Verkehrssicherheitsarbeit für Österreich

Activity Report 2007

under Article 23(3) of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 ('Railway Safety Directive')

This document is translated from the original written in German and is for information only. The original document should be used as the reference source.

REPUBLIC OF AUSTRIA
FEDERAL MINISTRY OF TRANSPORT, INNOVATION AND TECHNOLOGY
FEDERAL OFFICE OF TRANSPORT
FEDERAL ACCIDENT INVESTIGATION BUREAU
RAIL SECTION

FEDERAL ACCIDENT INVESTIGATION BUREAU
HEAD: PETER URBANEK

The investigation of incidents is the main task of the Federal Accident Investigation Bureau (*Unfalluntersuchungsstelle des Bundes* - UUB). A qualified investigation procedure allows accidents to be studied effectively. The sole objective of any investigation is to establish the cause of the incidents. The investigation is not intended to clarify questions of liability or the question of blame.

The legal principles for investigating incidents in the rail sector are contained in Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 ('Railway Safety Directive') and subsequently in the Accident Investigation Act, Federal Law Gazette I No 123/2005 of 31 October 2005 (came into force on 1.1.2006).

Reporting incidents

The relevant undertakings are obliged to report incidents to the UUB. The incidents to be reported together with the time and form of the report are regulated in various legal standards (MeldeVO-Eisb 2006).

Initiating an investigation

In principle, an investigation begins when the incident is reported; it is crucial to bear in mind, however, that not every report initiates an investigation.

The decision on whether to initiate an investigation depends on how clear the cause of the incident is. If an investigation is initiated, it must be established whether an on-site assessment is also required for this investigation. If no investigation is initiated, an 'incident report' is to be produced which should outline the facts of the case and the cause of the incident.

Investigation

Every investigation must be carried out immediately, simply and effectively, and it should be taken into account that the investigation procedure is not public and the investigation personnel are bound by a duty of confidentiality.

For on-site investigations, the investigation personnel are, among other things, authorised to enter the site of the incident without hindrance in order to be able to look for clues.

Investigation report

Every investigation is to be closed with an investigation report, which is to be the subject of an appraisal procedure prior to publication. Depending on the situation in each individual case, this procedure involves a draft of the investigation report being sent for comment to all parties that could help prevent similar incidents in the future or are closely associated with the incident themselves (e.g. manufacturers of the vehicles involved in the incident, undertakings involved, competent authorities).

The final investigation report is to be published, and must include, among other things, the details of the incident, details of the means of transport involved, the circumstances which

led to the incident, the investigations carried out and their findings and the establishment of the cause.

Safety recommendations

On the basis of the investigation's findings, safety recommendations should be drafted as proposals to improve transport safety. Safety recommendations are to be sent to those offices that can implement them as appropriate measures. Whether and to what extent the said safety recommendations are implemented is the responsibility of those parties actually affected by them, who in the end also have to bear the costs of such recommendations. Measures have already been drafted and implemented for some of these safety recommendations.

Rail section

2007 was the first year for the Rail section in the UUB in which the requirements of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 ('Railway Safety Directive') and the Accident Investigation Act were able to be implemented without restriction.

As a result of the changes for railway undertakings that came out of the 'Regulation of the Federal Minister for Transport, Innovation and Technology on the scope and form of reports of accidents and failures that occur in railway undertakings to the Federal Accident Investigation Bureau' (MeldeVO-Eisb 2006, promulgated in Federal Law Gazette II No 279/2006 of 27 July 2006), in connection with a comprehensive need for information, the reporting of accidents and failures in accordance with the Regulation was first ensured from the end of 2006/beginning of 2007.

Various priorities were set in 2007 which are also being continued in 2008 on the basis of the emerging development of incidents.

These priorities include, in particular, incidents relating to truck-on-train vehicles and vehicles for the transport of hazardous goods, as well as incidents on level crossings.

