RID: 10th Meeting of the Working Group on Tank and Vehicle Technology (Brussels, 11 and 12 June 2009)

Subject: Notification of occurrence in accordance with RID 1.8.5

Information transmitted by Belgium

SUMMARY

Accident report in accordance with 1.8.5 – derailment of 3 RID tank-wagons (empty, uncleaned) – minor leakage of product – 23/1032.

Attached at annex are:
– the report in accordance with 1.8.5;
– some photos of the accident.

Observations

Derailment of a train of 30 wagons (14 wagons loaded – 9 wagons empty – 7 wagons loaded) at the exit from a marshalling yard when crossing a set of points (estimated train speed 15 km/h).

3 wagons (19th, 20th and 21st position) derailed.
The 3 wagons were empty, uncleaned and had contained dangerous goods:
19th wagon: empty, uncleaned, had contained trimethylamine, anhydrous (23/1083)
20th wagon: empty, uncleaned, had contained dimethylamine, anhydrous (23/1032)
21st wagon: empty, uncleaned, had contained trimethylamine anhydrous (23/1083).

The cause of the derailment was located at the exit of an S curve following deceleration. The 20th wagon left the rails first and continued rolling with the 1st axle and then the 1st bogie derailed, for a distance of 865 metres and caused the wagons next to it to derail when it went over a set of points.

**Causes of the derailment**

A combination of the following factors led to the derailment:

- The driver applied the brakes when leaving the curve.
- The curve had a slight counter-cant and slight subsidence (although this was within the accepted margin of tolerance).
- The train did not brake uniformly because:
  - The position of the braking method levers on wagons 19 and 20 was “P”, while the entire train was braked in braking method “G”. *However, it should be noted that the regulations allow a maximum of 3 wagons to be present in braking method “P” in a train-set in braking method “G”. In this case therefore, the composition of the train was in conformity with the rules in force.*
  - The brake switch on the 25th wagon (i.e. 3 wagons behind those that derailed) was in the “empty” position even though it was loaded.

**Consequence of the derailment**

Relatively major damage to track, sleepers and points.

19th wagon: rear bogie derailed.

20th wagon: both bogies of this wagon derailed and it tipped over ± 45°. There was major damage to the bogies and damage to the discharge device. The pipes for the liquid and gas phases were crushed between the bottom valves and the discharge valves. As a result, there was slight leakage (10 drops per minute) at the back of the discharge valve. The emergency services emptied the rest of the product present in the pipe and tightened all the bolts. No leakage was observed after this had been done.

21st wagon: one bogie derailed.
### 1. Mode

<table>
<thead>
<tr>
<th>X</th>
<th>Mode</th>
<th>Rail</th>
<th>Road</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wagon number (optional):</td>
<td>33 80 7912 6813 (empty, uncleaned tank-wagon)</td>
<td>Vehicle registration (optional):</td>
</tr>
</tbody>
</table>

### 2. Date and location of occurrence

<table>
<thead>
<tr>
<th>Year: 2008</th>
<th>Month: July</th>
<th>Day: 9</th>
<th>Time: 10.55</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Station Montzen – Borough of Plombières</td>
<td>Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shunting/marshalling yard</td>
<td>Built-up area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loading/unloading/transhipment site</td>
<td>Loading/unloading/transhipment site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Borough of Plombières – Belgium or Open line</td>
<td>Open road</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Location / Country:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description of line: .............................................</td>
<td>Location / Country: ......................................................</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kilometres: .............................................................</td>
<td>Kilometres: .............................................................</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Topography

- Gradient/incline
- Tunnel
- Bridge/Underpass
- Crossing

### 4. Particular weather conditions

- Rain
- Snow
- Ice
- Fog
- Thunderstorm
- Storm

Temperature: ... °C

### 5. Description of occurrence

<table>
<thead>
<tr>
<th>X</th>
<th>Occurrence</th>
<th>Derailment/Leaving the road</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Collision</td>
<td>Fire</td>
</tr>
<tr>
<td></td>
<td>Overturning/Rolling over</td>
<td>Explosion</td>
</tr>
<tr>
<td></td>
<td>Fire</td>
<td>Explosion</td>
</tr>
<tr>
<td></td>
<td>Explosion</td>
<td>Loss</td>
</tr>
<tr>
<td></td>
<td>Loss</td>
<td>Technical fault</td>
</tr>
</tbody>
</table>

Additional description of occurrence:

Wagon No. 33 80 7912 6813 derailed. A suspicious odour was noticed near the top of the wagon. The wagon, two of whose bogies derailed, lost an axle on the front bogie and the discharge device was damaged. It was noticed that a small amount of the load was leaking from the discharge device.
### 6. Dangerous goods involved

<table>
<thead>
<tr>
<th>UN Number(1)</th>
<th>Class</th>
<th>Packing Group</th>
<th>Estimated quantity of loss of products (kg or l)(2)</th>
<th>Means of containment(3)</th>
<th>Means of containment material</th>
<th>Type of failure of means of containment(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1032</td>
<td>2</td>
<td></td>
<td>&lt; 333 l</td>
<td>7</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

(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
- [ ] 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:**

- [ ] 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
  - [ ] Closure of public traffic routes for a duration of at least three hours caused by the dangerous goods involved
- [x] No

If necessary, the competent authority may request further relevant information.
Loss of product