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 **25 November 2013**

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Item 8 of the provisional agenda
Global harmonization of transport of dangerous goods regulations with the Model Regulations

Information on decisions taken by the ICAO Dangerous Goods Panel (DGP/24)

Transmitted by the International Civil Aviation Organization (ICAO)

Introduction

1. The Twenty-Fourth Meeting of the Dangerous Goods Panel (DGP/24) was held in Montreal from 28 October to 8 November 2013. The panel made a final review of amendments proposed to the Technical Instructions in order to harmonize with the 18th revised edition of the UN Model Regulations.

2. This information paper highlights issues which DGP/24 determined should be brought to the attention of the 44th Session of the Sub-Committee.

Harmonization of the ICAO Technical Instructions with the 18th revised edition of the UN Model Regulations

Editorial amendments

Exceptions for specimens comprising or simulating radioactive material enclosed in a sealed capsule (2.7.2.3.3.6 of Model Regulations)

3. A gap was identified between 2.7.2.3.3.6 (a) (i) which referred to radioactive material less than 200 g and 2.7.2.3.3.6 a) ii) which referred to radioactive material more than 200 g. To remove this gap, "more than 200 g" was replaced with "200 g or more" in the Technical Instructions.

> 7.2.3.3.6 Specimens that comprise or simulate radioactive material enclosed in a sealed capsule may be excepted from:
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> a) the tests prescribed in 7.2.3.3.5 a) and b) provided that the specimens are alternatively subjected to the impact test prescribed in ISO 2919:2012: "Radiation Protection — Sealed Radioactive Sources — General requirements and classification":
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> i) the Class 4 impact test if the mass of the special form radioactive material is less than 200 g; or
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> ii) the Class 5 impact test if the mass of the special form radioactive material is ~~more than~~ 200 g or more but less than 500 g; and

Reference to human or animal specimens (2.6.3.1.4 of the Model Regulations)

4. The Model Regulations refer to "human or animal specimens" in paragraph 2.6.3.2.3.8 as do the Technical Instructions. It was decided to replace this reference with "patient specimens" as this term was used throughout the Instructions and was defined in 2;6.3.1.4 (2.6.3.1.4 of the Model Regulations).

DGP decisions which result in lack of harmonization with the UN Model Regulations

Lamps containing dangerous goods (1.1.1.9 of Model Regulations)

5. The provisions in 1.1.1.9 a) and c) of the Regulations related to used, damaged or defective lamps were not adopted in the Technical Instructions. It was believed that these provision were mainly a concern for the surface mode and not applicable to air transport. Additionally, the general philosophy in the Technical Instructions was not to make allowance for transport of anything used, damaged or defective.

2.6 LAMPS CONTAINING DANGEROUS GOODS

The following lamps are not subject to these Instructions provided that they do not contain radioactive material:

~~a) lamps that are collected directly from~~ individuals ~~and households when transported to a collection or recycling facility;~~

a) lamps each containing not more than 1 g of dangerous goods and packaged so that there is not more than 30 g of dangerous goods per package, provided that:

1) the lamps are certified to a manufacturer's quality management system; and

Note.– The application of ISO 9001:2008 may be considered acceptable for this purpose.

2) each lamp is either individually packed in inner packagings, separated by dividers, or surrounded with cushioning material to protect the lamps and packed into strong outer packagings meeting the general provisions of 4;1.1 and capable of passing a 1.2 m drop test;

~~c) used, damaged or defective lamps each containing not more than 1 g of dangerous goods with not more than 30 g of dangerous goods per package when transported from a collection or recycling facility. The lamps must be packed in strong outer packagings that are sufficient for preventing release of the contents under normal conditions of transport meeting the general provisions of 4;1.1 and that are capable of passing a drop test of not less than 1.2 m.~~

b) lamps containing only gases of Division 2.2 (according to 2;2.2.1) provided they are packaged so that the projectile effects of any rupture of the bulb will be contained within the package.

Note.– Lamps containing radioactive material are addressed in 2;7.2.2.2 b).

Unpackaged fissile material

6. References to unpackaged fissile material that were added to Model Regulations were not added to the Instructions on the basis that unpackaged radioactive material was not permitted for air transport.