In the case of incidents on level crossings in particular, a rising trend can be identified (sharp rise in the number of fatally and seriously injured persons and also incidents on level crossings with automatic barriers or traffic signals).

The exchange of opinions, information and experiences begun in 2006 with rail infrastructure and rail transport undertakings, with the competent rail authorities, with the relevant intervention forces (forces of law and order, fire services, rescue organisations, etc.) as well as with representatives of the judiciary (examining magistrates, prosecutors) was also continued in 2007.

The information platform set up in 2006 between representatives of the Rail Section in the UUB, those responsible for accident investigation in the German Federal Railway Authority (*Eisenbahn-Bundesamt* - EBA) and the Swiss Investigation Bureau for Railway, Funicular and Ship Accidents of the General Secretariat of the Department of the Environment, Transport, Energy and Communications (DETEC) was also used in 2007 for a comprehensive exchange of opinions, information and experiences between accident investigation bodies.

In the meantime, representatives of the Hungarian and Czech accident investigation bodies have also joined this platform. Talks are currently ongoing on the involvement of other European accident investigation bodies (e.g. Slovakia, Slovenia).

The Rail section is also a member of the 'Network of the National Accident Investigation Bodies' committee at the headquarters of the European Railway Agency (ERA) in Lille, and a member of the 'Common Safety Indicators' committee, also at the headquarters of the ERA.

Incident statistics for the Federal Accident Investigation Bureau in accordance with Section 20 of the Accident Investigation Act 2005

Table 1: Reported incidents - Tracks section

Reported and statistically recorded incidents (accidents and failures)	1527
of which reported accidents (Table 2)	1173
of which reported failures (Table 3)	354

Table 2: Reported accidents - Tracks section

Fires, explosions	263
Derailments shunting / ancillary journey	152
Derailments train	19
Crash ancillary journey	4
Crash shunting	172
Crash train	168
Accidents in connection with hazardous goods	22
Serious injuries and fatalities in connection with operation (incl. suicide)	176
Collisions	197

Table 3: Reported failures - Tracks section

Reduction in safe operation due to rail crime	66
Reduction in safe operation due to severe shortcomings in technical installations and railway vehicles	197
Rolling out of railway vehicles	15
Driving without a mandate or driving licence	20
Endangering of persons during work near track by journeys	5
Unauthorised passing of signals	49
Unauthorised admittance of trains onto busy sections of track	2

Table 4: In 2007 the Tracks section carried out 39 on-site investigations

Date	State	Incident
27.02.07	UA [Upper Austria]	**Unauthorised admittance** of train 3870 onto busy sections of track in Steyregg
03.03.07	UA	**Collision** Z1163.001 EK 20,905 Str. 25201
07.03.07	UA	**Shunting crash** in Gmunden
09.03.07	ST [Steiermark]	**Collision** Z46750 and Z.45051 EK 253,832 Str. 41301
23.03.07	LA [Lower Austria]	**Collision** Z6433 EK 13,407 Str. 16301
27.03.07	V [Vienna]	**Shunting derailment** in Vienna Matzleinsdorf
29..03.07	V	**Endangering of train journeys** in Vienna Liesing
30.03.07	LA	**Collision** Z6637 EK 69,098 Str. 10701
03.04.07	LA	**Collision** Z72107 EK 16,530 Str. 15301
03.04.07	LA	**Collision** Z6805 EK 0,982 Str. 17301
04.04.07	UA	**Derailment** Z45902 between Taufkirchen a. d. Pram and Schärding
24.04.07	ST	**Unauthorised admittance** of a train onto busy sections of track in Gralla
27.04.07	S [Salzburg]	**Fire** Z 4010.006 in Golling
30.04.07	V	**Shunting crash** in Vienna Südbf
15.05.07	LA	**SKL derailment** N102 in Willendorf
18.05.07	C [Carinthia]	**Rolled out vehicle** Tfz 1116.062 between Tarvisio Boscoverde and Villach
30.05.07	T [Tyrol]	**Crash** Z54432 between Hopfgarten and Üst Hp 1
13.06.07	UA	**Derailment** Z48514 in Gaisbach-Wartberg
26.06.07	LA	**Derailment** Z38226 in Hohenau
26.06.07	LA	**Collision** Z 2568 between Raasdorf and Sibenbrunn-Leopoldsdorf
05.07.07	LA	**Rolled out vehicle** in Linz Vbf-Ost reception sidings
06.07.07	V	**Collision** Z 75042 between Stadlau and Raasdorf

