



Safety recommendation no. 109

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Safety deficit	<p>At 12:22 on 18 September 2015, a shunting movement consisting of several passenger train carriages pushed by a traction unit collided with a parked passenger train in Zurich Vorbahnhof. Various carriages were seriously damaged. There were no passengers in the carriages. The driver of the traction unit sustained minor injuries and sought medical treatment.</p> <p>The collision between the pushed shunting movement and the stationary train can be attributed to the fact that the foreman shunter operated under the assumption of an unobstructed route to the desired destination and did not adjust the speed of the movement to the dwarf signal indicating "Proceed with caution". It was then no longer possible to stop the shunting movement in a timely manner. Factors contributing to the accident were:</p> <ul style="list-style-type: none">- A wrong destination track was requested by mistake.- The destination track that was requested by mistake was occupied by stationary carriages.- The routine in the operating procedure led to the fact that an unobstructed route was expected and that little importance was attributed to the dwarf signal indicating "Proceed with caution". <p>Personnel are aware of the meaning of a dwarf signal indicating "Proceed with caution". The routine in the operating procedure leads to the fact that an unobstructed route is expected, and that little importance is attributed to a dwarf signal indicating "Proceed with caution". The shunting personnel are responsible for ensuring the safe execution of a shunting movement. If there is a difference between the expectation of a clear route to the designated destination and the actual situation (wrong destination track, an obstacle on the route), the likelihood of a collision or derailment increases.</p>
Safety recommendation	<p>The FOT should carry out an in-depth study of the conflicts between applicable regulations and operational reality, and implement appropriate measures. The study should cover the following topics:</p> <p>A) How do shunting movement accidents rank (frequency and extent) in comparison to all of the other accidents in which railway companies have an influence? To what extent is action required concerning risks and the potential development of risks (risk acceptance)?</p> <p>B) Are there safety deficits in shunting operations due to the centralisation of the signal box operation?</p> <p>C) In which areas does the day-to-day behaviour of personnel differ from the rules for shunting movements in facilities with dwarf signals as stipulated in the transport service regulations?</p> <p>D) What is the impact of proper behaviour during shunting movements in facilities with dwarf signals on operations? What need</p>

for action can be derived from it?

E) What measures can be implemented to eliminate any conflict between proper behaviour during shunting movements in facilities with dwarf signals and uninterrupted operations?

F) What would a safety net for carriages in shunting service that has a similar effect to that of the train protection system need to look like?

G) What opportunities and risks are involved in an increased exchange of information between the personnel involved from traffic and infrastructure?

H) Do additional aids to ensure a consistent level of information amongst all involved, traffic and infrastructure, make sense and how must they be designed?

Addressees	Bundesamt für Verkehr
Stage of the implementation	Implemented. The Federal Office of Transport (FOT) considers Safety Recommendation No 109 to be implemented. The FOT considers that the proportion of incidents and FWI during marshalling has decreased since 2009 in comparison with all incidents and FWI in the responsibility of the railway undertakings. The FOT has taken the following measures both during marshalling and on work sites: <ul style="list-style-type: none">• Since 2018, monitoring, analyses and measures on signalling incidents during marshalling has been a fixed item on the KOSEB VI agenda.• Key points of safety monitoring: Increased audit activity with regard to marshalling and work sites.
Investigation report concerning the safety recommendation	<u>Schlussbericht</u>