



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTIETH MEETING

Montréal, 24 October to 4 November 2005

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 2007-2008 Edition

FUEL CELLS

(Presented by G. Leach)

1. INTRODUCTION

1.1 At WG05,WP 46 proposed a new Packing Instruction 31X (subsequently renumbered 313 in DGP/20-WP/7) for fuel cells. This Packing Instruction requires strong outer packagings to reflect the corresponding entry in the UN Model Regulations and not UN specification packaging.

1.2 There are a number of items listed in Table 3-1 of a similar nature to fuel cells which unlike the UN Model Regulations require UN specification packaging e.g. **Batteries, containing sodium** UN3292, **Batteries, dry, containing potassium hydroxide solid** UN3028, **Batteries, wet, filled with acid** UN2794, **Batteries, wet, filled with alkali** UN2795, **Batteries, wet, non-spillable** UN2800, **Lithium batteries** UN3090, **Lithium batteries packed with equipment** UN3091. It is suggested that fuel cells should similarly be required to be packed in UN specification packaging not only for consistency but because these items are a new technology and a conservative approach in the air mode is justified.

2. PROPOSAL

2.1 It is proposed to replace the Packing Instruction 31X agreed at WG 05 with the following new Packing Instruction:

<u>313</u>	PACKING INSTRUCTION <u>313</u>	<u>313</u>
<p><u>This instruction applies to UN3473 on passenger and cargo aircraft.</u></p> <p><u>Fuel cell cartridges containing flammable liquid must be packed in accordance with the general packing requirements of Part 4, Chapter 1 and be in wooden (4C1, 4C2), plywood (4D), fibreboard (4G) or reconstituted wood (4F) boxes, plywood drums (1D), fibre drums (1G), plastic drums (1H2), plastic jerricans (3H2) or solid plastic boxes (4H2) of Packing Group II. The fuel cells must be incapable of short-circuiting and be securely cushioned in the packagings.</u></p> <p><u>If fuel cell cartridges are shipped as an integral component of assembled equipment, they must be securely installed and protected against contact with other articles so as to prevent short circuits.</u></p> <p><u>When fuel cell cartridges are packed with equipment, they must be packed in inner packagings or placed in the outer packaging with cushioning material so that the cartridges are protected against damage that may be caused by the movement or placement of the equipment and the cartridges within the outer packaging.</u></p>		

— END —