Date	State	Incident
20.07.07	LA	**Collision** Z 7023 between Purgstall and Scheibbs
24.07.07	LA	**Crash** between Z 38260 and Z 54701 in Obereggendorf
24.07.07	LA	**Collision** Z 7013 in Wieselburg a.d. Erlauf
30.07.07	LA	**Derailment** Z 55007 in Moosbierbaum-Heiligeneich
02.08.07	V	**Derailment** Z 54093 in Vienna Matzleinsdorf
24.08.07	LA	**Collision** Z 6407 between Bad Fischau-Brunn and Winzendorf
24.08.07	LA	**Collision** Z 77063 between Aspang and Obereggendorf
28.08.07	LA	**Crash** Z IC 539 in Gumpoldskirchen
04.09.07	B	**Collision** Z 2773 between Altpinkafeld and Oberwart
06.09.07	V	**Shunting derailment** Blumental
09.09.07	V	**Derailment** Z 41328 between Heiligenstadt and Klosterneuburg-Weidling
12.10.07	LA	**Fatality** of 3 employees caused by Z 2699 in Götzendorf
31.10.07	S	**Derailment** Z 54352 between Mallnitz-Obervellach and Böckstein
09.11.07	V	**Derailment** Z 54000 in Vienna in the rollout sidings of Zvbf Kledering
12.11.07	UA	**Derailment** Z 6192 in Perg
19.11.07	V	**Derailment** Z 96116 between Maxing and Abzw. HF1
28.12.07	C	**Derailment** Z 4824 in Rattendorf-Jenig

Table 5: In 40 cases, further investigations were carried out on the basis of the accident report submitted by the railway undertakings.

Date	State	Incident
19.01.07	S	**Loss of freight** with injury Z 54591 between Bischofshofen and St. Johann im Pongau
21.04.07	C	**Person injured** by Z 4614 between Spital Millstättersee and Möllbrücke-Sachsenburg
29.01.07	V	**Fire** Tfz 2143 038-4 in Vienna Praterkai
31.01.07	ST	**Person injured** by Z 54076 betw. Graz Verschiebebf and Gratwein
02.02.07	ST	**Crash** Z 44455 in Graz Hbf
04.02.07	UA	**Crash** shunting between St. Valentin and Enns
06.02.07	Hungary	**Crash** between regional and goods train (support of Hungarian accident investigation body)
13.02.07	ST	**Route cancellation** LZ 38624 Bf Fentsch-St. Lorenz
11.03.07	LA	**Collision** Z 2705 Scheiblingkirchen-Warth and Edlitz-Grimmenstein
13.03.07	S	**Shunting derailment** in Selzthal
19.03.07	S	**Propane gas escape** Sulzau
24.03.07	LA	**Roll-out** in Guntramsdorf-Kaiserau
27.03.07	V	**Derailment** Z 94241 in Vienna Matzleinsdorf
29.03.07	ST	**Shunting derailment** in Leoben-Donauwitz
29.03.07	LA	**Unauthorised passage** of Z 6845 in Schwadorf
11.04.07	S	**Resumption of derailment** Z 64346 in Salzburg
12.04.07	T	**Crash** Z 1144.211 with Z 1515 in Kitzbühel
20.04.07	ST	**Shunting crash** in Graz
29.04.07	B	**Fatality of a person** caused by Z 41114 in Neufeld an der Leitha
05.05.07	LA	**Vehicle fire** Z 54183 in Amstetten
07.05.07	ST	**Unauthorised passing of signal** Z 4015 in Krieglach
09.06.07	ST	**Fatality of a person** caused by Z 4018 between Frohnleiten and Mixnitz

