



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/15)**

Montreal, 27 April to 1 May 2015

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 2017-2018 Edition

DETERMINATION OF TRANSPORT INDEX

(Presented by D. Mirko)

SUMMARY

This paper proposes to introduce a change to Part 7;2.9.1.3 of the Technical Instructions concerning the requirements for determination of the transport index.

Action by the DGP-WG: The DGP is invited to consider adding a Note 2 to Part 7;2.9.1.3 as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 A working paper was presented to the Dangerous Goods Panel Working Group of the Whole (DGP-WG/14, Rio de Janeiro, Brazil, 20 to 24 October 2014) (see paragraph 3.2.5.4 of the DGP-WG/14 Report) advising that some radioactive packages permitted for transport had both gamma and neutron emitting radiation and that the joint use of Geiger Mueller detectors and neutron detectors was necessary for an accurate calculation of the transport index for such packages. It was reported, however, that some shippers used only one and suggested that this would result in an inaccurate measurement. The addition of a recommendation on determining the transport index in Part 5;1.2.3 of the Technical Instructions was therefore proposed. The text of the recommendation was based on advisory material from the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material. DGP-WG/14 determined that the issue was complex and in need of further consideration.

1.2 This working paper provides a revised proposal. The current text of the Technical Instructions does not have this provision; it is therefore proposed that it be added in a note under Part 7;2.9.1.3.

2. **ACTION BY THE DGP-WG**

2.1 The DGP is invited to consider adding Note 2 to Part 7;2.9.1.3 as shown in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 7 OF THE TECHNICAL INSTRUCTIONS

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Part 7

OPERATOR'S RESPONSIBILITIES

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Chapter 2

STORAGE AND LOADING

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2.9 SPECIAL PROVISIONS APPLICABLE TO THE CARRIAGE OF RADIOACTIVE MATERIAL

2.9.1 Limitation of exposure of persons to radiation

2.9.1.1 The radiation exposure of transport and storage personnel must be so controlled that none of them are likely to receive a radiation dose in excess of that permitted for members of the public. In special cases, arrangements may be made with the competent authority for radiological control to have such personnel classified as radiation workers and to comply with the necessary provisions.

2.9.1.2 All relevant transport and storage personnel must receive such instructions as are necessary concerning the hazards involved and the precautions to be observed.

2.9.1.3 The practice should be followed of keeping exposure to radiation as low as reasonably achievable. The separation distances shown in Tables 7-3 and 7-4 are minimum values, and greater distances should be used where feasible. As far as possible, packages of radioactive materials stowed in underfloor cargo compartments of passenger aircraft should be placed on the compartment floor.

Note 1.— The separation distances from packages of radioactive material to passengers specified in Table 7-3 are based on a 0.02 mSv/h reference dose rate at a seat height of 0.4 m.

Note 2.— If the measured dose rate comprises more than one type of radiation, then the transport index should be based on the sum of all the dose rates from each type of radiation (IAEA Specific Safety Guide No. SSG-26 (2012 Edition)).

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