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### Economic Commission for Europe

#### Inland Transport Committee

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

#### Ninetieth session

Geneva, 3–5 May 2011

Item 6 (b) of the provisional agenda

#### Proposals for amendments to Annexes A and B of ADR:

#### Miscellaneous proposals

### Safety in road tunnels

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

#### *Summary*

<b>Executive summary:</b>	Make loads exceeding 8 tonnes of dangerous goods packed in limited quantities in accordance with Chapter 3.4 subject to tunnel traffic restrictions.
<b>Action to be taken:</b>	Amend the Consolidated Resolution on Road Signs and Signals (R.E.2). Indicate in Chapters 1.9, 3.4 and 8.6 that loads exceeding 8 tonnes of dangerous goods packed in limited quantities are subject to tunnel restrictions and that they are required to have a transport document.
<b>Related documents:</b>	ECE/TRANS/WP.1/112, ECE/TRANS/WP.15/2009/12, ECE/TRANS/WP.15/2010/10, ECE/TRANS/WP.15/2010/18, ECE/TRANS/WP.15/204, ECE/TRANS/WP.15/206, ECE/TRANS/WP.15/208

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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-ninth 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 packed in limited quantities in accordance with Chapter 3.4. The discussion is reflected in paragraphs 39 and 40 of the report (ECE/TRANS/WP.15/208). It was noted that when tunnel restrictions had been introduced in 2007 no marking had been required for loads carried in accordance with Chapter 3.4. With the introduction of marking requirements in 2011, it would be possible to improve risk management in tunnels. Switzerland indicated at the time that it would submit a simplified proposal.

2. Improved management of this risk will allow tunnel categorization to better reflect the reality of tunnel traffic. Currently, tunnel managers apply the precautionary principle. Since they are not aware of the real risks posed by the passage of dangerous goods carried in accordance with Chapter 3.4, they tend to select tunnel categories which are too strict compared to the real risks involved. This is done at the expense of dangerous goods subject to orange-coloured plate marking, which can no longer use the tunnels. If checks were introduced on loads in excess of 8 tonnes of goods in limited quantities in accordance with Chapter 3.4, only 47 entries would be subject to any real disruption in passage. Such checks would, however, make it possible to carry out a genuine risk assessment, which could allow a tunnel currently in category E to be assigned another category (B, C or D), thereby making unimpeded passage possible for the other 1,612 entries that can be transported in limited quantities.

3. Tunnel prohibitions are regulated by the road signs and signals contained in the Vienna Conventions; an interpretation of which is given in the Consolidated Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.1/112). According to R.E.2, prohibitions marked by the sign C, 3<sup>h</sup> apply only to vehicles for which the orange-coloured plates according to 5.3.2 of Annex A of ADR are required.

4. The current ADR considers loads in excess of 8 tonnes of dangerous goods packed in limited quantities as posing a sufficient risk to warrant vehicle marking. There should be no doubt about the scope of the sign C, 3<sup>h</sup> prohibiting the passage of dangerous goods. The sign should prohibit loads in excess of 8 tonnes under all circumstances because the risks they pose are considered by ADR as equivalent to those not exempted under Chapter 3.4. The scope of tunnel restrictions should be defined in ADR, not in R.E.2. Under the planned amendments to R.E.2 contained in proposal 1 below, signs prohibiting passage through tunnels would apply to any vehicle marked in accordance with ADR, whether it displayed an orange-coloured plate marking or one in accordance with Chapter 3.4.

5. With respect to category E tunnels the situation is straightforward: any vehicle marked in accordance with 3.4.14 is prohibited from using category E tunnels. The situation is less straightforward when it comes to regulating category B, C, or D tunnels. The following UN numbers are affected by prohibitions in these tunnels:

<i>UN Nos.</i>	<i>Category of tunnel</i>
UN Nos. 1950 and 2037 with classification codes 5F, 5FC, 5T, 5TC 5TF, 5TFC 5TO and 5TOC	Forbidden in category D and E tunnels
Organic peroxides with UN Nos. 3103 to 3110	
Self-reactive substances with UN Nos. 3223 to 3230	
UN Nos. 2956, 3241, 3242, 3251, 3478 and 3479	

<i>UN Nos.</i>	<i>Category of tunnel</i>
UN Nos. 1204, 2059, 3101, 3102, 3221 and 3222	Forbidden in category B, C, D and E tunnels

6. The 45 entries concerned have not been assigned a restriction code for E tunnels but can be carried in limited quantities in accordance with Chapter 3.4.