Date	State	Incident
19.07.07	ST	**Derailment** Z 48922 in Hieflau
21.07.07	UA	**Collision** Z 3477 in Antisenhofen
01.08.07	LA	**Collision** Z 7773 in Traiskirchen
03.08.07	ST	**Collision** Z 44356 between Gleisdorf and Studenzen / Fladnitz
09.08.07	LA	**Derialment** Z 2755 between Steinbach-Großpertholt and Langschlag
09.08.07	ST	**Collision** Z 64588 in Zeltweg-Pöls
28.08.07	ST	**Collision** Z 2704 between Fürstenfeld and Bierbaum
30.08.07	ST	**Fire** Z 612 in Niklasdorf
30.08.07	LA	**Derailment** Z 6836 between Puchenstuben and Winterbach
31.08.07	LA	**Derailment** Z 49882 in Brenner
31.08.07	C	**Shunting crash** in Villach Süd
21.09.07	T	**Escape of hazardous goods** Z 64452 in Hall in Tirol
28.09.07	C	**Collision** Z 46750 between Launsdorf-Hochosterwitz and St. Veit a. d. Glan
29.10.07	LA	**Collision** Z 2127 between Hötzelsdorf-Geras and Irnfritz
12.11.07	T	**Crash** Z 562 between Strengen and Pians
13.11.07	B	**Conflict movement** Z 44634-88030 between Jennersdorf and Szentgotthárd
17.11.07	LA	**Fire** Z 2715 between Aspang and Ausschlag-Zöbern
10.12.07	Vo	**Crash** Z 164 with construction vehicle between Feldkirch - Nendeln

Table 7: In 2007, 26 investigations were closed with an investigation report, including extreme safety recommendations.

Date	State	Incident
09.05.06	C	**Derailment** Z 48246 in Villach **Safety recommendations** • Regular maintenance of the entire track should be undertaken, with due regard for existing standards or upkeep and maintenance plans, and also taking into account the findings of the metallographic investigation. • The existing standards for the thermite welding process are to be checked to ensure they are up to date and adapted if required. • Thermite welds must be performed in observance of the attendant quality assurance measures (e.g. approved track welding technicians, etc.).
19.07.06	B	**Crash** Z 44642 in Parndorf **Safety recommendations** • Inspection and evaluation of the wagon take-up process. • Inspection and evaluation of the working processes for the technical inspection of wagons (safety inspection etc.) with regard to securing freight. • Drafting of clear and comprehensible work instructions for employees on the basis of the results of the evaluations carried out. • Drafting of a clear and comprehensible instruction (operating regulation, explanation) on the behaviour of locomotive drivers in the event of a sudden loss of voltage from the overhead line, taking into account the available means of communication.
31.08.06	V	**Derailment** Z 68146 in Stadlau **Safety recommendations** • ÖBB-Infrastruktur-Betrieb AG decreed that in addition to periodic investigations with the track recording car, the actual track area is to be inspected on foot by an employee of the ÖBB-ISC. According to the requirements of the upkeep plan, all tracks of category ‘a’ are to be inspected every 2 months by the district inspector. This inspection can be replaced by an inspection on foot. In addition, during both regular maintenance and inspections according to the upkeep plan, particular attention should be paid to whether an overhaul of the bed is necessary on the basis of the geological conditions.
28.09.06	V	**Crash** Z 346 in Altmannsdorf **Safety recommendations** • Urgent awareness-raising among or retraining of employees about the rules concerning preparations for transfer trips and the permitted maximum speeds during shunting in accordance with ÖBB DV V3 (‘Operating Procedure’) • Review of the rules for transfer trips of ÖBB DV V3 (‘Operating Procedure’)

