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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF
DANGEROUS GOODS AND ON THE GLOBALLY
HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the
Transport of Dangerous Goods

Twenty-eighth session, 28 November-7 December 2005
Item 6 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS
ON THE TRANSPORT OF DANGEROUS GOODS**

Security of dangerous goods in transport
Addition to the High Consequence Dangerous Goods Indicative List

Transmitted by the expert from the United Kingdom

Introduction

1. The expert from the United Kingdom recalls the development of Chapter 1.4 of the UN Model Regulations. This paper proposes that certain explosives of Division 1.4 are added to the indicative list of high consequence dangerous goods. High consequence dangerous goods have been defined in Chapter 1.4 of the UN Model Regulations (14th edition) as those “which have the potential for misuse in a terrorist incident and which may, as a result, produce serious consequences such as mass casualties or mass destruction”. The list includes all explosives classified as Division 1.1, 1.2 and 1.5 and those classified as Division 1.3 in compatibility Group C. Explosives of Division 1.4 are excluded from this list.
2. Designation of explosives as high consequence dangerous goods means that the security provisions in section 1.4.3 of the Model Regulations, the requirement for carriers, consignors and others engaged in the transport of high consequence dangerous goods to adopt, implement and comply with a security plan that addresses at least the elements specified in 1.4.3.2.2, apply.
3. There are ranges of explosives articles that are classified as Division 1.1, but in different packaging arrangements may be classified as Division 1.4. Of particular concern are detonators, detonating cord and shaped charges. The exclusion of such articles of Division 1.4 means that, for the same article, a security plan may or may not be required, simply depending on how it is packaged.

4. Detonators and detonating cord are particularly difficult for terrorists to manufacture themselves and will always be attractive targets for theft. Detonators and detonating cord are often the key components in improvised explosive devices (IEDs) and can be used as initiators of other explosives to destroy structures such as containment vessels holding dangerous goods.
5. For transport purposes however, these articles may be packaged such that articles that present a mass explosion hazard (Division 1.1) packaged in one way, can give no significant hazard (Division 1.4) when packaged differently. It is common practice to have detonators packaged and classified as Division 1.4, for example, so that they may be transported by passenger aircraft. It is also good practice to package any dangerous goods in a manner that reduces the hazard.

Discussion

6. Quite rightly, not all Division 1.4 explosives are considered to pose a serious threat to security. However, in recent meetings of security experts in Europe (involving France, Germany, Italy, Spain and the United Kingdom) and in bilateral discussions with Inspectorates of Explosives (e.g. Canada/United Kingdom) concern has been expressed about those Division 1.4 articles that might readily be used by terrorists and others in conjunction with other high consequence dangerous goods (including other explosives) to create mass destruction or casualties. Detonators and detonating cord have particular attractiveness to terrorists, but shaped charges also have potential utility to cause mass casualties or mass destruction.
7. In the United Kingdom, government ministers have sought advice on appropriate measures to ensure a minimum level of security of such articles.

The table below indicates the articles that are of concern.

Proper Shipping Name	High Consequence		Non-High Consequence	
	UN No	Hazard Code	UN No	Hazard Code
Detonator assemblies, non electric for blasting	0360	1.1B	0361 0500	1.4B 1.4S
Detonators for ammunition	0073	1.1B	0365 0366	1.4B 1.4S
Detonators, electric, for blasting	0030	1.1B	0255 0456	1.4B 1.4S
Detonators, non-electric, for blasting	0029	1.1B	0267 0455	1.4B 1.4S
Cord, detonating, flexible	0065	1.1D	0289	1.4D
Cord, detonating, mild effect, metal clad	0290	1.1D	0104	1.4D
Charges, shaped. Flexible, linear	0288	1.1D	0237	1.4D
Charges, shaped, without detonator	0059	1.1D	0440 0441	1.4D 1.4S

8. These explosives of Division 1.4 have the same ability as their counterparts in Division 1.1 to cause immediate mass destruction or mass casualties, but are not currently considered to be high consequence dangerous goods because of their packaging. The attractiveness of Division 1.1 and 1.4 detonators, detonating cord and shaped charges lies in their usefulness as initiators of mass events using other dangerous goods. A box of 100 detonators, for instance, can potentially be used to initiate 100 mass explosions using other explosives. For example, approximately two tonnes of home made explosives with a small amount of detonating cord was enough to create the London Bishopsgate bomb. Designation of these articles as high consequence dangerous goods will resolve this anomaly.
9. It is recognised that in developing the initial high consequence dangerous goods list the principles adopted included the need to provide a simple table without the complication of listing specific UN numbers. However, United Kingdom experience in applying these security measures on a non-mandatory basis for road and rail transport for some two years (and on a mandatory basis since July 2005) and experience of more recent terrorist attacks now shows that further refinement of the table would be appropriate.

Proposal

10. To add Division 1.4 with the specific UN Numbers 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456, 0500 to the indicative list of high consequence dangerous goods in Table 1.4.1 of the UN Model Regulations.
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