



## DANGEROUS GOODS PANEL (DGP)

### TWENTY-FOURTH MEETING

Montréal, 28 October to 8 November 2013

**Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)* for incorporation in the 2015-2016 Edition**

### TRANSPORT OF EMPTY TYPE B (U) OR TYPE B(M) PACKAGES

(Presented by the World Nuclear Transport Institute)

#### SUMMARY

This working paper proposes the addition of new text to the note added at DGP-WG/13 under Part 2;7.2.4.1.1.5 of the Technical Instructions. The new text refers to residual contamination or activation in the internal part of a package as something that might also cause the external radiation level at the surface of an empty package to exceed 5  $\mu\text{Sv/h}$  therefore prohibiting the package from transport as UN 2908 — **Radioactive material, excepted package — empty packaging**. Editorial amendments to the note are also proposed.

**Action by the DGP:** The DGP is invited to agree to the amendment proposed in the appendix to this working paper.

## 1. INTRODUCTION

1.1 At the 2013 meeting of the DGP Working Group of the Whole (DGP-WG/13, Montreal, 15 to 19 April 2013), it was agreed to add a new note under Part 2;7.2.4.1.1.5 (renumbered 2;7.2.4.1.1.5.7 in DGP/24-WP/12) to explain that an empty package of radioactive material might exceed the 5  $\mu\text{Sv/h}$  permitted for classification as an excepted package due to the presence of depleted uranium in the shielding material, and it would therefore be classified either as low specific material (LSA-I) or as a Type B(U) or Type B(M) package.

1.2 An empty package of radioactive material might also exceed the 5  $\mu\text{Sv/h}$  permitted for classification as an excepted package due to residual contamination or activation in the internal part of the packaging. It is suggested that this possibility should be added to the note as proposed in the appendix to this working paper. Editorial amendments to the note are also proposed.



APPENDIX

AMENDMENT TO PART 2 OF THE TECHNICAL INSTRUCTIONS

Part 2

CLASSIFICATION OF DANGEROUS GOODS

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Chapter 7

CLASS 7 — RADIOACTIVE MATERIAL

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7.2 CLASSIFICATION

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7.2.4.1.1.5 An empty packaging which had previously contained radioactive material may be classified under UN 2908 — **Radioactive material, excepted package — empty packaging** only if:

- a) it is in a well-maintained condition and securely closed;
- b) the outer surface of any uranium or thorium in its structure is covered with an inactive sheath made of metal or some other substantial material;
- c) the level of internal non-fixed contamination, when averaged over any 300 cm<sup>2</sup>, does not exceed:
  - (i) 400 Bq/cm<sup>2</sup> for beta and gamma emitters and low toxicity alpha emitters; and
  - (ii) 40 Bq/cm<sup>2</sup> for all other alpha emitters; and
- d) any labels which may have been displayed on it in conformity with 5;3.2.6 are no longer visible.

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DGP/24-WP/3 (see paragraph 3.2.16)

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*Note.— The external radiation level at the surface of empty Type B(U) or Type B(M) packages may exceed 5 µSv/h due to either the presence of depleted uranium in the shielding material or to residual contamination or activation in the internal part of the packaging. Such empty packages cannot be transported as UN 2908 — **Radioactive material, excepted package — empty packaging** as they do not meet all the conditions specified in 7.2.4.1.1.2. These packages remain subject to all applicable parts of these Instructions and may be classified either as:*

- a) low specific material (LSA-I) due to the presence of depleted uranium as specified in 7.2.3.1.2 a) ii) or as:*
- b) surface contaminated object (SCO-I or SCO-II) as specified in 7.2.3.2.1;*
- c) a Type A package as specified in 7.2.4.4;*
- b) a Type B(U) or Type B(M) package as specified in 7.2.4.6.2; or*
- c) a Type B(M) package as specified in 7.2.4.6.3.*

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