Date	State	Incident
04.10.06	ST	**Derailment** Z 63637 Hieflau **Safety recommendations** • Random checks of inspections or overhaul of rail vehicles (e.g. also comparison of documents on periodic inspection with the vehicles) • Inspection of workshops for permission to inspect and overhaul rail vehicles • Retrofitting of vehicles with buffer head(s) < 400 mm to buffer head(s) ≥ 400 mm
18.10.06	T	**Crash** Z 5276 with track-building crane in Kirchberg in Tirol **Safety recommendations** • Re-evaluation of the cranes permitted in Austria of type KRC 1200 with regard to the functionality of the safety devices, controls and the technical modifications made. In particular, the working order of the live ring brake should be integrated into the control logic and monitored by this in cranes of type KRC 1200 and the like. This is to rule out any automatic movement of the counterweight. The stability of the crane is thus guaranteed, and the restriction of the clear space over neighbouring tracks prevented. From the point of view of Tracks Section of the UUB and in accordance with the existing statutory provisions, the technical securing of the live ring brake is to be preferred to an organisational measure. The modification of track building crane SK1 X 980.009-5 of type KRC 1200 implemented by the manufacturer with respect to the display of the angle of the counterweight, together with the acoustic device when the limit angle position is exceeded, is viewed as an immediate measure. The crane driver mainly controls the crane by sight. In so doing, he has to take account of the load moved, the set-down point of the load, any employees in the set-down area and the hand signals of a marshal. Due to the sequence of operations it is difficult while lowering the load to always pay attention to the readout of a display which acts as a support for raising the crane. The acoustic warning device is at best an additional aid, but in no way an additional safety device, as it may not be possible to hear the acoustic warning signal due to the noise of the construction site. The crane driver's steering in the opposite direction if the counterweight's permissible angle of rotation is exceeded can only be considered an emergency measure. Since the movement of the counterweight is determined purely by the control logic, the crane driver can only steer in the opposite direction indirectly via the jib. In the case of a roped-up load that has not been raised, it is impossible to steer in the opposite direction via the jib. The only option available to the operator is to shut off the power to all components of the crane, and therefore the live ring brake too, using the 'emergency stop', in order to stop the counterweight.

Date	State	Incident
18.10.06	T	**Safety recommendations** • Where track building cranes are scheduled to be used, it should be established that the provisions of ÖBB ZOV 7 are to be applied analogously to the clear space as well as to the lateral spaces. Apart from the clearance gauge, 2000 mm outwards from the centre of the track, the side spaces, 2500 mm outwards from the centre of the track (according to the loading gauge 'A-B' in accordance with Figure 20), must also in principle be left clear. • Lifting operations and the transporting of loads on the jib of a track building crane should be seen as a further, non-calculable source of danger. The effects of the weather, such as gusts of wind, or a break in the reeving line could result in the raised or transported load ending up in the clearance of the adjacent track, without it being possible for the crane team to safely prevent this. In this case, on safety grounds, it would seem advisable to halt traffic on the adjacent track during a loading operation, and during lifting, setting down or transport operations on the crane jib not to allow any journeys on the adjacent track, if it is not possible to safely prevent the load being lifted from entering the clearance gauge of the adjacent track. • Draw up operating instructions for performing construction work with a clear division of responsibilities and powers. • Harmonise the definitions (such as Local Supervisor, Safety Inspectorate, Construction Site Inspectorate, etc.) in the ÖBB DV, guides and instructions with the terms used in the statutory regulations (such as e.g. Railways Act, Railways Regulation, Railway Employee Protection Regulation, Employee Protection Act, Construction Worker Protection Regulation, etc.). • Random inspections of the completion of construction work in situ are to be carried out by the railway undertaking or by the competent supervisory authority. **Safety recommendation of 20 October 2006 as immediate measure (see point 9) with GZ.BMVIT-795.037/0001/II/BAV/UUB/SCH/2006:** While working in the vicinity of tracks with track building crane X 980.009-5, no journeys should be permitted within the slewing range of the crane. Work using track building crane X 980.009-5 is to be stopped before allowing journeys within the slewing range. The safety recommendation was issued to: • the management of ÖBB-Infrastruktur Betrieb AG • the management of ÖBB-Infrastruktur Bau AG • Swietelsky Baugesellschaft mbH in Fischamend This safety recommendation (GZ.BMVIT-795.037/0001/II/BAV/UUB/SCH/2006) is withdrawn with all instructions, since it has been integrated into the safety recommendation GZ.BMVIT-795.037/0002/II/BAV/UUB/SCH/2006.

