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### Economic Commission for Europe

#### Inland Transport Committee

#### Working Party on the Transport of Dangerous Goods

##### Eighty-eighth session

Geneva, 3–7 May 2010

Item 6 (c) of the provisional agenda

**Proposals for amendments to annexes A and B of ADR: New proposals**

### Safety in road tunnels

**Transmitted by the Government of Switzerland\***

#### *Summary*

**Executive summary:** Subject carriage in limited quantities to tunnel traffic restrictions in accordance with Chapter 3.4.

**Action to be taken:**

**Related documents:** ECE/TRANS/WP.15/AC.1/116/Add.1, Chapter 3.4, ECE/TRANS/WP.15/203, ECE/TRANS/WP.1/112, ECE/TRANS/WP.15/2009/12.

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\* The present document is submitted in accordance with paragraph 1 (c) of the terms of reference of the Working Party, as contained in document ECE/TRANS/WP.15/190/Add.1, which provides a mandate to “develop and update the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)”.

## Introduction

1. During the eighty-seventh session of the Working Party a discussion was held on the question of introducing tunnel restrictions for units carrying in excess of 8 tonnes of dangerous goods in limited quantities in accordance with Chapter 3.4 (document ECE/TRANS/WP.15/2009/12). Special mention was made of the accident in the Tauern tunnel in Austria, in which several people lost their lives, and which involved dangerous goods in limited quantities. A majority of those who spoke favoured the idea of introducing restrictions for these transport units, but some implementation issues needed to be resolved.
2. The Working Party invited Switzerland to continue its work and to consider the different means available to solve the practical problems of application (see paragraph 57 of the report, ECE/TRANS/WP.15/203).
3. The main obstacles to the speedy implementation of tunnel restrictions in accordance with Chapter 3.4 are, at the present time, the question of vehicle marking and the lack of information about the load in the absence of a transport document.

## Marking

4. The issue of vehicle marking has been partially resolved, at least for vehicles carrying loads in excess of 8 tonnes of goods in limited quantities in accordance with Chapter 3.4, as adopted for entry into force on 1 January 2011. The only outstanding issue is of a legal nature. According to the new text the Working Party has proposed to introduce into the Consolidated Resolution on Road Signs and Signals (R.E.2), which is the text describing the interpretation to be given to the different signs of the Vienna Convention on Road Signs and Signals (document ECE/TRANS/WP.1/112), "*Sign C, 3<sup>h</sup> 'NO ENTRY FOR VEHICLES CARRYING DANGEROUS GOODS FOR WHICH SPECIAL SIGN PLATING IS PRESCRIBED' described in the 1968 Convention on Road Signs and Signals should be used without an additional panel to prohibit the entry of all vehicles defined in Article 1 (a) of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) carrying dangerous goods defined in Article 1 (b) of ADR for which orange-coloured plates according to section 5.3.2 of Annex A of ADR for marking of vehicles are required on the vehicles.*"
5. A vehicle carrying in excess of 8 tonnes of dangerous goods under the limited quantities regime shall be marked not with orange-coloured markings in accordance with section 5.3.2, but with markings in accordance with the new ADR 2011 texts in 3.4.7 and 3.4.13 to 3.4.15. Apart from the fact that the marking is not orange-coloured, these texts are not in the right section (5.3.2) to enable tunnel restrictions to be applied to these transport units.
6. The interpretation in R.E.2 makes it difficult to move forward under ADR. In order to enable flexible development of ADR regulations, the reference to section 5.3.2 which currently appears for signs C, 3<sup>h</sup>, C, 3<sup>m</sup>, D, 10<sup>a</sup>; D, 10<sup>b</sup> and D, 10<sup>c</sup> in R.E.2 should be amended.
7. We propose to ask the Working Party on Road Safety and Road Transport (WP.1) to consider deleting the reference to orange-coloured plates and to section 5.3.2 in the Consolidated Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.1/112).

## Proposal 1

8. In the Consolidated Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.1/112) in 1.11 (a) replace the end of the first paragraph containing the phrase:

“... for which orange-coloured plates according to section 5.3.2 of Annex A of ADR for marking of vehicles are required on the vehicles.”

with the following text:

“... for which marking of the vehicle is required in accordance with Annex A of ADR.”

In 1.11 (a) (i), (ii) and (iv) replace (three times) the phrase:

“... for which the orange-coloured plate marking according to 5.3.2 of Annex A of ADR is required.”

with the following text:

“... for which marking is required in accordance with Annex A of ADR.”

In 1.11 (a) (iii) replace the phrase:

“... for which the orange-coloured plate marking according to 5.3.2 of Annex A of ADR is required.”

with the following text:

“... for which marking is required in accordance with Annex A of ADR.”

## Consequential amendments

The same modification should be introduced for signs D, 10<sup>a</sup>; D, 10<sup>b</sup> and D, 10<sup>c</sup>.

In 1.11 (c) replace the end of the paragraph containing the phrase:

“... for which orange-coloured plates according to section 5.3.2 of Annex A of ADR are required on the vehicle.”

with the following text:

“... for which marking of the vehicle is required in accordance with Annex A of ADR.”

The same modification should be introduced for signal C, 3<sup>m</sup>.

In 1.11 (b), towards the end, replace:

“... orange-coloured plates on the vehicle according to 5.3.2 of Annex A of ADR are ...”

with the following text:

“... marking in accordance with Annex A of ADR is ...”