Requirements for medical devices or equipment (paragraph 2.6.3.2.3.9 of the Model Regulations)

7. Issues related to exceptions added to the 18th revised edition of the Model Regulations for medical devices and equipment potentially contaminated with or containing infections substances have been the subject of on-going discussions by the DGP and by the UN Sub-Committee. These include the feasibility of performing the required drop test on large and/or expensive equipment and whether or not medical devices and equipment capable of puncturing the packaging were adequately addressed in the current provisions. DGP/24, recognizing that any amendments agreed at this session of the Sub-Committee would only be applicable to the air mode in 2017 (through incorporation in the 2017-2018 Edition of the Technical Instruction), developed revisions to the provisions which it believed would address these issues in the interim.

8. There was general agreement by the DGP members that the intent of the 1.2 m drop test was never to require the actual dropping of large, often extremely expensive equipment but rather to ensure that if it were dropped, the dangerous goods would be retained and there would be no leakage. A new note describing what would constitute "capable of" retaining the medical devices and equipment when dropped from a height of 1.2 m was therefore added under the equivalent provisions in the Technical Instructions and more stringent packaging requirements were added:

> 6.3.2.3.7.1 Medical devices or equipment must be drained of free liquid to the extent practicable. They must be packed in a strong rigid outer packaging fitted with sufficient cushioning material to prevent movement within the outer packaging. These packagings must meet the general packing requirements of 4;1.1.1, 4;1.1.3.1 and 4;1.1.4 (with the exception of 4;1.1.4.1). If the outer packaging is not liquid tight and the medical devices or equipment are contaminated with or contain liquid infectious substances, a means of containing the liquid in the event of leakage must be provided in the form of a leakproof liner, plastic bag or other equally effective means of containment. These packagings must be capable of retaining the medical devices and equipment when dropped from a height of 1.2 m.
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> *Note.— A packaging's capability of retaining medical devices or equipment when dropped from a height of 1.2 m should be determined through testing a sample* package *as prepared for transport, or through alternative means such as non-destructive testing and engineering analysis, testing employing an article of similar mass and size, or other equivalent means.*

New entry for UN 3509 — Packaging discarded, empty, uncleaned

9. **Packaging discarded, empty, uncleaned** (UN 3509) will be forbidden for transport by air on the basis that Part 4;1.1.15 of the Technical Instructions (4.1.1.11 of the Model Regulations) requires empty packagings which previously contained dangerous substances to be subject to the same requirements of the Technical Instructions as they would if the package had been filled with that substance, unless the hazard was nullified. A new special provision explaining this was assigned to UN 3509.

Issues DGP/24 believed needed further attention by the Sub-Committee

10. The following are issues DGP/24 determined should be brought to the attention of the Sub-Committee. If necessary, issues will be raised formally at the next session of the Sub-Committee

Use of supplementary packaging within an outer packaging (new paragraph 4.1.1.5.2 of the Model Regulations)

11. DGP suggested that the reference to adding suitable cushioning used to prevent movement within a package in new paragraph 4.1.1.5.2 (highlighted below) was inappropriate as it was believed that the cushioning material could only be used if it was used when the packaging underwent testing. The text was adopted for the sake of alignment with the Model Regulations, but the meeting agreed that this concern should be brought to the attention of the Sub-Committee.

> Use of supplementary packagings within an outer packaging (e.g. an intermediate packaging or a receptacle inside a required inner packaging) additional to what is required by the packing instructions is permitted provided all relevant requirements are met, including those of 4;1.1.2, and, if appropriate, suitable cushioning is used to prevent movement within the packaging.

Life saving appliances

12. Concerns were raised that there were no limits set for the size of a battery in cases where UN 3072 — **Life-saving appliances, not self-inflating** and UN 2990 — **Life-saving appliances, self-inflating** contained lithium batteries and that there was no hazard communication to indicate the presence of these batteries. Some members wished to add requirements to the Instructions to address this, but it was believed that it was a wider problem involving all modes that would need to be addressed more comprehensively.

New documentation requirements (paragraph 5.4.1.5.7.1 and 5.4.1.6 of the Model Regulations)

13. The panel believed that the new requirements for paragraph references to appear on the transport document for consignments of fissile material (paragraphs 5.4.1.5.7.1 f) i) and f) iii)) were impractical as the paragraph number would be different depending on the mode. The requirements were maintained in the Technical Instructions for the sake of harmonization, but DGP believed the issue should be raised with the Sub-Committee.

14. A new footnote in the declaration text on the transport document (paragraph 5.4.1.6.1) was not adopted in the Technical Instructions as it was felt to be unnecessary.