Date	State	Incident
18.10.06	T	**Safety recommendation of 10 November 2006 with GZ.BMVIT-795.037/0002/II/BAV/UUB/SCH/2006:** Following the findings of the investigation of 8 November 2006, the safety recommendation was extended to all cranes of identical construction of type KIROW KRC 1200. While working in the vicinity of tracks with track building crane of type KIROW KRC 1200, no journeys should be permitted within the slewing range of the crane. Work using track building crane X 980.009-5, 980.011-1 and 8455 9892 200-1 is to be stopped before allowing journeys within the slewing range. The safety recommendation was issued to: • the management of ÖBB-Infrastruktur Betrieb AG • the management of ÖBB-Infrastruktur Bau AG • Swietelsky Baugesellschaft mbH in Fischamend • Wels (operator of a crane of identical construction)
09.11.06	C	**Crash** Z 4856 with Z 67510 in Villach **Safety recommendations** • It is recommended that the optical display for the status of the intermittent automatic train control device on the traction unit (traction unit with blue lamp in the driver's cab) be optimised. In an initial step, according to the use being made and bearing in mind the residual service life of the traction unit (Tfz), the optimisation should be performed in particular on those traction units which are in repeated two-way use for shunting and hauling. Then on the remaining traction units the display for the status of the intermittent automatic train control device should be improved accordingly.
11.11.06	UA	**Derailment** Z 92517 in Linz **Safety recommendations** • Raise awareness of all Tfz drivers of all RU active in Austria on the subject of non-acknowledgement with the vigilance button. • A further safety recommendation no longer applies by virtue of the entry into force of the new provisions of Section 27 of the ÖBB DV V 3, Operating Procedure, relating to the brake setting to be applied according to the type of train and weight of the train set, on 10 December 2006.
25.11.06	ST	**Endangering** of Z EC 531 in Fentsch-St. Lorenzen **Safety recommendations** • Interruption or omission of work (support and fault clearance) in the vicinity of control desk in safety installations of the type Siemens VGS 80 during an operator action to set a route for journeys (implemented in ÖBB-Infrastruktur Betrieb AG on 01.12.2006). • Instruction / information to operators of signal boxes with push-button geographical circuitry of the type Siemens VGS 80 on the absolute need to follow instructions on a touch control of at least 2 seconds (implemented in ÖBB-Infrastruktur Betrieb AG on 01.12.2006). • Drafting of a system-based risk analysis in conjunction with the manufacturer, including any remaining up-times of signal boxes with push-button geographical circuitry, which is to be used as a basis for a technical improvement to prevent incorrect signalling

		on the basis of a 3-touch control (e.g. incorporation of additional protective circuits).

