELOPMENT OF RAILWAY SAFETY

1. Initiatives to maintain/improve safety performances

Table D.1.1 – Safety measures triggered by accidents/precursors to these

Accidents/precursors which led to the measure			Safety measure decided
Date	Place	Description of the event	
17/02/2010	Bettembourg marshalling yard	During a change of driving cab, a freight train began to move and passed a fixed shunting signal at danger.	<ul style="list-style-type: none"> – The train driver's licence to drive has been suspended by the RU. – A notice on this subject has been prepared and distributed to the staff concerned by the RU.
17/02/2010	Differdange	While work was being done on the catenary, the operating manager inadvertently despatched a passenger train into the protection zone.	<ul style="list-style-type: none"> – The operating manager was removed permanently from his duties as far as a safety post is concerned.
26/06/2010	Line from Luxembourg to Troisvierges Level crossing 21 at Lintgen	Accident between an empty coaching stock train and the trailer of a lorry fouling the track at level crossing 21.	<ul style="list-style-type: none"> – Campaign to educate the public on 'Safety at level crossings' by CFL (Luxembourg State Railways) *
30/09/2010	Line from Luxembourg to Wasserbillig Level crossing 64 at Munsbach	A freight train struck a private car fouling the track at level crossing 64.	
15/10/2010	Bettembourg	A train was hit sideways following a signal passed at danger by another train.	<ul style="list-style-type: none"> – Immediate suspension of the driver who passed the signal at danger by the RU. – Checking of his professional knowledge by a qualified instructor – Examination of medical suitability and psychological balance

* Neither the infrastructure manager nor the railway undertaking were responsible. The safety installations of the level crossings operated normally at the time of the incident,

Accidents/precursors which triggered the measure			Safety measures decided
Date	Place	Description of the event	
20/10/2010	Line from Luxembourg to Kleinbettingen	While work was being carried out on the line a passenger train had been despatched into a barred line	<ul style="list-style-type: none"> – Staff were reminded of the arrangements regarding the establishment of communications in relation with the safety of the running of trains – Publication of a note dated 17/12/2010.
21/04/2010	Luxembourg Station	Signal passed at danger without authorisation	– Immediate suspension of the driver by the RU.
19/05/2010	Belval Usines		– Checking of his professional knowledge by a qualified instructor
06/10/2010	Luxembourg - Dommeldange		– Examination of medical suitability and psychological balance
20/12/2010	Bettembourg	The driver had to make an emergency brake application following the presence of two members of staff in a point switch.	<ul style="list-style-type: none"> – Analysis of the incident and preparation of a causality tree. – Staff concerned were reminded of the arrangements in this matter.
		Signalling failures that affected safety	<ul style="list-style-type: none"> – Detection of the tracks where there is a risk of non-shunting of a track circuit following the oxidation (rust) of the surface of the rails – Taking local measures (instruction and note) by the IM.

Table D.1.2 – Safety measures resulting from other reasons

Description of the cause	Description of the field concerned	Safety measures taken
<ul style="list-style-type: none"> – Introduction of new techniques by the IM – Results of audits carried out by the IM – Feedback from IM 	<ul style="list-style-type: none"> – General Regulations for Technical Operation (GRO) 	<ul style="list-style-type: none"> – Introduction of the amendments to Annex 1 of the GRO: Amendment No 3 dated 15/05/2010 Amendment No 4 dated 24/10/2010 – Draft amendments of the GRO (in progress): GRO 04: Running of trains at signal boxes GRO 06: Additional arrangements for electrified lines GRO 10: Work on the track or close to the track
	<ul style="list-style-type: none"> – Frontier instructions 	<ul style="list-style-type: none"> – Frontier instructions: The new frontier instruction for BELLAIN/GOUVY came into force on 22/04/2010. The reference instruction 'SNCF/CFL Common Directive' on the safety management in the cross-border zones between France and Luxembourg came into force on 20/07/2010
	<ul style="list-style-type: none"> – ETCS 	<ul style="list-style-type: none"> – ETCS (in progress): New regulation which formed the subject of Annex III to the GRO
	<ul style="list-style-type: none"> – Local instructions for stations 	<ul style="list-style-type: none"> – Preparation and revision of local instructions for the stations of Luxembourg, Merttert-Port and some remotely controlled signal boxes of line 1 (in progress) – Preparation of the operating check-lists (in progress)
<ul style="list-style-type: none"> – 	<ul style="list-style-type: none"> – Communication methodology (Service Instruction No 99) 	<ul style="list-style-type: none"> – Adaptation of the regulations concerning the use of certain methods of communication by electromagnetic waves (in progress)

Description of the cause	Description of the field concerned	Safety measures taken
<ul style="list-style-type: none"> – Introduction of new techniques by the IM – Results of audits carried out by the IM – Feedback from IM 	<ul style="list-style-type: none"> – Training of IM staff (Service Instruction No 74) 	<ul style="list-style-type: none"> – Adaptations of the regulations concerning the training of IM staff (in progress) – Refresher courses
	<ul style="list-style-type: none"> – Level crossing (Service Instruction No 92) 	<ul style="list-style-type: none"> – Adaptation of the regulations concerning level crossings (in progress)
<ul style="list-style-type: none"> – Introduction of new rules by the IM 	<ul style="list-style-type: none"> – Signalling situation plans 	<ul style="list-style-type: none"> – Introduction on 09/08/2010 of a new edition of the Service Instruction 'Conventional signs'
<ul style="list-style-type: none"> – Feedback from IM 	<ul style="list-style-type: none"> – Infrastructure 	<ul style="list-style-type: none"> – Increase of the rate of track inspections (letter FI/I/I of 12/04/2010) – Fitting the safety forks (letter FI/V/3 of 09/07/2010).
<ul style="list-style-type: none"> – Feedback from IM 	<ul style="list-style-type: none"> – General Regulations for Technical Operation (GRO) 	<ul style="list-style-type: none"> – Programming in advance the execution of the checking of the simple release CDs during the planning of work on the track
<ul style="list-style-type: none"> – Introduction of new techniques by the IM and the RUs 	<ul style="list-style-type: none"> – Control-command and signalling system 	<ul style="list-style-type: none"> – Continuation of the programmes to implement ETCS level 1 on the infrastructure and rolling stock sides
<ul style="list-style-type: none"> – Confusion on the identification of the correct signal to be observed in a zone at risk protected by a multitude of different signals 	<ul style="list-style-type: none"> – The driving of trains 	<ul style="list-style-type: none"> – Publication of a safety flash which encourages the drivers to pay attention to the location of the signals to be observed

2. Detailed information on the analysis of the trends

Salient facts	2010	2009
Accidents at level crossings including accidents involving pedestrians	2	5
Train collisions, including those with obstacles within the loading gauge	1	0
Fatal accidents to trespassers on railway premises struck by moving rolling stock	0	2
Fatal accidents to staff	0	1
Suicides	3	4
Broken rails	1	12
Cases of track buckling	1	7
Signalling failures that affected safety	3	2
Signals passed at danger without authorisation	4	1

Infrastructure characteristics		
Lines fitted with the MEMORII+ automatic train protection system	100%	100%
Main fixed signals and advance fixed signals fitted with MEMORII+	100%	100%
Lines fitted with ETCS level 1	80%	59%
Main fixed signals and advanced fixed signals fitted with ETCS level 1	62%	48%
Level crossings with active equipment	106	107
Level crossings with passive equipment	32	35

In 2010 no member of staff or of the public was killed or seriously injured and only three suicides were recorded. This is a marked improvement compared with 2009. Regarding the warning signs of accidents/incidents broken rails and track twists have reduced considerably, which is certainly due to better inspection of the track (see Table 2.1 in Chapter 1. Signalling failures and passing signals at danger have increased.

The implementation of ETCS level 1 on the infrastructure side is constantly progressing while the total number of level crossings has been reduced by four units.

Thus, the overall level of safety can be considered as good. However, the medium or long-term trend of the common safety indicators cannot be supplied because they were only produced for the first time in 2009.

3. Results of the safety recommendations

L'Administration des Enquêtes Techniques (AET) [Administration for Technical Investigations] was set up by the law of 19 May 2008. In 2009 it published its first safety recommendations together with the *Bureau d'Enquêtes sur les Accidents de Transport Terrestre* (BEA-TT France) [Land Transport Accident Investigation Bureau], as part of the technical report on the railway accident at Zoufftgen, an accident which occurred in 2006 and resulted in the death of six people.

Following this accident, 21 recommendations were made, of which 15 have been implemented or are in the course of being implemented, 5 have been rejected and 1 did not concern the staff of Luxembourg State Railways. All these recommendations were given in the report for 2009; below there is some **additional information** on the progress with certain recommendations:

Recommendation R7 (CFL): re-train the Bettembourg CCP staff on the use of IPCS by adapting this training to suit the current practices at CFL and to ensure that their knowledge is regularly updated.

The initial IPCS (*Installations Permanent de Contra-Sens*) (Permanent Installations for wrong line working) training was provided by the SNCF Training Centre. The local managers of Bettembourg station attended this course in 2009 and subsequently carried out the training specifically adapted to Bettembourg signal box. They now monitor that the knowledge is maintained.

The training of the local managers of Bettembourg Station was carried out in 2010.

Recommendation R8 (CFL, SNCF, RFF): examine the feasibility of extending SAAT (*Système d'Annonce Automatique des Trains SNCF*) [the SNCF Automatic Train Announcing System ATAS] to Bettembourg, by displaying the first train announced on the VCP (Visual Control Panel).

The automatic train announcement systems such as the ZNL 800 [*Zugnummernmeldeanlage* – train number announcement system] of CFL or the ATAS of SNCF are only aids to operation and never affect the safety of train running. They can only contribute indirectly to the improvement of safety.

CFL and SNCF have taken the decision to develop an interface to connect the ZNL 800 and ATAS systems. This interface is in the trial phase between Longwy (SNCF) and Rodange (CFL).

The introduction of this installation is scheduled for 1 January 2011.

Recommendation R13 (CFL): provide Bettembourg CCP staff (and if necessary staff elsewhere using similar systems) with further training on electric traction and ensure that their knowledge is kept up to date.

The question of how to make an emergency power cut-off has been raised with the traffic managers regularly in the training courses. A note on this subject was published in April 2008.

In 2010 permanent monitoring has been provided by means of safety audits.

Recommendation R15 (CFL): based on an analysis of staff activity, examine the safety regulations so that the division of the safety tasks to be performed in a signal box like the one at Bettembourg CCP, by the different employees in the box (Traffic Controller, Train Announcer and Signalmen), corresponds both to the employee responsibilities and to operational constraints.

A new organisation at Bettembourg CCP was introduced on 16 July 2007.