7. In the Tauern tunnel accident in Austria in 1999, which killed 12 people, burning and exploding aerosols delayed action by the emergency services. A tunnel manager can hardly ignore such hazards when assessing risk in a tunnel. Classifying a tunnel as category D so as to allow the passage of all code E goods (marked in accordance with 3.4.7 or 5.3.2) would be possible only if access by code D and B goods could be controlled. One option would be to prohibit any load marked in accordance with 3.4.7, but that would unfairly penalize the 1,612 entries assigned a restriction code for E tunnels which otherwise could have passed through D tunnels in limited quantities. A more appropriate solution would be to allow the passage of a vehicle through a category B, C or D tunnel only if information is available on the tunnel restriction code assigned to the goods carried. Current regulations call for such information to be entered in the transport document. This has been included as an option in square brackets in proposal 2, although in our view it complicates the regulations unnecessarily.

8. Discussions at the eighty-ninth session revealed some continuing resistance to making a transport document obligatory for loads exceeding 8 tonnes of dangerous goods packed in limited quantities which pass through restricted tunnels, partly because of supposed problems for multimodal transport. Such opposition cannot be justified by reference to problems for multimodal transport, since all modes of transport apart from land transport already have this obligation. With respect to the passage through restricted tunnels of loads exceeding 8 tonnes of dangerous goods packed in limited quantities, it is sufficient for information on the tunnel restriction code to be provided to the driver as well. An explicit tunnel prohibition in the regulations, without an obligation to have information available on the tunnel restriction code, would make passage through category B, C or D tunnels extremely complicated, because carriers could never be sure whether the restriction applied to their load or not. They would be required to demonstrate that their loads were authorized for passage without this information having been provided in advance. Bearing in mind the advantages for the carriage of most UN entries of classifying tunnels according to actual risks and the problems faced by carriers during checks if they do not have tunnel restriction codes, it seems that all the interested parties should accept the minor additional burden of looking up tunnel codes for loads in excess of 8 tonnes in order to enter them in transport documents. We therefore propose that the documentation should be required only for passage through tunnels subject to restrictions for loads exceeding 8 tonnes of dangerous goods packed in limited quantities (proposal 2).

9. It should be noted that these proposals do not concern prohibitions on roads that are not tunnels.

10. Some delegations considered that there was a need for explanatory texts in other parts of ADR. We propose adding to 1.9.5.2.2, 1.9.3.6, 3.4.1 (h), 8.6.3.3 and 8.6.4 texts clarifying the scope of the restrictions (proposal 3). In 8.6.3.3 it is proposed that text be added only for restriction codes in B, B/D, C/E, D and E tunnels, for which there are entries which can be carried in limited quantities.

## Proposal 1

11. We propose to request the Working Party on Road Traffic Safety (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) as follows:

In 1.11 (a), at the end of the first paragraph, replace:

“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:

“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:

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

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

In 1.11 (a) (iii) replace:

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

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

## Consequential amendments

12. 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), at the end of the paragraph, replace:

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

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

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

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

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

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

## Proposal 2

14. Add a new 3.4.16 to read as follows:

“3.4.16 When the total gross mass of the packages containing dangerous goods packed in limited quantities 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.”

### Proposal 3

15. In 1.9.5.2.2:
- For tunnel category B, add at the end:
- “UN Nos. 1204, 2059, 3101, 3102, 3221 and 3222 carried in quantities exceeding 8 tonnes (total gross mass) per transport unit according to Chapter 3.4.”
- For tunnel category D, add at the end:
- “UN Nos. 1950 and 2037 with classification codes 5F, 5FC, 5T, 5TC 5TF, 5TFC 5TO and 5TOC, 3103 to 3110, 3225 to 3230, 3241, 3242, 3251, 3278 and 3279 carried in quantities exceeding 8 tonnes (total gross mass) per transport unit according to Chapter 3.4.”
- For tunnel category E, add at the end:
- “, and all dangerous goods carried in quantities exceeding 8 tonnes (total gross mass) per transport unit according to Chapter 3.4.”
16. Add at the end of 1.9.5.3.6 the following text:
- “, except when vehicles carrying such goods are marked in accordance with 3.4.13 as defined in 3.4.14.”
17. Add at the end of 8.6.3.3 the following text:
- “, except if the unit is required to be marked in accordance with 3.4.13 as defined in 3.4.14.”
18. Insert in the second column of the table in 8.6.4 the following text in rows B, B/D, C/E, D, D/E and E:
- “Passage forbidden where quantities carried exceed 8 tonnes (total gross mass) per transport unit according to Chapter 3.4.”
19. Add at the end of 3.4.1 (h) the following text:
- “and 8.6.4.”
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