



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
WORKING GROUP MEETING (DGP-WG/16)**

**Montreal, 17 to 21 October 2016**

**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 2019-2020 Edition**

**EXCLUSIVE USE SHIPMENTS OF RADIOACTIVE MATERIALS**

(Presented by T. Muller)

**SUMMARY**

The transport of some shipments of radioactive materials under exclusive use has shown that there may be some weaknesses in the regulations mainly related to proper arrangements between shipper and operator and to adequate consideration of radiation protection measures.

**Action by the DGP:** The DGP is invited to discuss this topic and to share any experience with the panel. If the panel believes that additional measures may be required for “exclusive use” shipments a formal proposal will be made for the next working group.

**1. INTRODUCTION**

1.1 Exclusive use is defined as:

For the transport of radioactive material, the sole use, by a single shipper, of an aircraft or of a large freight container, in respect of which all initial, intermediate and final loading and unloading and shipment are carried out in accordance with the directions of the shipper or consignee, where so required by these instructions.

1.2 A freight container in the case of radioactive material transport is defined as:

An article of transport equipment designed to facilitate the transport of packaged goods by one or more modes of transport without intermediate reloading, which is of a permanent enclosed character, rigid and strong enough for repeated use and must be fitted

with devices facilitating its handling, particularly in transfer between aircraft and from one mode of transport to another.

In addition, a small freight container is that which has an internal volume of not more than 3 m<sup>3</sup>.

A large freight container is that which has an internal volume of more than 3 m<sup>3</sup>.

For the transport of radioactive material, a freight container may be used as a packaging.

1.3 Special arrangement means:

Those provisions, approved by the competent authority, under which consignments which do not satisfy all the requirements of these Instructions applicable to radioactive material may be transported.

For international consignment of this type multilateral approval must be required.

1.4 For non-fissile material, exclusive use must be applied in the following circumstances:

- a) In case a shipper wants to use less stringent Industrial Package requirements for LSA material and SCO (Technical Instructions Table 4-2);
- b) In case the transport index (TI) of a package or overpack exceeds 10 and the maximum radiation level at any point on the external surface exceeds more than 2mSv/h (but not more than 10 mSv/h), in which case special arrangement is also required.
- c) In case the total sum of transport indexes in a freight container exceeds 50; and
- d) In case the total sum of transport indexes on board a cargo aircraft exceeds 200.

1.5 With the exception of 1.4 b) where a special arrangement is required, the only way the operator's or handling agent's staff is advised that it concerns an "exclusive use" shipment is with a statement on the dangerous goods transport document. Nowhere in the regulations can you find a requirement that proper arrangements need to be made between the shipper and operator/handling agent.

It seems logical that when a booking is made for a "shipment under exclusive use", the information should be communicated to operations. However, a recent incident with a shipment of freight containers where the total transport index of one of the containers was far above 50 has shown that the handling staff did not receive any information, was not aware of any special handling instructions and no consideration was given to any radiation protection measures.

## 2. ACTION BY THE DGP-WG

2.1 The DGP is invited to discuss this topic and to share any experience with the panel. If the panel believes that additional measures may be required for "exclusive use" shipments, a formal proposal will be made for the next working group.