Two operating managers with defined responsibility have been put in place; one operating manager for the station sector and one for the frontier section. The post of train announcer has been abolished.

Recommendation R17 (CFL): examine the possibility, when passing on safety information at handover, of using standardised documents (on the national or local level), to ensure that this information can be traced and provides comprehensive coverage of all the information (and only that information) required by the person taking over.

The different registers and note books used at signal boxes are standardised documents and their use is obligatory. Both the completion and the correct annotation of the documents are checked.

Since 2010 the safety information is transmitted to staff electronically by personal-mail.

Recommendation R18 (CFL, SNCF and RFF): prepare staff responsible for safety to deal with the emergency situations that are most likely to occur, including in particular:

- identifying the risks to be dealt with;
- formalising reaction scenarios;
- training and the staging of exercises.

Multifunctional exercises take place ***at least once a year*** between SNCF and CFL and this is done in the context of a serious situation.

Since September 2006, CFL have a computerised control post simulator that can be used by the control post operators during their retraining, which, among other things, can simulate the measures to be applied during serious operating situations. The feedback received from the operators and trainers shows that the use of this simulator definitely increases the quality of the continuous training.

Recommendation R21 (CFL): enable local managers to be on the spot and have the necessary means to check and monitor the staff on the ground.

Since February 2009 a reorganisation of the operational zones has been put in place with the creation of a railway safety assistance section which has the particular job of supervising and managing the control posts from the point of view of safety.

Since 2010 some periodic coordination meetings have been held between the operational zones in order to strengthen the feedback of experience.

E. IMPORTANT CHANGES IN LEGISLATION AND REGULATION

1. Legislation

- The law of 3 August 2010 on the regulation of the railway market:

The object of this law is:

- A) the transposition into National Law of Directive 2007/58/EC of the European Parliament and the Council of 23 October 2007 amending Directive 91/440/EEC on the development of the railways of the communities and Directive 2001/14/EC on the allocation of the railway infrastructure capacity and the charges for the railway infrastructure;
- B) the creation of an organisation to control the railway market;
- C) to amend the amended law of 11 June 1999 on access to the railway infrastructure and its utilisation;
- D) to amend the amended law of 10 May 1995 on the management of the railway infrastructure.

(Publication in Mémorial A N° 135 of 12-08-2010)

- Grand Duchy regulation (GDR) of 27 February 2010 amending the amended Grand Duchy regulation of 31 March 2003 defining the procedure for the application of charges for the infrastructure of the Luxembourg railways and establishing a system of improvement of the performances

The object of this Grand Duchy regulation is to introduce into the system of charges for the use of the railway infrastructure a system of improvement of performances in accordance with the provisions of the European legislation.

(Publication in Mémorial A N° 40 of 15-03-2010)

- **Grand Duchy regulation (GDR) of 1 June 2010 on railway interoperability**
The object of this Grand Duchy regulation is to transpose Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the railway system within the European Community such as amended by Directive 2009/131/EC of the Commission of 16 October 2009 amending Annex VII of Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the railway system within the Community
(Publication in Mémorial A N° 91 of 14-06-2010)
- **Grand Duchy regulation (GDR) of 16 August 2010 on the certification of train drivers**
The object of this Grand Duchy regulation is:
 - a. to transpose into national law Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of drivers who drive locomotives and trains on the railway system of the Community;
 - b. to create a regulatory framework regarding the certification of drivers who drive locomotives and trains on the Luxembourg railway system.
 (Publication in Mémorial A N° 152 of 23-08-2010)

2. Regulations

- **Rectification of Annex I to the General Regulations for Technical Operation (GRO) by the Infrastructure Manager**
This document contains additional information and details for application of the provisions of the General Regulations for Technical Operation (GRO).
- **New Frontier Instruction 142 Infrabel / 1 CFL**
The instruction contains a description of the cross-border section BELLAIN-GOUVY and specifies the operating conditions.
- **New SNCF – CFL instruction documentation on safety management in the frontier zones between France and Luxembourg**
The instruction documentation formalises the safety management in the frontier zones between France and Luxembourg.
- **New local instruction for Wasserbillig Station**
The local instruction gives a description of the station, indicates the features of its installations, explains the organisation and the operation of its service and gives the local operating directives for the application of the provisions of the RGO or the Service Instructions.

F. THE DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

1. National legislation - dates of introduction - availability

- 1.1. Date from which safety certificates (Part A and Part B) were issued in accordance with Article 10 of Directive 2004/49/EC.

Chapter IV of the law of 22 July 2009 regarding railway safety contains the general provisions for obtaining a safety certificate Part A and Part B. The law was published on 27 July 2009 in Mémorial (The Official Journal of the Grand Duchy of Luxembourg). This law came into force on 1 August 2009.

The Grand Duchy regulation of 21 September 2009 on the certification of the safety of railway undertakings specifies the details of the conditions for obtaining and validating safety certificates as well as the procedures for their preparation. It also lays down the conditions and the procedures for renewing, re-examining and withdrawal of the certificates. The regulation in question came into force on 5 October 2009, the date of its publication in Mémorial.

- 1.2. Date from which safety authorisations were issued in accordance with Article 11 of Directive 2004/49/CE.

Chapter V of the law of 22 July 2009 on railway safety contains the general provisions for obtaining a safety authorisation. This law came into force on 1 August 2009.

The Grand Duchy regulation of 21 September 2009 on the certification of the safety of the infrastructure manager specifies the conditions for obtaining and validating the safety authorisation as well as the procedures for its preparation. It also lays down the conditions and procedures for renewing, re-examining and withdrawal of the authorisations. The regulation in question came into force on 5 October 2009, the date of its publication in Mémorial.

- 1.3. Provision of national safety rules or other relevant legislation to railway undertakings and infrastructure managers.

The Luxembourg legal texts are officially published in Mémorial (The Official Journal of the Grand Duchy of Luxembourg). They can also be consulted at any time on the Legilux website (<http://legilux.public.lu/>).

The national safety rules relative to Annex II of Directive 2004/49/EC are distributed on request to interested parties by ACF. The CFL infrastructure manager supplies its documents containing the operating rules to railway undertakings that have a safety certificate for the Luxembourg railway infrastructure.

The technical rules concerning the authorisation to introduce rolling stock into service are published in www.railinfra.lu.

2. Numerical data (Annex E)

3. Procedural aspects

3.1. Part A safety certificates

- 3.1.1. Reasons for which a revision/amendment of Part A certificates has been requested (for example, for a change of the type of service, an extension of the traffic or the size of the company).

No request was recorded in 2010.

- 3.1.2. Principle reasons for exceeding the time of four months for the issue of Part A certificates. (The time specified in Article 12(1) Railway Safety Directive which starts after the receipt of all the necessary information).

No case in 2010.

- 3.1.3. Details of requests by foreign national safety authorities to check or access information regarding the Part A certificate of a railway undertaking certified in Luxembourg, requesting a Part B certificate in another member State.

No request was recorded in 2010.

- 3.1.4. Summary of the problems of mutual recognition of Part A certificates valid throughout the European Union.

No case in 2010.

- 3.1.5. Fee to be paid to the National Safety Authority for the issue of a Part A certificate.

At present no fee is due for the issue of a Part A certificate, but this matter is being considered.

- 3.1.6. Summary of the problems related to the use of harmonised formats for the Part A certificates in relation to the types and the extensions of services.

No problem in 2010.

- 3.1.7. Summary of the problems/difficulties frequently met by the National Safety Authority in the procedures for application for Part A certificates.

The evaluation of whether the application meets the criteria given in the draft regulations of the European Commission, prepared by ERA, for a common safety method to assess if the application conforms with the requirements to obtain a safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

- 3.1.8. Summary of the problems reported by the railway undertakings during their application for a Part A certificate.

No problem reported in 2010.

- 3.1.9. Feedback procedure (for example a questionnaire) that allows railway undertakings to express their opinion on the issuing procedures/practices or to file complaints.

There is no feed-back procedure; any railway undertaking can contact ACF to make their views known on this matter. No feed-back was received in 2010.

3.2. Part B safety certificates

- 3.2.1. Reasons for which a revision/modification of Part B certificates was requested (for example, for a change regarding the types of services, the amount of traffic, the lines to be operated, the type of rolling stock, the category of staff, etc.).

No request was recorded in 2010.

- 3.2.2. Principle reasons for exceeding the time of four months for the issue of Part B certificates. (The time specified in Article 12(1) Railway Safety Directive which starts after the receipt of all the necessary information).

No case in 2010.

- 3.2.3. Fee to be paid to the National Safety Authority for the issue of a Part B certificate.

At present no fee is due for the issue of a Part B certificate, but this matter is being considered.

- 3.2.4. Summary of the problems connected with the use of harmonised formats for the Part B certificates in general and in particular in connection with the types of service or the extension of services.

No problem in 2010.

- 3.2.5. Summary of the problems/difficulties frequently met by the National Safety Authority in the procedures for requesting Part B certificates.

The evaluation of whether the application meets the criteria given in the draft regulations of the European Commission prepared by ERA, for a common safety method to assess if the application conforms with the requirements to obtain a safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

- 3.2.6. Summary of the problems reported by the railway undertakings during their request for a Part B certificate.

No problem reported in 2010.

- 3.2.7. Feedback procedure (for example a questionnaire) that allows railway undertakings to express their opinion on issuing procedures/practices or to file complaints.

There is no feed-back procedure; any railway undertaking can contact ACF to make their views known on this matter. No feed-back was received in 2010.

3.3. Safety authorisations:

The first application to obtain a safety authorisation was recorded in 2010 and the evaluation is in progress.

3.3.1. Reasons for the revision/modification of safety authorisations.

/

3.3.2. Main reasons for exceeding the time of four months for the issue of safety authorisations. (Time specified in Article 12(1) Railway Safety Directive which starts after the receipt of all the necessary information).

/

3.3.3. Summary of the problems/difficulties frequently met by the National Safety Authority in the procedures for requesting safety authorisation.

The evaluation of whether the application meets the criteria given in the draft regulations of the European Commission prepared by ERA, for a common safety method to assess if the application conforms with the requirements to obtain a safety certificate is not straight forward as there is no 'European check list' of the documents to be supplied.

Without a detailed examination of the application, it is impossible to establish whether or not the file is complete which results in a long delay.

3.3.4. Summary of the problems reported by the infrastructure managers during their request for a safety authorisation.

No case reported in 2010.

3.3.5. Feedback procedure (for example, a questionnaire) that allows infrastructure managers to express their opinion on issuing procedures/practices or to file complaints.

There is no feedback procedure; the infrastructure manager can contact ACF to make his views known on this matter.

