

## **Extract from the technical report on the incident at Montauban (Département 82 – Tarn-et-Garonne) on 26 April 2008 involving the malfunctioning of Veolia freight train No 467473**

### **Summary**

On Saturday, 26 April 2008, at 06.36 hours, freight train No 467 473 operated by the Veolia Cargo France rail company, travelling from Bordeaux Bassens to Boussens, made an emergency stop in Montauban station after having been unable, in spite of the brakes having been applied, to halt in response to the signal protecting the junction of the Brive–Toulouse and Agen–Toulouse lines. Between the application of the emergency brakes at the distant signal warning of the imminent stop signal and the point at which the train actually stopped, the distance covered by the train amounted to some 3 300 metres.

There were no human casualties or material damage, thanks to the swift reaction of the pointsman at Montauban and the absence of any other traffic at the junction or on the section of track on which train No 467 473 was travelling at the time of the incident.

This incident could have turned into a serious accident in slightly different circumstances.

The immediate cause of the incident was the fact that train No 467 473 was dispatched when the braking capacity of the entire rake of wagons was neutralised. Two human errors were at the root of the malfunction:

- after the final brake test had been conducted successfully, the general brake line was isolated so that the preparation of the locomotives could be completed and was not reconnected prior to the departure of the train;
- the train started off without a continuity test having been conducted on the brake pipes.

This unsatisfactory situation persisted, although there were two points at the start of the journey when it should normally have been detected by the driver but was not.

Two organisational factors contributed to these flaws in the application of the safety instructions: the imprecision of the working procedures for train formation and inadequate hierarchical and contractual supervision.

The report makes four recommendations regarding the monitoring of professional practices and on the formation and preparation of trains:

- production of engine rosters explicitly detailing the routine preparation of traction units;
- checks to verify the accuracy of the statement of train formation;
- systematic performance of an on-track brake test after the departure of the train;
- establishment of more effective supervision of operators responsible for the formation and driving of trains

### **Identification of causes and associated factors**

#### **Immediate and direct cause of the malfunction**

The direct and immediate cause of the malfunction was the fact that train 467 473 from Bordeaux Bassens to Boussens was dispatched when the braking capacity of the entire rake of wagons was neutralised.

#### **Other causes of the malfunction**

The dispatch of the rack with the braking system shut off resulted directly from two errors in the application of safety rules with regard to brake tests by the relevant staff, namely the drivers and the person responsible for train formation:

- failure by the person responsible for the formation of the train to re-establish the continuity of the brake system;
- absence of brake-continuity tests by the person responsible for train formation and the driver before the departure of the train.

### **Causes of the persistence of the malfunction**

Two factors allowed the malfunctioning of the train to continue over a distance of more than 200 kilometres without appropriate remedial action:

- the driver's failure to use the braking system properly when the train made its first unscheduled stop; in order to halt at extended protection signal 221 in Bordeaux, the driver applied the independent brake instead of the automatic brake; the inadequacy of the braking action could have been detected at that moment;
- a lack of attention or inappropriate response by the driver when the train slowed down for the first time in Bordeaux, a situation in which the malfunction would normally be detectable; at that point, the driver should have followed the prescribed procedure for operating and stopping malfunctioning trains.

### **Organisational factors**

Two organisational causes contributed to the observed errors in the application of safety instructions:

- working procedures for the loading and formation of trains that are not very conducive to consistency of operational practice in train preparation;
- insufficient hierarchical and contractual supervision, which means that divergences from the proper application of the rules cannot be detected rapidly.

### **Summary of recommendations**

The four recommendations made in the report are designed to establish supervision of the working practices of the various operators and to define more precisely the conditions that apply to the preparation of trains.

**Recommendation R1 (Veolia):** When engine rosters are drawn up, they should specify that the routine preparation of traction units must take place before the shunting of wagons and the formation of the freight train.

**Recommendation R2 (Veolia):** Care should be taken to ensure that the person responsible for forming the train checks the accuracy of the statement of train formation, which features in the waybill.

**Recommendation R3 (Veolia):** The railway company's hierarchical supervision and its supervision in the framework of contractual relations with the operators responsible for the formation and driving of trains should be strengthened.

**Recommendation R4 (Veolia):** For each train starting its journey, a brake test should be conducted on a systematic basis as close as possible to its place of departure.