



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

2.5: Part 5 — Shipper's Responsibilities

**COMMENT ON THE PROPOSAL IN DGP-WG/15-WP/2 — DETERMINATION OF
TRANSPORT INDEX**

(Presented by D. Brennan)

SUMMARY

This working paper provides comments and proposes an alternative approach to the proposal set out in DGP-WG/15-WP/2.

Action by the DGP-WG: The DGP is invited is invited to consider the proposed changes as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 The issue raised in DGP-WG/15-WP/2 was first brought to light at the Dangerous Goods Panel Working Group of the Whole Meeting (DGP-WG/14, Rio de Janeiro, Brazil, 20 to 24 October 2014) where it was identified that the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition) (SSG-26) contains information regarding the determination of the transport index, and specifically that where appropriate, the measured radiation needs to take into account the presence of neutron radiation to accurately determine the transport index of the package and overpack.

1.2 While there was support for the proposal submitted to DGP-WG/14, see DGP-WG/14-WP/10 and paragraph 3.2.5.4 of the report of DGP-WG/14, it was believed that it was inappropriate to amend the provisions of the Technical Instructions without input from the IAEA and in particular the Transport Safety Standards Committee (TRANSSC) and also that this was a multi-modal issue that should first be incorporated through the UN Model Regulations.

1.3 DGP-WG/15-WP/2 has taken an alternative approach to amending the provisions of the Technical Instructions and instead proposes the addition of a note. However, the working paper proposes that the note be added to Part 7;2.9.1.3, which would make any recommendation a responsibility of the operator.

1.4 It is believed that to somehow direct, or recommend that the operator should in some way have a responsibility for determining or confirming the calculation of the transport index of a package is inconsistent with the provisions of the Technical Instructions which places the determination of the transport index in Part 5 – Shipper’s Responsibilities.

1.5 In addition, adding the note into Part 7 does not address the potential for the incorrect transport index to be applied when the package is in road transport between the shipper’s premises and the airport. For these reasons it is preferred that any note be added into Part 5;1.2.3.1.1.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to revise the provisions of the Technical Instructions as shown in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 5 OF THE TECHNICAL INSTRUCTIONS

Part 5

SHIPPER'S RESPONSIBILITIES

...

Chapter 1

GENERAL

...

1.2 GENERAL PROVISIONS FOR CLASS 7

...

1.2.3 Determination of transport index (TI) and criticality safety index (CSI)

1.2.3.1 Determination of transport index

1.2.3.1.1 The transport index (TI) for a package, overpack or freight container, must be the number derived in accordance with the following procedure:

- a) Determine the maximum radiation level in units of millisieverts per hour (mSv/h) at a distance of 1 m from the external surfaces of the package, overpack, or freight container. The value determined must be multiplied by 100 and the resulting number is the transport index. For uranium and thorium ores and their concentrates, the maximum radiation level at any point 1 m from the external surface of the load may be taken as:
 - 0.4 mSv/h for ores and physical concentrates of uranium and thorium;
 - 0.3 mSv/h for chemical concentrates of thorium;
 - 0.02 mSv/h for chemical concentrates of uranium, other than uranium hexafluoride;
- b) For freight containers, the value determined in step a) above must be multiplied by the appropriate factor from Table 5-1;
- c) The value obtained in steps a) and b) above must be rounded up to the first decimal place (e.g. 1.13 becomes 1.2), except that a value of 0.05 or less may be considered as zero.

Note.— 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 (see paragraph 523.1 of the IAEA Specific Safety Guide No. SSG-26 (2012 Edition)).

...

— END —