3.3.6. Fee to be paid to the National Safety Authority for the issue of a safety authorisation.

At present no fee is due for the issue of a safety authorisation, but this matter is being considered.

G. MONITORING OF THE RAILWAY UNDERTAKINGS AND INFRASTRUCTURE MANAGERS

As ACF was only set up in August 2009 and its human resources are very limited it has only carried out two safety audits on RUs.

1. Monitoring of the railway undertakings and infrastructure managers

1.1. Audits/Inspections/Lists of inspections

Due to the lack of staff in the Interoperability and Safety Division, the monitoring of the RUs and the IM was limited to two audits carried out on the RUs which were holders of A and B certificates issued by the Luxembourg Ministry of Sustainable Development and Infrastructure. The two audits were concerned with the Part A and Part B certificates. These audits concentrated on:

- the railway safety of hauled rolling stock,
- the initial and subsequent training of the staff who carry out the technical inspection of the hauled rolling stock
- the flow of information if irregularities are found
- and the repair of damaged vehicles

1.2. Points to check/key points to follow up

/

2. Description of the treatment of the legal aspects in the annual reports of the infrastructure managers and railway undertakings – Availability of the annual reports before 30 June (in accordance with Article 9(4) Railway Safety Directive)

ACF has received the annual reports of CFL as manager of the infrastructure and all the other railway undertakings that have a safety certificate for the Luxembourg railway infrastructure, i.e.

- CFL - Infrastructure Manager (11/07/2011)
- CFL - Railway Undertaking (11/07/2011)
- CFL cargo (11/07/2011)
- SNCF - SNCF Fret (17/05/2011)
- SNCB - B-CARGO OPERATIONS (06/06/2011)

3. Number of inspections carried out at the IMs and RUs in 2010

Audits	At RUs that have a Part A safety certificate	At RUs that have a Part B safety certificate	At IMs that have a safety authorisation	At RUs that have a safety certificate 2001/14
Planned	0	0	0	0
Un-planned	0	0	0	0
Carried out	0	0	0	0

4. Number of audits carried out at the IMs and RUs in 2010

Audits	At RUs that have a Part A safety certificate	At RUs that have a Part B safety certificate	At IMs that have a safety authorisation	At RUs that have a safety certificate 2001/14
Planned	2	2	0	0
Un-planned	0	0	0	0
Carried out	2	2	0	0

5. Summary of the measures/corrective actions (amendment, withdrawal, suspension, serious warning, etc.) connected to safety aspects following these audits/inspections

/

6. Summary/brief description of the complaints of infrastructure managers on the subject of the railway undertakings, to do with the conditions stipulated in their Part A/Part B certificates

No complaint recorded in 2010.

7. Summary/brief description of the complaints of the railway undertakings on the subject of the infrastructure managers, to do with the conditions stipulated in their authorisation

No complaint recorded in 2010.

H. REPORT ON THE APPLICATION OF THE CSMs TO THE RISK ASSESSMENT

The regulation (EC) No 352/2009 of the Commission of 24 April 2009 on the adoption of a common safety method (CSM) for the risk assessment will only apply from 1 July 2012.

However it applies from 19 July 2010;

a) to all significant technical modifications to vehicles, such as are defined in Article 2 point c), of Directive 2008/57/EC.

b) to all significant modifications to the structural sub-systems, when Article 15(1) of Directive 2008/57/CE or a TSI requires it.

Neither the RUs nor the IM have advised us in their respective annual report of any concrete projects for which the above mentioned regulation has been applied.

However ACF has drawn attention in several e-mails and meetings to the fact that the application of this regulation means application to any significant change concerning the structural sub-systems of the European railway system.

I. CONCLUSIONS – PRIORITIES

Due to its recent creation, ACF is not able to plot the progress of the level of safety on the Luxembourg railway infrastructure in accordance with Directive 2004/49/EC and is thus unable to draw conclusions regarding its development.

However in view of the number of casualties, which was zero for 2010, the number of accidents and warning signs of accidents and incidents that occurred, the level of safety can be considered as high. The principle objective of ACF is to maintain at least this level, and indeed to improve it in conjunction with all the people concerned.

The progressive installation of ETCS on the whole of the Luxembourg railway system and on the tractive units will considerably increase the level of safety, for example by reducing the risk of passing signals at danger.

It is very likely that the IM will be granted a safety licence in 2011, thus all the railway stakeholders will comply with the European and Luxembourg legal arrangements and will have a safety management system.

A major task for ACF is the development of an organisation which enables it to better meet its national and international obligations. The introduction of a formal method of operation for the administration, that is to say a modelling of the principle processes, followed by the preparation of procedures that are relative to it is another (implementation of a management system).

The limited number of people who have the necessary experience and ability to carry out the tasks of monitoring, auditing and advising in the railway sector is a major problem for recruiting suitable people.

J. SOURCES OF INFORMATION

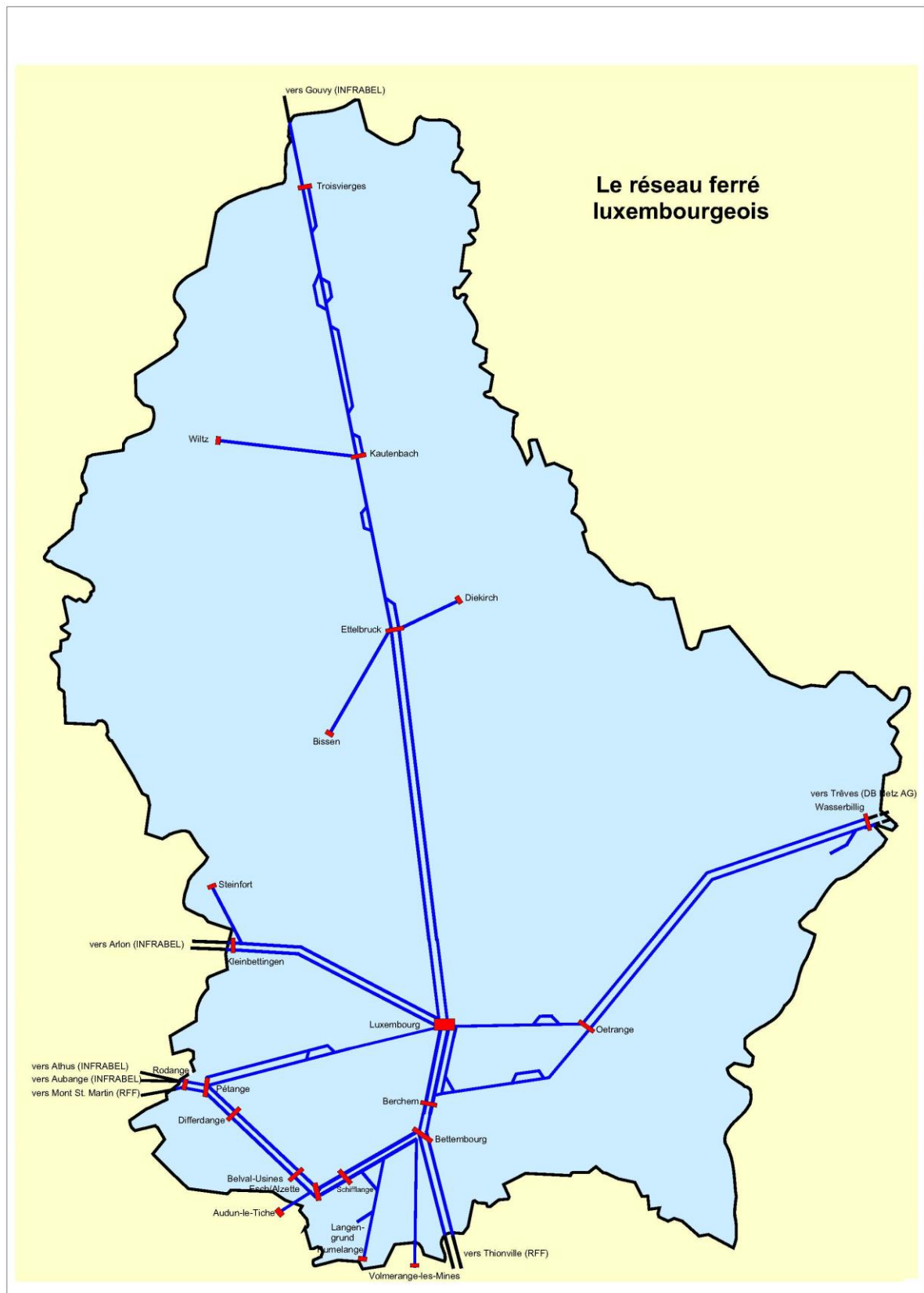
- Publications in MEMORIAL (The Official Journal of the Grand Duchy of Luxembourg) for details see Chapter E.1
- ACF internal information
- Annual reports for 2010 received from the infrastructure manager and railway undertakings
- The reports of the Administration for Technical Investigations (AET)

K. ANNEXES

Annex A:	Information on the railway structure
Annex B:	Organisation charts of the National Safety Authority
Annex C:	Information on Common Safety Indicators CSI – Definitions used
Annex D:	Important amendments to the legislation and the regulations
Annex E:	The changes in the certification and safety authorisation in figures

Annex A: Information on the railway structure

A.1 Map of the Luxembourg railway system



Map supplied by CFL

A.2 List of railway undertakings and infrastructure managers

Infrastructure manager (at 31 December 2010)

Name: CFL
Address: 9, place de la Gare, L-1616 Luxembourg
Web site: www.cfl.lu

Railway Undertakings (at 31 December 2010)

a. Carriage of passengers and freight

In 2010 no RU had a certificate to carry passengers and freight.

b. Carriage of passengers

Name: CFL
Address: 9, place de la Gare, L-1616 Luxembourg
Web site: www.cfl.lu
Safety Certificate Part A: LU 11200090001
valid until: 16 September 2014
Safety Certificates Part B: LU 12200090001
valid until: 16 September 2014

c. Carriage of freight

Name: SNCF
Address: 34, rue du Commandant Mouchotte, F-75699 Paris Cedex 14
Web site: www.sncf.com
Safety certificate: N° 002 certificate in conformity with Directive 2001/14/EC.
valid until: 8 November 2010

Name: CFL cargo SA
Address: 11, boulevard J.F. Kennedy, L-4170 Esch-sur-Alzette
Web site: www.cfl.lu (espace CFL cargo)
Safety certificate: N° 004 certificate in conformity with Directive 2001/14/EC.
valid until: Initially valid until 5 December 2011, replaced by certificates A and B below
Safety Certificate Part A: LU 11200100001
valid until: 4 December 2011
Safety Certificates Part B: LU 12200100001
valid until: 4 December 2011

Name: SNCB (B-Cargo OPERATIONS)
Address: Avenue de la Porte de Hal, 40, B-1060 Bruxelles
Web site: www.sncblogistics.be and www.b-rail.be
Safety certificate: N° 005 certificate in conformity with Directive 2001/14/EC.
valid until: Initially valid until 10 March 2013, validity limited to 31 December 2010 by Grand Duchy regulation of 21 September on the question of certification of safety of railway undertakings.

