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WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-SECOND MEETING

Montréal, 5 to 16 October 2009

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 2011-2012 Edition

LIMITS ON TRANSPORT INDEX (TI) AND RADIATION LEVELS FOR PACKAGES AND OVERPACKS

(Presented by H. Al Muhairi)

SUMMARY

This working paper discusses a shipment of radioactive isotopes which was denied and invites the DGP to provide feedback related to challenges experienced by other States on this issue.

Action by the DGP: The DGP is invited to consider the information presented in this paper with the view of providing feedback related to implementation or challenges experienced by other States on a similar issue.

1. INTRODUCTION

1.1 A shipment was originally intended for transport by ship. An IMDG was prepared, but due to the urgency of the radioactive isotopes, the shipment was transported by air instead.

1.2 The consignment, an overpack using a bunker, consisted of seven packages inside the overpack. The shipper declared an individual transport index (TI) for five of the pieces. Three pieces had a TI of 3 each and the other two pieces had a TI of 1 each, totaling TI 11 in one overpack. As the TI for the other two units was 0.0005, i.e. negligible, the shipper declared a TI for only 5 of the pieces. The shipper had correctly labeled the 5 individual pieces which were inside the overpack.

1.3 The shipment was accepted for transport at the departure point. However, it was stopped on arrival at the transit point before it could be loaded for its final destination. At the transit point, the initial reading of the radiation at 1 m from the package was taken with the help of experts. The maximum TI that could be obtained was 0.5. This corroborated the stance of the shipper all along that though collectively, the bunker had a total TI of 11, the radiation level outside the package would be absolutely

low. Another reading was taken with gamma and neutron units a couple of days later and the reading at a 1 m distance indicated 0.6µSv/h — equivalent of TI 0 (White-I).

1.4 Part 5;1.2.3.1.4 of the Technical Instructions refers to the package or overpack being assigned to whichever category is higher, TI or surface radiation. However, in this case the surface radiation appears to indicate a very low level of radiation. Hence, in our opinion, the surface radiation reading must be taken and package labeled and transported accordingly.

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