## Justification

12. This enables ADR to be developed flexibly without having to resort regularly to amending the Convention on Road Signs and Signals. Vehicles marked in accordance with Chapter 3.4 can be subjected to tunnel restrictions. This enables risks to be managed in

these tunnels in a way that takes account of the risks actually present in the tunnel at the time of carriage.

## **Proposal 2**

10. Bearing in mind the decision-making procedures in WP.1 and the need to immediately enable effective management of all the risks in tunnels, a transitional solution is necessary in order to enable implementation of checks on the carriage of goods in limited quantities through tunnels. We therefore propose to introduce the following amendments into 5.3.2:

Insert a new subparagraph 5.3.2.1.1.2:

“For the purposes of carriage in accordance with Chapter 3.4, orange-coloured marking means the mark required by 3.4.13.”

## **Consequential amendment**

11. Renumber 5.3.2.1.1 as 5.3.2.1.1.1.

## **Justification**

12. Thanks to this indication in 5.3.2 requirements for tunnels can be implemented more quickly for loads carried in accordance with Chapter 3.4. The proposed amendments to the text of R.E.2 described in Proposal 1 can be adopted by WP.1 at their own speed, and more comprehensive risk management in tunnels is made possible forthwith.

## **Documentation**

13. During discussions at the eighty-seventh session there was little support for a transport document on units carrying more than 8 tonnes of dangerous goods in limited quantities. Other means of communicating the necessary information can be considered. However, it is not clear that such other means (electronic or otherwise) would be easier to implement than those currently recommended by the UN Model Regulations and by all transport modes, except road, for transport in accordance with Chapter 3.4. The risks presented by loads exceeding 8 tonnes of dangerous goods may well not be major for journeys on open roads. However, this is certainly not the case when such quantities are present in a confined space like a tunnel. Managing the risk means having information about all the hazards present in the tunnel. The simplest solution is currently provided by ADR in 5.4.1.1. Some delegations felt that there were other more appropriate means of transmitting the information. The Swiss delegation is ready to support them if they are presented. The aim of the present document is to move the debate forward.

14. Section 3.4.12 requires consignors of dangerous goods packed in limited quantities to inform the carrier in a traceable form of the total gross mass of such goods to be consigned. Where tunnels are concerned, this information is not enough to decide whether a given substance should pass through or not. Knowledge of the type of substance and the quantities loaded is necessary for comprehensive risk management. This can be obtained from the information required in 5.4.1.1.

15. During discussions at the eighty-seventh session, it came to light that, although studies showed the dangers presented by limited quantity packaging loads, some delegations do not accept that the risks presented by these loads can be compared to those

of other types of loads. Given that no study has shown that the 8 tonne limit is safe for such packaging and that the limit complicates the regulations unnecessarily, Switzerland has always been of the opinion that the limits in 1.1.3.6 were those that should be used to allow exemption from marking requirements in accordance with Chapter 3.4. However, this discussion should end when a majority of the Working Group accepts that the danger involved justifies marking vehicles carrying in excess of 8 tonnes of goods loaded in accordance with Chapter 3.4. Such a consensus, which takes into account the additional risk presented by quantities exceeding 8 tonnes, should lead to another consensus according to which the danger involved is sufficient to justify the presence of a transport document to pass through a tunnel subject to restrictions.

16. When it is known beforehand that the carriage will pass through a regulated tunnel, 5.4.1.1.1 (k) requires that the tunnel restriction code be included. Similarly, the simplest way to enable comprehensive management of risks in tunnels is to require that transport units carrying dangerous goods packed in limited quantities in loads exceeding 8 tonnes have a transport document in cases where carriage is planned to pass through a tunnel subject to restrictions.

### **Proposal 3**

17. Add in Chapter 3.4 a section 3.4.16 with the following text:

“3.4.16 When the total gross mass of the packages containing dangerous goods packed in limited quantities carried exceeds 8 tonnes per transport unit and the load must pass through a tunnel subject to restrictions on the passage of vehicles carrying dangerous goods the provisions concerning the transport document in 5.4.1.1 and the provisions in Chapter 8.6 shall apply.”

### **Justification**

18. Once it is accepted that a load of 8 tonnes of dangerous goods in limited quantities may be hazardous and that the danger justifies the marking of the transport unit, tunnel managers can hardly be expected to manage effectively the risks identified by the Working Group itself if they are not given the means to do so. It is not possible to manage risks in tunnels without taking into account the quantities of dangerous goods actually present at a given time. A tunnel manager cannot possibly consider a less strict tunnel classification if he is unaware of the frequency of the dangerous goods loads actually passing through the tunnel and therefore is not aware of the real risks involved, and above all if he does not have the means to carry out checks on vehicles in a simple manner. Therefore as long as comprehensive risk management involving the management of loads in accordance with 3.4 is not possible, the tunnel manager must assume the worst-case scenario and classify his tunnel as a category E tunnel. This is unlike other forms of transport of dangerous goods, which are not exempted in accordance with Chapter 3.4.

19. The use of a transport document is necessary so that both the quantities carried and the load's tunnel restriction code may be checked quickly. It enables effective risk management in the tunnel. This will expedite the necessary decisions concerning passage through tunnels, thereby facilitating the work of the carrier, the tunnel operators and the control authorities who must decide whether to allow a consignment through. An alternative solution without a transport document will only further complicate passage through tunnels subject to restrictions for vehicles marked in accordance with 3.4.13.