A.2.1. Infrastructure Manager

Name	Société Nationale des Chemins de Fer Luxembourgeois [Luxembourg National Railways] (CFL)
Address:	9, place de la Gare L-1616 Luxembourg
Web site:	www.cfl.lu
Link to the system reference document	www.railinfra.lu
Safety authorisation (number/date)	Application in progress
Date of start of commercial activity	Law of 10 May 1995 regarding the management of the infrastructure
Total length of the railway/gauge	614 km / 1435 mm
Length of the railway electrified/voltage	48 km / 3kV 535 km / 25kV
Total length of double track/single track	147 km / 128 km
Total length of the high speed lines LGV	0 km
ATP equipment used	MEMOR II+ / ETCS level 1
Number of level crossings	138
Number of main colour light signals	530

Abbreviations: LGV = Lignes à Grande Vitesse [High speed lines] (in the sense of Directive 96/48/CE)

 ATP = Automatic Train Protection

A.2.2. Railway undertakings

A.2.2.1. CFL

Name	Société Nationale des Chemins de Fer Luxembourgeois [Luxembourg National Railways] (CFL)
Address:	9, place de la Gare L-1616 Luxembourg
Web site:	www.cfl.lu
<i>Safety certificate as specified in 2001/14/CE (number/date)</i>	
<i>Date of start of commercial activity</i>	Law of 16 June 1947
<i>Safety Certificate Part A - B as specified in 2004/49/EC (number/date)</i>	A - N° LU 1120090001 / 20-12-2009 B - N° LU 1220090001 / 20-12-2009
<i>Type of carriage (freight, etc.)</i>	Passengers to the exclusion of high speed services
<i>Number of locomotives</i>	57
<i>Number of electric multiple units/diesel railcars</i>	45 railcars
<i>Number of coaches</i>	92 coaches 20 driving trailers
<i>Number of wagons</i>	
<i>Number of train drivers</i>	269
<i>Number of staff on board trains carrying out safety tasks (excluding drivers)</i>	243 (train crew)
<i>Volume of passenger traffic</i>	349 591 millions passenger kilometres 7 260 million passenger train kilometres
<i>Volume of freight traffic</i>	

A.2.2. Railway undertakings

A.2.2.2. SNCF

Name	SNCF
Address	34, rue du Commandant Mouchotte F-75699 Paris Cedex 14
Web site:	www.sncf.com
<i>Safety Certificate as specified in 2001/14/CE (number/date)</i>	N° 002 / 08/11/2005
<i>Date of start of commercial activity</i>	
<i>Safety Certificate Part A - B as specified in 2004/49/EC (number/date)</i>	
<i>Type of carriage (freight, etc.)</i>	Freight
<i>Number of locomotives</i>	
<i>Number of electric multiple units/diesel railcars</i>	
<i>Number of coaches</i>	
<i>Number of wagons</i>	
<i>Number of train drivers</i>	
<i>Number of staff on board trains carrying out safety tasks (excluding drivers)</i>	
<i>Volume of passenger traffic</i>	
<i>Volume of freight traffic</i>	

A.2.2. Railway undertakings

A.2.2.3. CFL cargo SA

Name	CFL cargo SA
Address	11, boulevard J.F. Kennedy Kennedy, L-4170 Esch-sur-Alzette
Web site:	www.cfl.lu (espace CFL cargo)
Safety Certificate as specified in 2001/14/CE (number/date)	N° 004 / 11-12-2006
Date of start of commercial activity	05/12/2006
Safety Certificate Part A - B as specified in 2004/49/EC (number/date)	A – N° LU1120100001 / 08/10/2010 B – N° LU1220100001 / 08/10/2010
Type of carriage (freight, etc.)	Freight
Number of locomotives	48
Number of electric multiple units/diesel railcars	0
Number of coaches	0
Number of wagons	4356
Number of train drivers	78
Number of staff on board trains carrying out safety tasks (excluding drivers)	0
Volume of passenger traffic	0
Volume of freight traffic	717 million tonne-km

A.2.2. Railway undertakings

A.2.2.4. SNCB

Name	SNCB
Address	Avenue de la Porte de Hal, 40 B-1060 Bruxelles
Web site:	www.sncblogistics.be and www.b-rail.be
Safety certificate as specified in 2001/14/CE (number/date)	N°005 / 10-03-2008
Date of start of commercial activity	
Safety Certificate Part A - B as specified in 2004/49/EC (number/date)	
Type of carriage (freight, etc.)	Freight
Number of locomotives	
Number of electric multiple units/diesel railcars	
Number of coaches	
Number of wagons	
Number of train drivers	
Number of staff on board trains carrying out safety tasks (excluding drivers)	
Volume of passenger traffic	
Volume of freight traffic	

ANNEX B: Organisation chart of the National Safety Authority

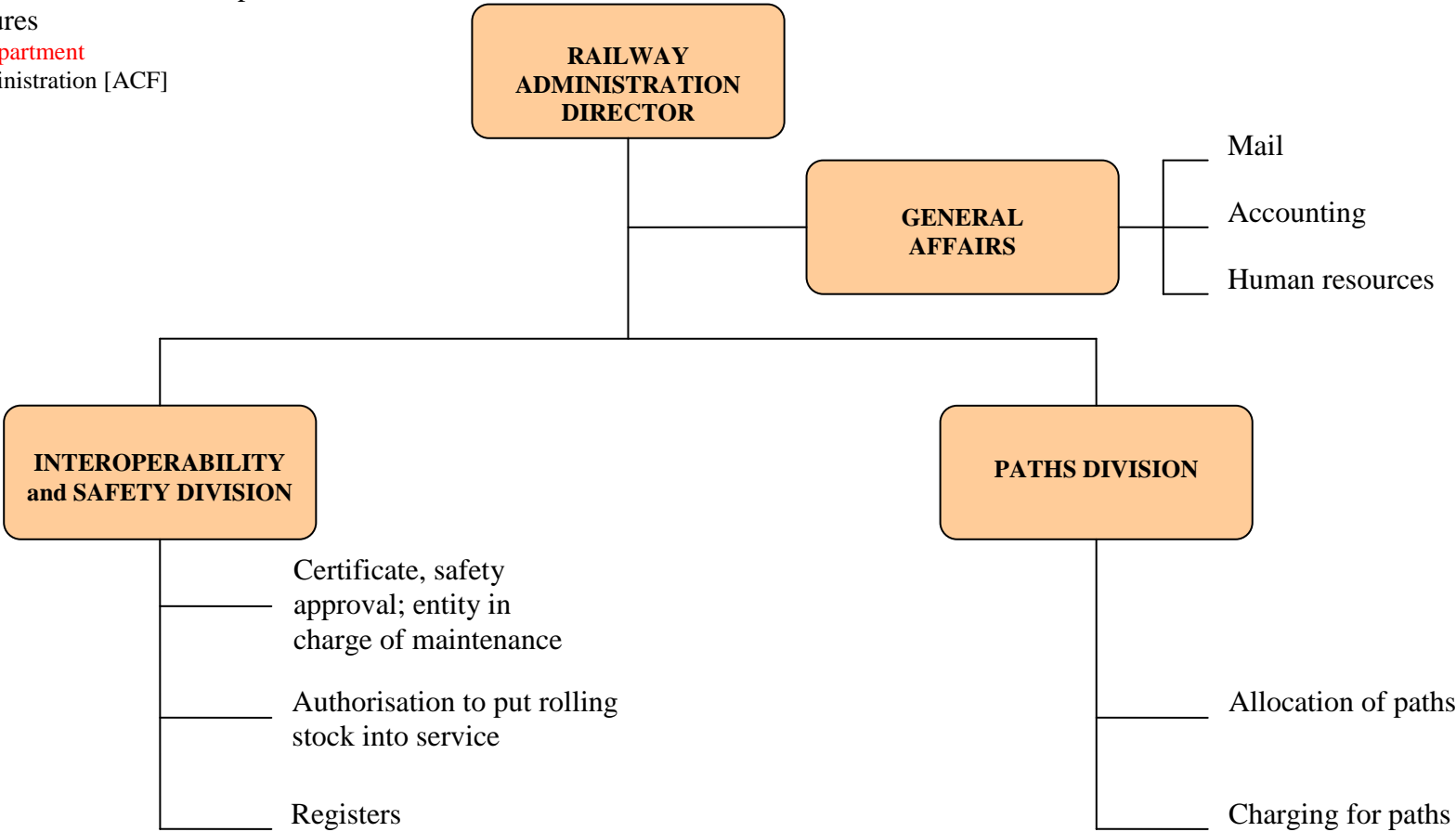
B.1. Internal organisation at 31 December 2009

B2. Relations with other national authorities

ANNEX B: Organisation chart of the National Safety Authority

B.1. Internal organisation at 31 December 2009

Ministry of Sustainable Development and
Infrastructures
Transport Department
Railway administration [ACF]

