The following report is based on the *Model for report on occurrences during the carriage of dangerous goods* in accordance with RID 1.8.5.4. Detailed information on this accident and what caused it can be found in the report by the Dutch Safety Board (OvV). The report is available via the following link: https://www.onderzoeksraad.nl/uploads/phase-docs/1194/bf794f7757b1treinbotsing-tilburg-en-interactief.pdf

We would also refer you to informal document INF.5, which the Netherlands have submitted to the 7th session of the RID Committee of Experts' standing working group (Prague, 22 to 24 November 2016), which is also annexed to this report.

1. Mode

x Rail Wagon number (optional):	□ Road Vehicle registration (optional): …….....

2. Date and location of occurrence

Year: **2015** Month: **March** Day: **6** Time: **16:45**

Rail □ Station □ Shunting/marshalling yard □ Loading/unloading/transhipment site Location / Country: ..... or x Open line Description of line: near Tilburg Goods yard Kilometres:	Road □ Built-up area □ Loading/unloading/transhipment site □ Open road Location / Country: …….....

3. Topography

□ Gradient/incline
□ Tunnel
□ Bridge/Underpass
x Crossing

4. Particular weather conditions

□ Rain
□ Snow
□ Ice
□ Fog
□ Thunderstorm
□ Storm

Temperature: ... °C

5. Description of occurrence

□ Derailment/Leaving the road
x Collision
□ Overturning/Rolling over
□ Fire
□ Explosion
□ Loss
□ Technical fault

Additional description of occurrence:

See informal document INF.5 the 7th session of the RID Committee of Experts' standing working group (Prague, 22 to 24 November 2016) attached to this report.

A passenger train collided with a stationary freight train of dangerous substances at Tilburg. The last tank-wagon of the freight train got damaged and leaked UN 1010 Butadiene. Furthermore the whole train consisted of several other (not damaged) tank-wagons which contained other dangerous goods (see the list of substances as mentioned under 6.).

6. Dangerous goods involved

UN Number[1]	Class	Packing Group	Estimated quantity of loss of products (kg or l)[2]	Means of containment[3]	Means of containment material	Type of failure of means of containment[4]
1010	**2**		**Minor (drip) leakage**	**7**	**Steel**	**1 (leak along seal of manhole cover)**
1005	**2**			**7**	**Steel**	
1093	**3**	**I**		**7**	**Steel**	
1230*	**6.1**	**II**		**7**	**Steel**	
2312*	**3**	**II**		**7**	**Steel**	
*****	**empty uncleaned**					

[1] For dangerous goods assigned to collective entries to which special provision 274 applies, also the technical name shall be indicated.

[2] For Class 7, indicate values according to the criteria in 1.8.5.3.

[3] Indicate the appropriate number
1 Packaging
2 IBC
3 Large packaging
4 Small container
5 Wagon
6 Vehicle
7 Tank-wagon
8 Tank-vehicle
9 Battery-wagon
10 Battery-vehicle
11 Wagon with demountable tanks
12 Demountable tank
13 Large container
14 Tank-container
15 MEGC
16 Portable tank

[4] Indicate the appropriate number
1 Loss
2 Fire
3 Explosion
4 Structural failure

7. Cause of occurrence (if clearly known)

□ Technical fault
□ Faulty load securing
x Operational cause (rail operation)
□ Other: ……

8. Consequences of occurrence

Personal injury in connection with the dangerous goods involved:
□ Deaths (number: .....)
□ Injured (number: .....)

Loss of product:
x Yes
□ No
□ Imminent risk of loss of product

Material/Environmental damage:
x Estimated level of damage ≤ 50,000 Euros
□ Estimated level of damage > 50,000 Euros

Involvement of authorities:
□ Yes → □ Evacuation of persons for a duration of at least three hours caused by the dangerous goods involved
x Closure of public traffic routes for a duration of at least three hours caused by the dangerous goods involved
□ No

Organisation intergouvernementale pour les transports internationaux ferroviaires
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr
Intergovernmental Organisation for International Carriage by Rail

INF. 5

9 November 2016

(English only)

RID: **7th Session of the RID Committee of Experts' standing working group**
(Prague, 22 to 24 November 2016)

Subject: **Report on a rail accident at Tilburg on 6 March 2015**

Transmitted by the Netherlands

Information

1. With reference to RID 1.8.5.2 the government of the Netherlands wishes to inform the RID Committee of Experts' standing working group of the report of the Dutch Safety Board regarding the train accident that took place in Tilburg on 6 March 2015.

Brief outline of the accident

2. On 6 March 2015 a passenger train collided with a stationary freight train carrying dangerous substances at Tilburg in the Netherlands. Eight people on the passenger train were slightly injured. The last tank-wagon of the freight train was damaged and leaked butadiene (UN 1010). Some police officers became unwell after inhaling the escaped gases.