Date	State	Incident
07.12.06	LA	**Crash** Z 2082 in Melk **Safety recommendations** • Clear specification of processes for the planning and completion of construction work, especially in connection with responsibilities and powers. • Instruction of employees regarding the provisions of ÖBB DV v3 a) Keeping of operational documents b) Block on through tracks (diversions/rerouting) c) Instruction of employees regarding the provisions of ÖBB FB 601 d) Keeping of the Advice of Work in Progress (BETRA) / event checklists e) BETRA requests f) Distribution of BETRAs • Random inspections (e.g.: telephone log, operating log, etc.) by the railway undertaking or the competent rail supervisory authority. Irregularities are to be recorded and appropriate measures put in place. • Guaranteeing the timely distribution of BETRA emissions and verification of the accuracy of the information. • Random inspection of the completion of construction work in situ by the railway undertaking or the competent rail supervisory authority. Irregularities are to be recorded and appropriate measures put in place. • Ensuring observance of the Working time Act by the railway undertaking or the competent rail supervisory authority. Irregularities are to be recorded and appropriate measures put in place. • Guaranteeing of construction site evaluation under Sections 4 and 5 of the Employee Protection Act by the employer.
29.12.06	Vo	**Crash** Z EC 196 in Lochau **Safety recommendations** • Removal of contradictions in competences to handle an emergency/extraordinary event between emergency leader and the traffic manager. Clear work instructions are to be produced for the emergency leader and his competences and responsibilities set down. This is to be communicated to all station inspectors in suitable form. • ÖBB-Infrastruktur Betrieb AG is to draw up a general instruction for such deployments of non-rail third parties in track danger areas straight away. This instruction must specify the measures according to the principles of risk prevention (Section 7 of the Employee Protection Act). Similarly, the responsibilities for implementing the measures are to be clearly specified and employees continuously informed of these. When establishing protective measures, the principles of risk prevention as summarised in Section 7 of the Employee Protection Act are to be observed. As regards track danger areas, these principles are also to be enshrined in the provisions of Section 26 of the

		Railway Employee Protection Regulation. It follows therefrom for specific cases: • Where possible, a derailing stop is to be put in place (cf. Section 7(1) of the Employee Protection Act - Avoiding risks, Section 7(3) of the Employee Protection Act - Tackling dangers at source, Section 7(6) of the Employee Protection Act - Eliminating or reducing dangers, cf. also the identically worded ruling of Section 26(2) of the Railway Employee Protection Regulation).

Date	State	Incident
29.12.06	Vo	• If no derailing stop is possible, technical measures should then be taken to warn employees in the track danger area of the approach of a rail vehicle, for example the use of a Minimel system (cf. Section 7(4) of the Employee Protection Act - Eliminating human sources of error, cf. also the identically worded ruling of Section 26(3) and (4) of the Railway Employee Protection Regulation). • If no derailing stop and no technical measures are possible, organisational measures should then be taken to warn employees in the track danger area of the approach of a rail vehicle, for example the use of lookout men or only allowing a rail vehicle to pass once the track danger area has been cleared (cf. also the identically worded ruling of Section 26(5) and (6) of the Railway Employee Protection Regulation). • Ongoing emergency drills in collaboration with the forces of law and order. • The emergency training and knowledge gained from this are to be communicated in suitable form and to the extent required to employees of the railway infrastructure undertakings, rail transport undertakings and the forces of law and order. • The coordination meetings with external assistants for emergency area stations provided for in accordance with the ÖBB-DA emergency management are also to be held nationwide with all existing emergency management and the forces of law and order. Under Section 8 of the Employee Protection Act, employers must collaborate on implementing protective measures, they must in particular coordinate their activities in the field of risk prevention and inform each other and their employees. In principle, this must be done at employer level (in this case ÖBB-Infrastruktur Betrieb AG on the one hand and the police authorities on the other). To avoid similar accidents, it should therefore be ensured that in future the employer ÖBB-Infrastruktur Betrieb AG guarantees appropriate coordination with other employers for activities in the track danger area. • Re-evaluation of the traffic controller jobs in the Wolfurt management office and in the RVL-West emergency management office in collaboration with the transport Labour Inspectorate. • Employees of the forces of law and order are to receive continuous instruction on behaviour in the track danger area.
27.02.07	UA	**Unauthorised admittance** Z 3870 in Steyregg **Safety recommendations** • Inspection of all route blocking magnets of identical construction (already carried out by ÖBB-Infrastruktur Betrieb AG).