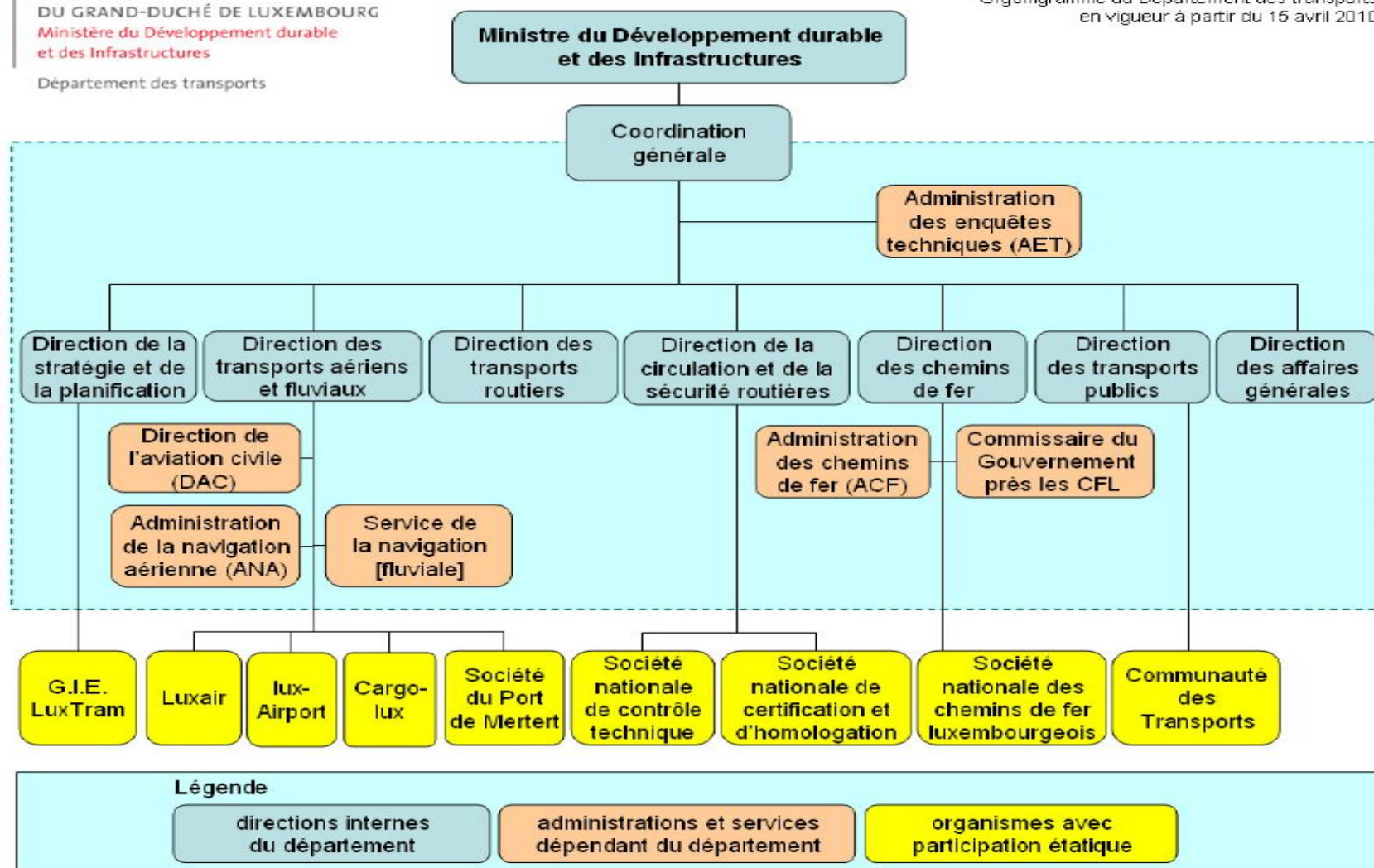


B2. Relations with other national authorities



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère du Développement durable
et des Infrastructures
Département des transports

Organigramme du Département des transports
en vigueur à partir du 15 avril 2010



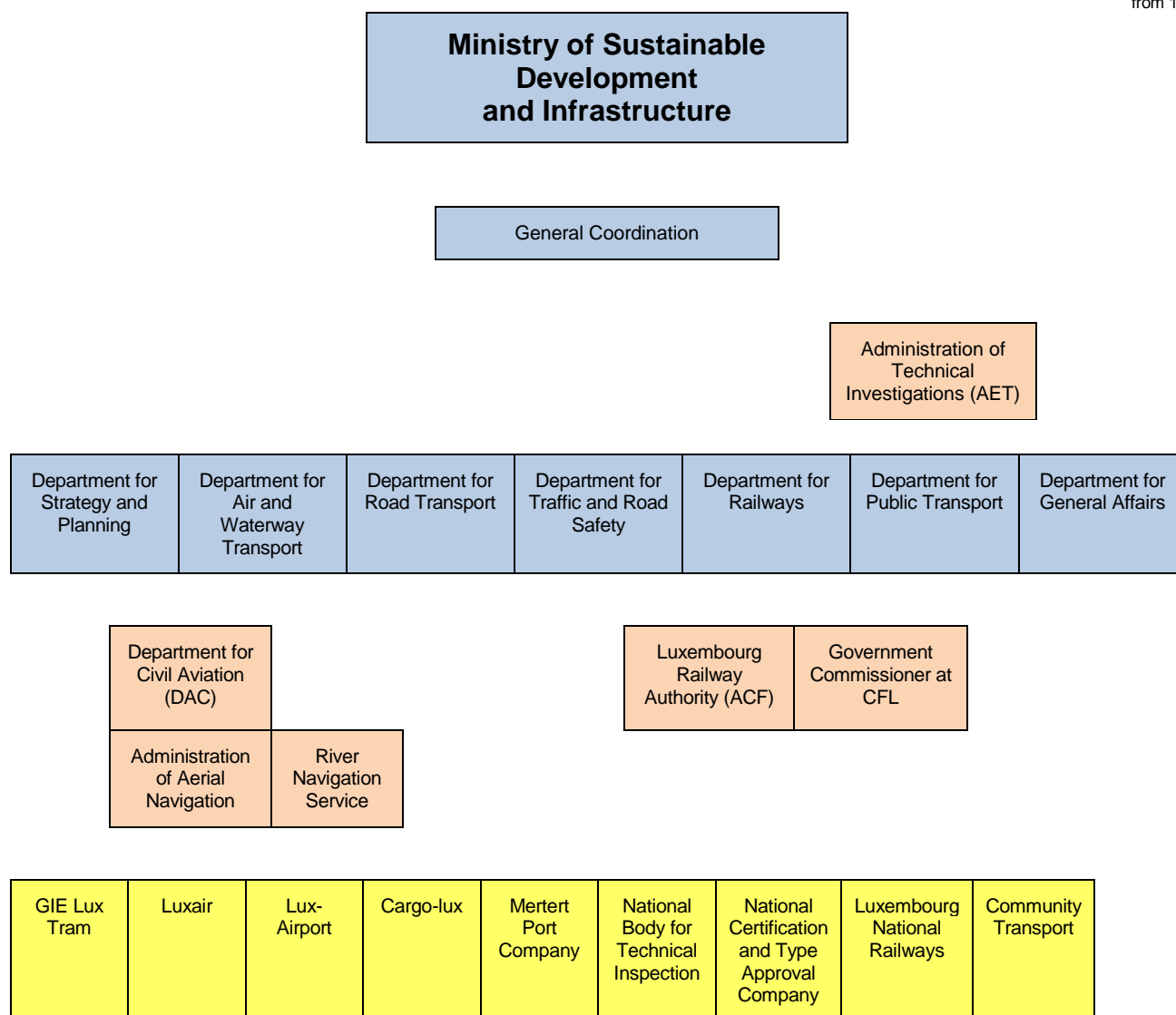
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B2 Relations with other national authorities

THE GOVERNMENT OF THE
GRAND DUCHY OF LUXEMBOURG
Ministry of Sustainable Development
and Infrastructure

Transport Department

Organisational chart of the Transport Department
from 15 April 2010



Key

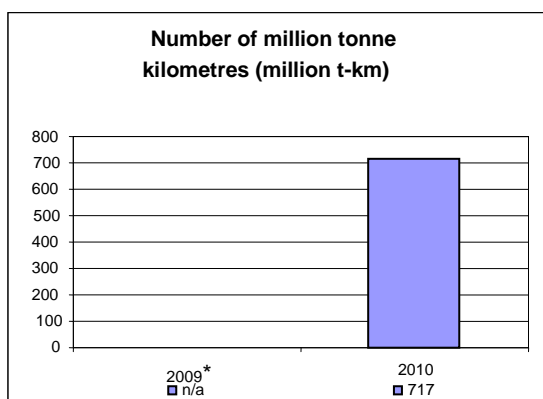
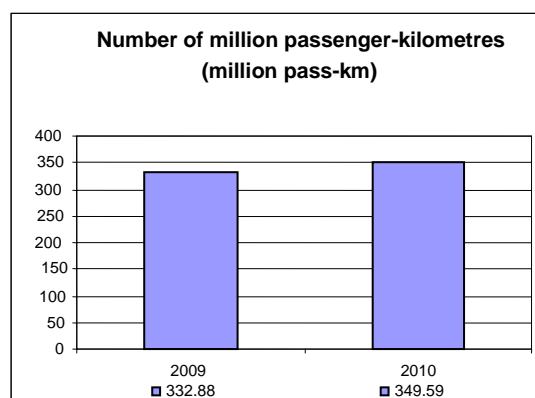
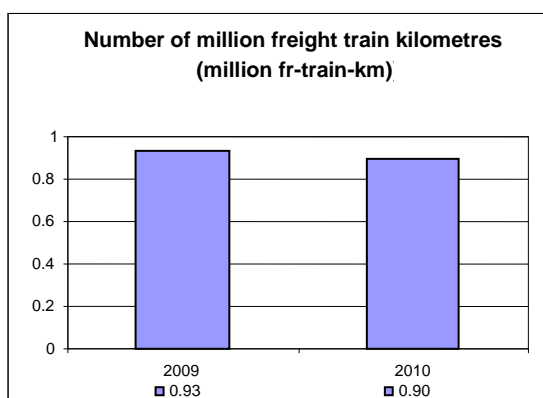
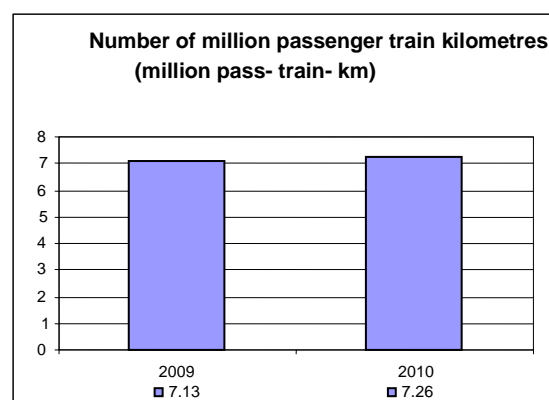
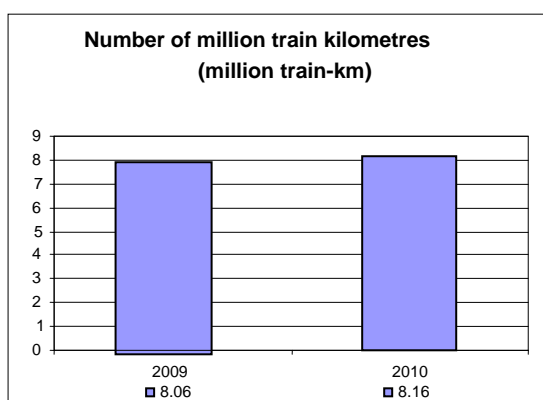
Internal sections in the Department	Administration and services in the Department	Organisations with state participation
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Appendix C: CSI Information - Definitions used (CSI Common Safety Indicators)