3. In response to the accident the Dutch Safety Board (Onderzoeksraad voor Veiligheid) carried out an investigation and published the report "Risicobeheersing bij spoorvervoer" (Risk management in railway transport) in which it has made several safety recommendations to the Ministry of Infrastructure and the Environment, the railway infrastructure manager, carriers and chemical companies.

Causes

4. The freight train was coming from the Chemelot chemical park in South Limburg and was en route to Rotterdam. Due to an adjustment in the schedule, the train left three hours later than originally planned and the carrier decided to stop in Tilburg to allow for a change of driver. When requesting the stop, the carrier's report on the length of the train was inaccurate, with the result that the train service management directed the train to a

siding that was too short. As a consequence, the rear wagon was so close to a switch that the signal for the passenger train remained red. The driver of the passenger train did not notice the red signal. The passenger train ran into the freight train. The front part of the passenger train climbed during the collision, and ended up against the tank of the butadiene tank-wagon.

Analysis

5. The sidings at Tilburg are not protected against red light passage by an automatic train control system (the so-called ATB-VV system), so the passenger train was not slowed down automatically by this system.

6. Because the passenger train was of an older type which does not have buffers, the front part of the passenger train climbed during the collision, and ended up against the tank of the butadiene tank-wagon.

7. The "climbing" of the passenger train was able to occur because the tank-wagon was not equipped with protection measures against overriding of buffers. Such protection is only mandatory for tank-wagons containing very toxic substances.

8. The freight train also contained wagons with non-dangerous substances. If one of those wagons had been placed at the rear end of the train, no dangerous substances would have leaked. However, there is no legal obligation to place a wagon with non-dangerous substances at the rear of a train.

Safety recommendations

9. The Dutch Safety Board highlighted in its report the importance of supply chain responsibility. It recommends rail companies not to make operational decisions that lead to an increase in known and managed safety risks. In addition, the Board recommends that passenger train railway undertakings should not use train types with poor collision compatibility on routes designated for the transport of dangerous goods.

10. Furthermore, the Board is of the opinion that the Minister of Infrastructure and the Environment should require that all types of tank-wagons be protected against overriding of buffers, and that the rear wagon of a freight train may not contain any dangerous goods.

Further steps

11. The Netherlands are currently exploring the possibilities for following up of the recommendations made by the Dutch Safety Board.

References

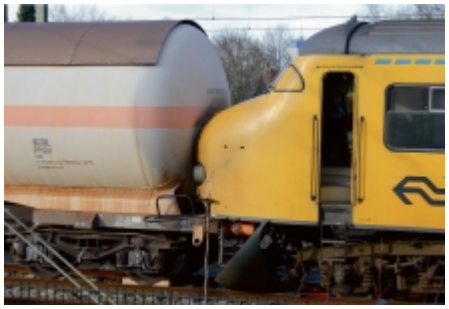
12. Overview of the recommendations (in English):
https://www.onderzoeksraad.nl/uploads/phase-docs/1194/7d35f4d5fcc1aanbevelingen-treinbotsing-tilburg-en.pdf

13. Full report by the Onderzoekraad voor Veiligheid (in English):
https://www.onderzoeksraad.nl/uploads/phase-docs/1194/bf794f7757b1treinbotsing-tilburg-en-interactief.pdf

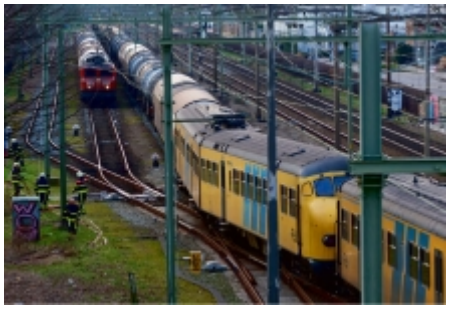
14. Press release with summary of the report by the Onderzoekraad voor Veiligheid (in Dutch only):
https://www.onderzoeksraad.nl/uploads/fm/09032016_DEF_persbericht_Tilburg.pdf

15. Report on the incident by the Inspectie voor Leefomgeving en Milieu (The Human Environment and Transport Inspectorate) (in Dutch only): https://www.ilent.nl/Images/Botsing%20Tilburg%20-%206%20maart%202015%20-%20definitief_tcm334-370747.pdf

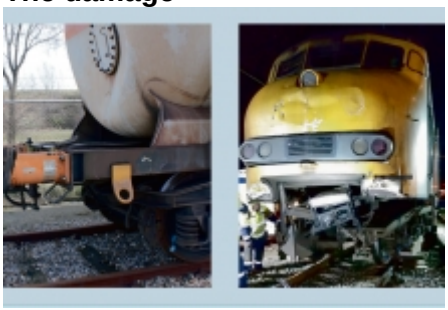
The collision



The situation



The damage



Situational overview