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COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the Transport of Dangerous Goods
(Sixteenth session,
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agenda item 5 (h))

MISCELLANEOUS DRAFT AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Segregation

Transmitted by the Expert from the Netherlands

Introduction

1. When the Sub-Committee discussed segregation before, it was in general agreed that more comprehensive provisions could be included at a later stage. The Sub-Committee will recall that at the 20th session of the Committee of Experts on the Transport of Dangerous Goods it was agreed to include this item at its work program for its next biennium.

2. When discussing amongst other the documents ST/SG/AC.10/C.3/1997/89 and UN/SCETDG/14/INF.3, it was possible to compare the various segregation requirements in place. It appeared that there are many differences between the modes.

3. The differences originate from different needs by the modes, such as:

(a) for the sea mode the main need is the safety of the ship and her crew, aspects considered in this respect are for example:

- *duration of a sea voyage in relation to the rapidity which an accident involving dangerous goods may affect the safety of the ship and her crew*
- *spillage's or leakage's of dangerous goods that may occur in locations which are not direct accessible, e.g. under deck, and may lead to a hazardous situation for the ship and her crew;*

(b) for the land mode the main need is to protect the public and environment, aspects considered in the aspect are for example:

- *transports of dangerous goods passes through dense populated areas*
- *such transports passes through environmentally sensitive areas, e.g. areas where drinking water is found;*

(c) availability of emergency response teams and/or equipment

- *for accidents occurring in the land mode specialised emergency response teams and/or equipment are often direct or on a short notice available*
- *sea-going vessels cannot call specialised emergency response teams in mid ocean and can fight an accident only with general emergency response equipment*
- *with the availability of specialised emergency response teams and/or equipment more adequate emergency actions can be carried out;*

(d) availability of direct supervision and accessibility

- *land transports of dangerous goods are always accompanied by e.g. a driver, who is and can constant supervise the transport and often have direct access to the cargo transport unit*
- *in the sea mode the amount of dangerous goods on board a ship is far more exceeding the amount carried in e.g. a single cargo transport unit (approx. 10 - 15% of freight containers carried on board a container ship are containing dangerous goods). Furthermore the dangerous goods are mostly stowed under deck, due to the high protective advantages, and can therefore not be constant supervised and direct access is often not possible;*

(e) different views in the modes with regard to undue hazard between incompatible dangerous goods in case of spillage, leakage or any other accident

- *certain dangerous reactions between incompatible dangerous goods are not always similar hazardous in all the modes, e.g. the result of an unobserved corrosive reaction in the hold of a ship is deemed fare more dangerous as in a road vehicle*

- *effects of such a dangerous reaction in e.g. a road vehicle often only affect the road vehicle, as on board a ship other dangerous goods maybe affected and may increase the hazard for the ship and her crew.*

4. Comprehensive segregation requirements, e.g. such as additional IMDG Code segregation requirements between certain substances, a certain substance and a group of substances or groups of substances, need not to be applied to all modes. Especially for the land mode with regard to distribution purposes, a harmonised multi model approach, which would include such comprehensive requirements, may be difficult to implement.

5. In principle incompatible goods should be segregated from one another when their stowage together may result in undue hazards in case of spillage or leakage, or any other accident. It is therefore important to define the term ***dangerous reaction between incompatible dangerous goods***.

Conclusions

1. For the reasons mentioned above it seems not appropriate to develop comprehensive multi model segregation requirements, and that segregation therefore should be dealt with by the modes.

2. However it would be very helpful if the UN could give a basic explanation in its Recommendations on the Transport of Dangerous Goods, Model Regulations of the term ***dangerous reaction between incompatible dangerous goods***, e.g. similar as described in para. 4.1.1.6 for dangerous goods packed together in the same outer packaging, which can be used in the modes for the development of their segregation requirements.