C.1. CSI Information

Reference information

Reference documents 2010	
Number of million train kilometres (million train-km)	8.16
Number of million passenger train kilometres (million pass-train-km)	7.26
Number of million freight train kilometres (million fr-train-km)	0.90
Number of million passenger kilometres (million pass-km)	349.59
Number of million tonne kilometres (million t-km)	717

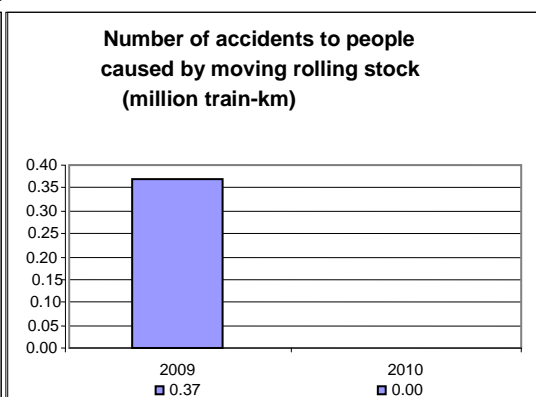
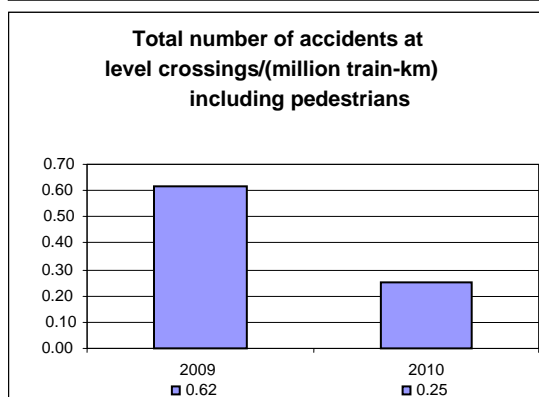
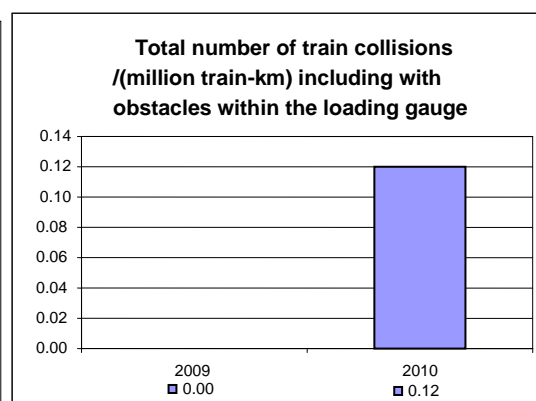
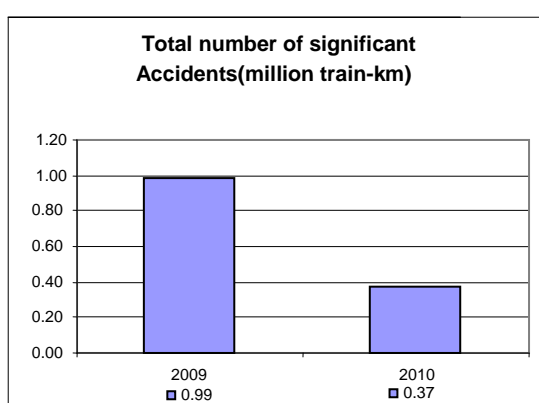


* For 2009, the number of tonne kilometres has not been advised to ACF.

C.1.1 Indicators regarding accidents

C.1.1.1 Total and number per million train kilometres (million train-km) of significant accidents and breakdown according to the types of accidents

Types of accident 2010	Number	Number per million train-km
Train collisions, including those with obstacles within the loading gauge	1	0.12
Derailments of trains	0	0.00
Accidents at level crossings including pedestrians	2	0.25
Accidents to persons caused by moving rolling stock	0	0.00
Fires in rolling stock	0	0.00
Others	0	0.00
Total	3	0.37



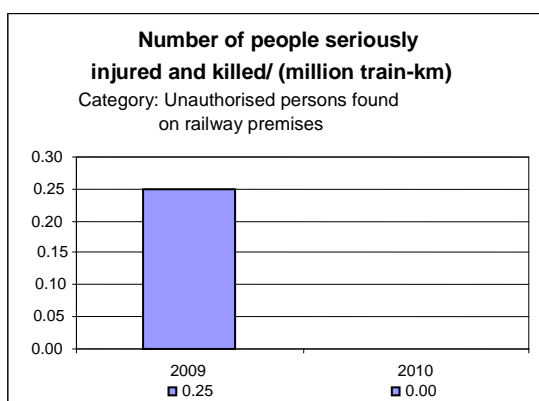
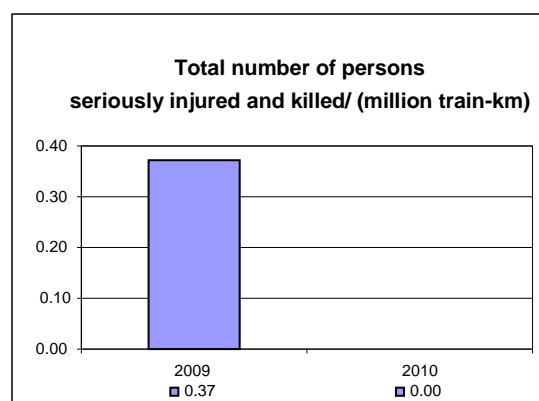
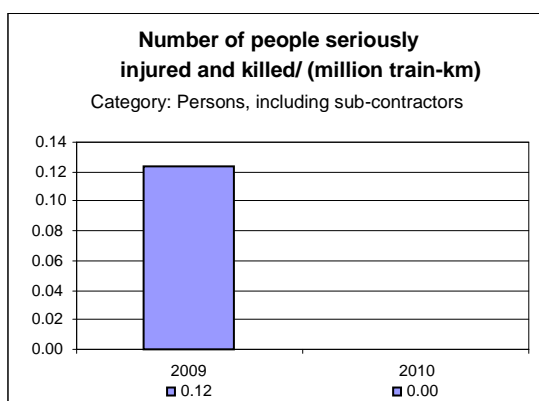
In 2009 and 2010 there was no significant accident in the categories 'Derailment of trains', 'Fires on rolling stock' and 'Others'.

C.1.1.2 Total and number per million train kilometres (million train-km) of persons seriously injured and persons killed by types of person and by type of accident

Types of people 2010	Number	Number per million train-km	Number per million pass-km	Number per million pass-train-km
Passengers	0	0.00	0.00	0.00
Persons, including sub-contractors	0	0.00		
Users of level crossings	0	0.00		
Unauthorised persons found in railway premises	0	0.00		
Others	0	0.00		
Total	0	0.00		

Number per million pass-km = number per million passenger-km

Number per million pass-train-km = number per million passenger train-km



In 2009 no person was seriously injured or killed in the categories 'passengers', 'users of level crossings' and 'others', and in 2010 there was no victim in any of these categories.

C.1.2 Indicators relating to dangerous goods

Total and number per million train kilometres (million train-km) of accidents during the carriage of dangerous goods

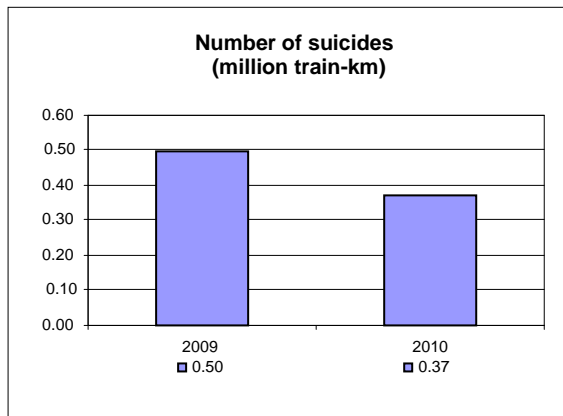
Accidents with dangerous goods 2010	Number	Number per million train-km
Accidents implicating at least one railway vehicle carrying dangerous goods	0	0.00
Accidents of this type involving the release of dangerous substances	0	0.00
Total	0	0.00

In 2009 and 2010 no accident was reported during the transport of dangerous goods.

C.1.3 Indicators regarding suicides

Total and number of suicides per million train kilometres (million train-km)

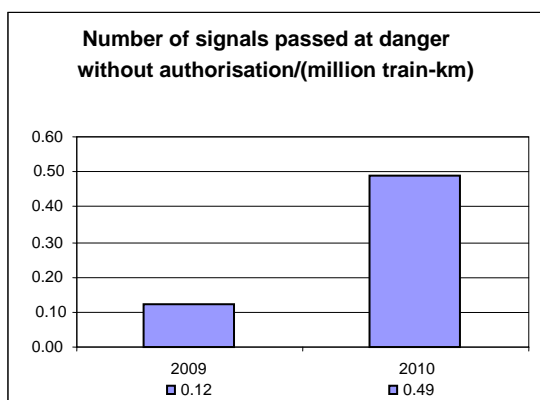
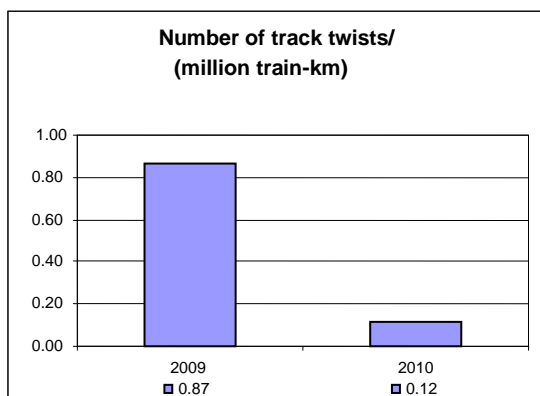
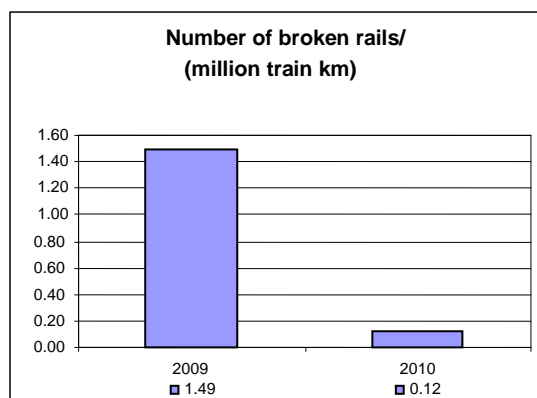
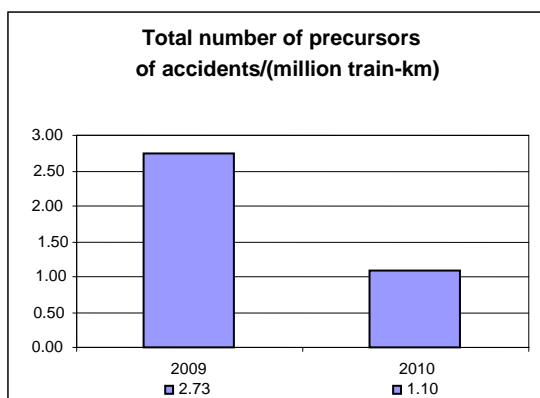
Suicides 2010	Number	Number per million train-km
Total	3	0.37