Date	State	Incident
07.03.07	UA	**Shunting crash** in Gmunden **Safety recommendations** • Instruction for employees regarding the provisions of ÖBB DV V3 Section II. • Random inspections of operational activities are to be carried out by the railway undertaking or the competent rail supervisory authority. Irregularities are to be recorded and appropriate measures put in place.
27.03.07	V	**Derailment** Z 94241 in Vienna Matzleinsdorf **Safety recommendations** • The one-sided loading of vehicles represents an increased risk of derailment and must be avoided at all costs. put into circulation the carrying rail transport undertaking must inspect the vehicles to be transported in a suitable form and scope as regards load distribution in accordance with AVV Annex 9 point 7.1.2 and RIV 2000 Annex II Volume 1, point 3.3. This inspection is also to be carried out on empty vehicles with reference to any remaining cargo. If the permissible limits of the wheelset load ratios of 1.25:1 in a transverse wagon direction, 2:1 for twin-axle wagons in a longitudinal wagon direction and 3:1 for bogie wagons in a longitudinal wagon direction are not observed beyond any doubt, the vehicle in question may not be transported.

Accidents on level crossings (EK)	
09.03.07 11.03.07 23.03.07 30.03.07 20.07.07 21.07.07 25.07.07 01.08.07 24.08.07 28.09.07 21.10.07 30.10.07	• Rail- and road-side investigation of the EK. This includes in particular o the type of protection (e.g. based on instructions, available protection taking into account existing traffic conditions and possibly altered parameters, etc.), o the situation of the technical installations and road signs or signals (e.g. erection points, visibility of installations, stop lines, etc.), o evaluation of the instructions (from 1963) for the entire stretch with respect to currently applicable provisions. • Implementation of a nationwide information campaign on EK in general and the correct behaviour of road-users in particular (e.g. media, authorities, driver's associations, driving schools, etc.). • Holding of special information events in situ on EK in general and the correct behaviour of road-users in particular (e.g. in municipalities, in schools, directly on level crossings, etc.). • Priority action of forces of law and order directly on site at level crossings.

Key:

Z	Train
ET	Electric rail car
Zvbf	Central shunting yard
Bf	Station
Üst	Cross-over
EC	EuroCity
Hbf	Main station
EK	Level crossing
SKl	Heavy trolley
Vbf	Shunting yard
Abzw	Junction
ÖBH	Austrian Armed Forces
Gvbf	Main shunting yard
DV	Instruction
Tfz	Traction unit
AB	Connecting line
DB	Guideline
IVB	Innsbrucker Verkehrsbetriebe
ZB	Zillertal train
ZSB	Supplementary provisions to the signalling and operating instructions
LZ	Light engine
IC	InterCity

Incident statistics for the Federal Accident Investigation Bureau in accordance with Section 20 of the Accident Prevention Act 2005 period 1.1.2008 to 30.06.2008

Table 8: Reported incidents - Tracks section

Reported and statistically recorded incidents (accidents and failures)	639
of which reported accidents (Table 2)	496
of which reported failures (Table 3)	143

Table 9: Reported accidents - Tracks section

Fires, explosions	85
Derailments shunting / ancillary journey	52
Derailments train	2
Crash ancillary journey	4
Crash shunting	66
Crash train	93
Accidents in connection with hazardous goods	13
Serious injuries and fatalities in connection with operation (incl. suicide)	113
Collisions	68

Table 10: Reported failures - Tracks section

Reduction in safe operation due to rail crime	14
Reduction in safe operation due to severe shortcomings in technical installations and railway vehicles	89
Rolling out of railway vehicles	1
Driving without a mandate or driving licence	5
Endangering of persons during work near track by journeys	2
Unauthorised passing of signals	31
Unauthorised admittance of trains onto busy sections of track	1