C.1.4 Indicators regarding the precursors of accidents

Total and number of precursors per million train kilometres (million train-km)

Types of precursor	Number	Number per million train-km
Broken rails	1	0.12
Cases of track buckling	1	0.12
Signalling failures that affected safety	3	0.37
Signals at danger passed without authorisation	4	0.49
Broken wheels and axles of rolling stock in service	0	0.00
Total	9	1.10

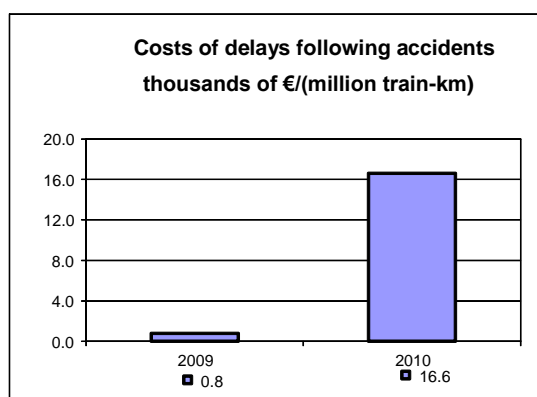
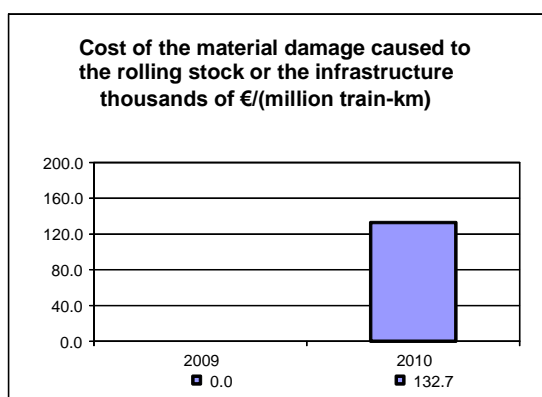
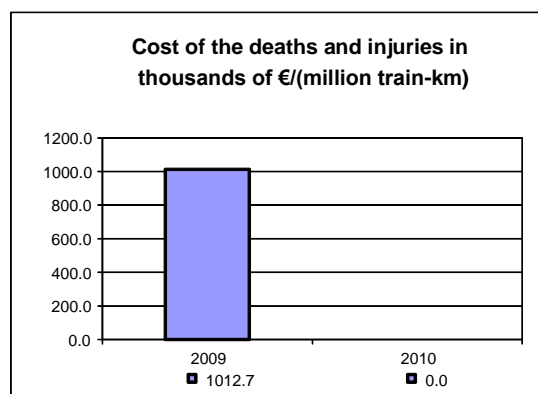
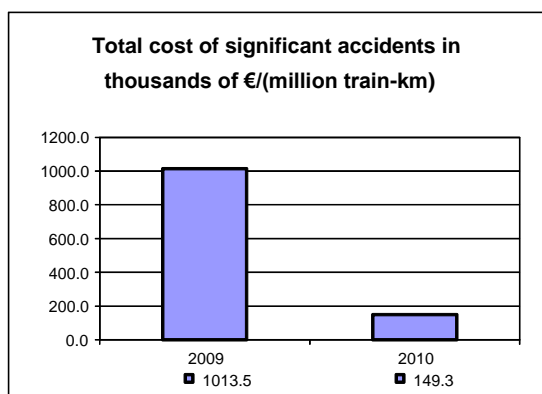


In 2009 and 2010 no fractured wheels or wheelsets were found on rolling stock.

C.1.5 Indicators regarding the economic aspects of accidents

Total and cost per million train kilometres (million train-km) in euros and by type of cost. Only the economic impact of **significant accidents** (of which there were three) is taken into account in the table below.

Types of cost	€ thousands	€ thousands per million train-km
Number of deaths and serious injuries multiplied by the value of prevention of a death or serious injury.	0.0	0.0
Costs and damage caused to the environment	0.0	0.0
Costs of the damage caused to rolling stock or to the infrastructure	1082.6	132.7
Signals at danger passed without authorisation	0.0	0.0
Costs of delays following accidents	135.5	16.6
Total	1218.1	149.3

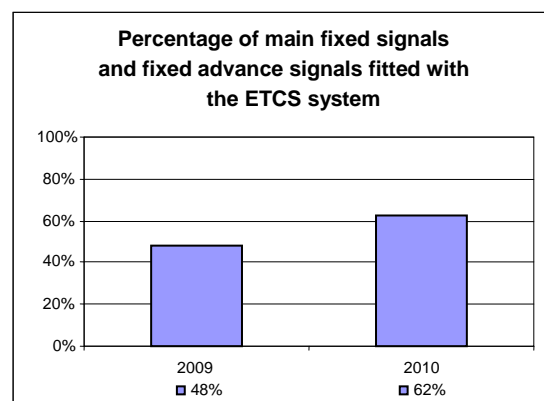
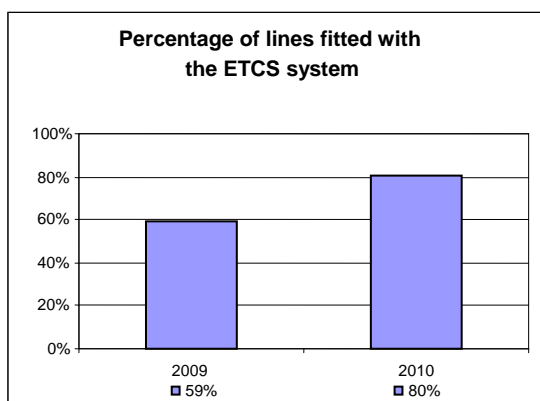


Remark: The increased cost of accidents per passenger is explained to a large extent by the change in the distribution key between workers and non-workers. In 2009 the part for the workers was chosen at 10% and that for the non-workers at 90% for the timetable periods in which the accidents occurred. Now, in accordance with the rules of the Association d'Assurance Accidents (AAA) [Association of Accident Insurers] on Health and Safety at Work, people returning from their work are subject to the legislation for accidents during a journey and should therefore also be considered as workers. Consequently the division has been taken over the whole day by applying the rule laid down by AAA which applies a rate of 70% of workers and 30% of non-workers. Students travelling by rail have been counted as workers.

C.1.6 Indicators relative to technical safety of the infrastructure and its implementation

C.1.6.1 System of Automatic Train Protection (ATP)

2010 indicators	MEMOR II+	ETCS
Percentage of tracks fitted with an ATP system in service	100%	80.37%
Percentage of main fixed signals and fixed advanced signals fitted with an ATP system in service	100%	62.20%
Percentage of train-kilometres run with operational ATP systems (estimate)	96%	3%

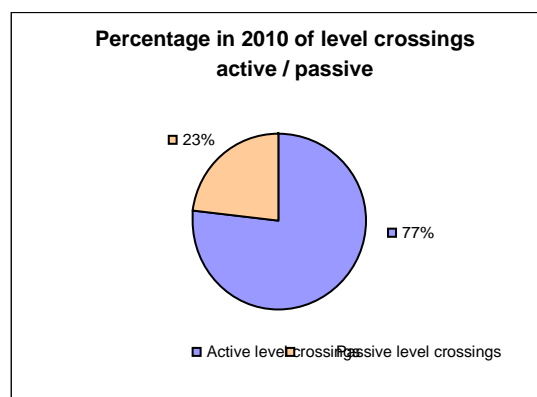
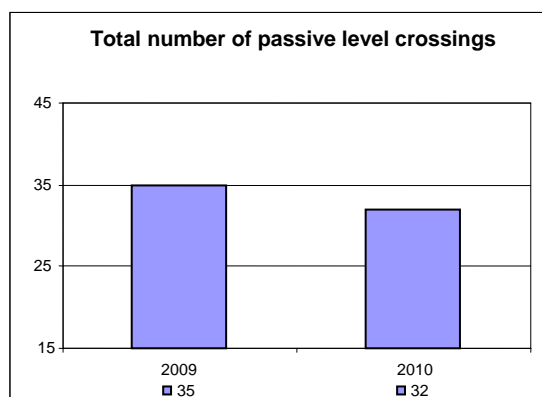
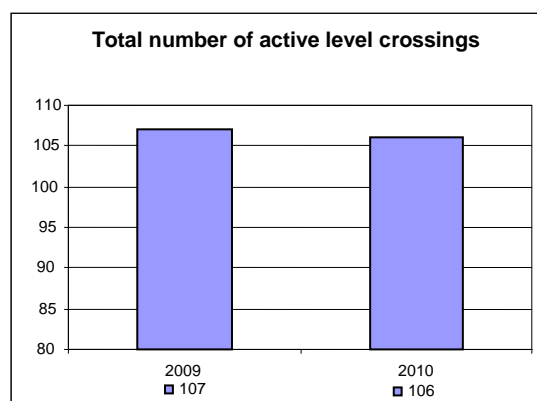
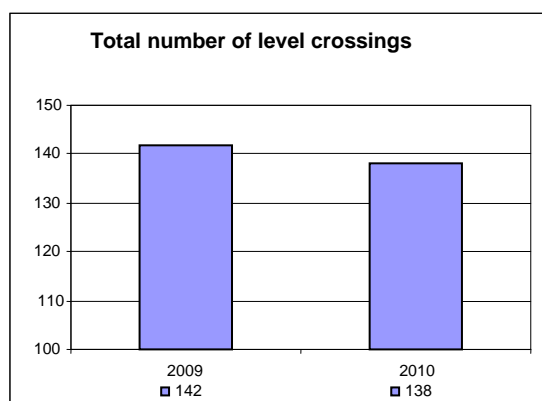


C.1.6.2 Number of level crossings (total, per line-kilometre and track kilometre) and by types of level crossing

a) Active level crossings by type	Number	by km of line (275 km)	by km of track (614 km)
i) Automatic warning on the users side	3	0.0109	0.0049
ii) Automatic protection on the users side	0	0.0000	0.0000
iii) Automatic protection and warning on the users side	82	0.2982	0.1336
iv) Automatic protection and warning on the users side and protection on the rail side	0	0.0000	0.0000
v) Manual warning on the users side	18	0.0655	0.0293
vi) Manual protection on the users side	2	0.0073	0.0033
vii) Manual protection and warning on the users side	1	0.0036	0.0016
Total	106	0.3855	0.1726

b) Passive level crossings	Number	by km of line (275 km)	by km of track (614 km)
Total	32	0.1164	0.0521

a) Active and passive level crossings	Number	by km of line (275 km)	by km of track (619 km)
Total	138	0.5018	0.2264



C.1.7 Indicators regarding safety management

Internal audits carried out by the infrastructure managers and railway undertakings such as are defined in the documentation of the system of safety management. Total number of audits carried out and percentage of the audits required (and/or planned).

Internal audits 2010	CFL/IM	CFL/RU	CFL cargo	Total
Number planned	235	91	204	530
Number carried out	195	76	138	409
Percentage of those planned carried out	83%	84%	68%	77%

C.2. Definitions used in the annual report

The common safety indicators supplied and the definitions used in this report are as given in Annex 1 and the Annex to Directive 2004/49/EC as amended by Directive 2009/149/CE of 27 November 2009.

C.3. Abbreviations

ACF	Luxembourg Railway Administration
AET	<i>Administration des Enquêtes Techniques</i> [Administration for Technical Investigations]
ANS	<i>Administration Nationale de Sécurité</i> [National Safety Authority]
CFL/GI	CFL Infrastructure Manager
CFL/EF	CFL Railway undertaking
OM	Operations Manager
CDs	<i>Contrôle de Dégagement simple</i> [Simple check of release]
BEA-TT	Land Transport Accident Investigation Bureau (France)
EF	Railway undertaking (RU)
ERA	European Railway Agency (<i>Agence ferroviaire européenne</i>)
ETCS	European Train Control System
IM	Infrastructure Manager
IPCS	<i>Installations Permanentes de ContreSens</i> [Permanent reverse running installations]
CSI	Common Safety Indicator
MDDI	Ministry of Sustainable Development and Infrastructure
MEMOR II+	System to assist drivers, improvement of the brush-crocodile system
Mémorial	The Official Journal of the Grand-Duchy
MR	Rolling stock
ATP	System of Automatic Train Protection
PD	<i>Poste Directeur</i> [Major signal box]
PDC	<i>Poste Directeur Centralisé</i> [Centralised traffic control centre]
GDR	Grand Duchy regulation
GRO	General Regulations for Technical Operation
RNE	RailNetEurope
SAAT	<i>Système d'Annonce Automatique des Trains</i> [SNCF Automatic Train Announcement System]
SNCB	<i>Société Nationale des Chemins de fer Belge</i> [Belgian National Railways]
SNCF	<i>Société Nationale des Chemins de fer Français</i> [French National Railways]
SFP	<i>Signal Fixe Principal</i> [Fixed main signal]
TSI	Technical Specification for Interoperability
TCO	<i>Tableau de Contrôle Optique</i> [Optical control panel]

Annex D: Important amendments to the legislation and the regulations

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
General national legislation on the safety of the railways				
Legislation on the railway infrastructure	The law of 3 August 2010 on the regulation of the railway market	01/09/2011	<p>New law</p> <p>The object of this law is:</p> <ol style="list-style-type: none"> 1. The transposition into National Law of Directive 2007/58/EC of the European Parliament and of the Council of 23 October 2007 amending Directive 91/440/EEC on the development of the railways of the communities and Directive 2001/14/EC regarding the distribution of the railway infrastructure capacity and the charges for the railway infrastructure; 2. The creation of an organisation to control the railway market; 3. To amend the amended law of 11 June 1999 on access to the railway infrastructure and its utilisation; 4. To amend the amended law of 10 May 1995 on the management of the railway infrastructure. 	The law specifies the missions and responsibilities of the organisation which controls the Luxembourg railway market. This regulator is responsible for ensuring non-discrimination, effective competition and efficient operation of the railway market.
	Grand Duchy regulation (GRD) of 27 February 2010 amending the amended Grand Duchy regulation of 31 March 2003 defining the procedure for the application of charges for the infrastructure of the Luxembourg railways and establishing a system of improvement of the performances.	01/03/2010	<p>New (GDR)</p> <p>This RGD introduces in the system of charges for the use of the railway infrastructure a system of improvement of performances in accordance with the provisions of the European legislation.</p>	The trains of railway undertakings running on the Luxembourg railway system are subject to a system of improvement of performance containing penalties and compensations in cases of serious delays or unforeseen cancellations.

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
Legislation on railway interoperability	Grand Duchy regulation (GDR) of 1 June 2010 on railway interoperability	16/06/2010	New GDR The object of this Grand Duchy regulation is to transpose into national law Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the railway system within the European Community such as amended by Directive 2009/131/EC of the Commission of 16 October 2009 amending Annex VII of Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the railway system within the Community.	The GDR specifies the conditions for achieving the interoperability of the railway system on the national railway system, in particular for the design, construction, the putting into service, the redevelopment, the renewal, the operation and the maintenance of the elements of this system, as well as for the professional qualifications and the health and safety conditions of the staff who contribute to its operation and its maintenance.
Legislation on certification of train drivers	Grand Duchy regulation (GDR) of 16 August 2010 on the certification of train drivers	25/08/2010	New GDR The object of this GDR is: 1. To transpose into national law Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of drivers who drive locomotives and trains on the railway system of the Community; 2. To create a regulatory framework regarding the certification of the drivers who drive locomotives and trains on the Luxembourg railway system.	The GDR specifies the conditions and procedures for the certification of drivers who drive locomotives and trains on the Luxembourg railway system.

	Legal reference	Date of entry into force	Reason for the introduction (state whether it is a new law or an amendment of the existing legislation)	Description
Regulations				
Rules regarding the objectives and methods of existing national safety	No new rule			
Rules regarding the requirements applicable to the management systems for safety and the safety certification of the railway undertakings	No new rule			
Common rules for operating the railway network which are not yet covered by the TSI, including the rules regarding the signalling system and traffic management.	Frontier instruction BELLAIN/GOUVY	22/04/2010	New version replacing the joint part of the frontier instruction part INFRABEL-CFL of 30/04/2004 and the part frontier section Troisvierges-Gouvy of 01/11/2004 The new part amends or replaces certain existing operational procedures.	The principle amendments are connected with the introduction of fixed main signals SFP 9X and 9Y of Bellain signal box. The boundary of the frontier section is marked by signal 9Y and the signal INFRABEL KX18
	SNCF/CFL joint Documentation Directive	20/07/2010	New version replacing the version of 01/06/2007	Definition of the joint management rules adding to the operating rules described in the documentation
	General Regulations for Technical Operation (GRO) Annex 1 edition 2009 – Additional information and application statements regarding the arrangements of the GRO	15/05/2010	Correction No 3	Additional information and application statements regarding the arrangements of the General Regulations for Technical Operation (GRO)

Common rules for operating the railway network which are not yet covered by the TSIs, including the rules regarding the signalling system and traffic management (continued).	General Regulations for Technical Operation (GRO) Annex 1 edition 2009 – Additional information and application statements regarding the arrangements of the GRO	24/10/2010	Correction No 4	Additional information and application statements regarding the arrangements of the General Regulations for Technical Operation (GRO)
Rules defining the requirements applicable to additional internal rules (statutes of the company) which must be prepared by the infrastructure managers and the railway undertakings	No new rule			
Rules concerning the requirements applicable to the staff who carry out critical safety tasks, including the selection criteria, the state of health, the professional training and the certification, if they are not yet covered by a TSI.	No new rule			
Rules relating to the investigations into accidents and incidents	No new rule			

Annex E: Changes in the certification and safety authorisation – Numerical information

E.1 Safety certificates issued in accordance with Directive 2001/14/EC

Number of certificates held in 2010 by railway undertakings that had a licence issued	by the Grand-Duchy of Luxembourg	0
	by another member State	2

E.2 Safety certificates issued in accordance with Directive 2004/49/EC

		New	Updated / amended	Renewed
E.2.1. Number of valid Part A certificates held in 2010 by railway undertakings registered	in the Grand Duchy of Luxembourg	2	0	0
	by another member state	0	0	0

		New	Updated / amended	Renewed
E.2.2. Number of valid Part B certificates held in 2010 by railway undertakings registered	in the Grand Duchy of Luxembourg	2	0	0
	by another member state	0	0	0

			A	R	I
E.2.3. Number of applications for Part A certificates submitted in 2010 by registered railway undertakings	in the Grand Duchy of Luxembourg	New certificates	1	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	0	0	0
	by another member State	New certificates	0	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	0	0	0

			A	R	I
E.2.4. Number of applications for Part B certificates submitted in 2010 by registered railway undertakings	in the Grand Duchy of Luxembourg	New certificates	1	0	0
		Certificates revised / amended	0	0	0
		Certificates renewed	0	0	0
	by another member State	New certificates	0	0	1
		Certificates revised / amended	0	0	0
		Certificates renewed	0	0	0

A = Request accepted, the certificate is already issued.

R = Request refused, no certificate has been issued.

I = The matter is still under consideration, no certificate has yet been issued.

E.2.5. List of countries where the RUs applying for a Part B certificate in your member state have already obtained their safety certificate Part A.
Luxembourg
FRANCE

E.3. Safety authorisations issued in accordance with Directive 2004/49/EC

	New	Updated / amended	Renewed
E.3.1. Number of valid safety authorisations held in 2010 by infrastructure managers registered in the Grand Duchy of Luxembourg	0	0	0

		A	R	I
E.3.2. Number of requests for safety authorisations submitted in 2010 by infrastructure managers registered in the Grand-Duchy of Luxembourg	New authorisations	0	0	1
	Certificates revised / amended	0	0	0
	Authorisations renewed	0	0	0

A = Request accepted, the authorisation is already issued.

R = Request refused, no authorisation has been issued.

I = The matter is still under consideration, no authorisation has yet been issued.

E.4. Procedural aspects – Part A safety certificates

		New	Updated / amended	Renewed
Mean time between receipt of the application (after receipt of all the necessary information) and the final issue of a Part A safety certificate in 2010 for RUs holding a	licence issued by the Grand Duchy of Luxembourg			80 working days
	licence issued by another member state			

E.5. Procedural aspects – Part B safety certificates

		New	Updated / amended	Renewed
Mean time between receipt of an application (after receipt of all the necessary information) and the final issue of a Part B safety certificate in 2010 for RUs holding a	licence issued by the Grand Duchy of Luxembourg			80 working days
	licence issued by another member State			

E.6. Procedural aspects - Safety authorisations

		New	Updated / amended	Renewed
Mean time between receipt of an application (after receipt of all the necessary information) and the final issue of a safety authorisation in 2010 for the infrastructure managers	registered in the Grand Duchy of Luxembourg			
	registered in another member state			