DANGEROUS GOODS PANEL (DGP) MEETING OF THE WORKING GROUP OF THE WHOLE

Atlantic City, United States, 4 to 8 April 2011

- 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 2013-2014 Edition
 - 2.3: Part 3 Dangerous Goods List, Special Provisions and Limited and Excepted Quantities

TABLE 3-1 REQUIREMENT FOR LITHIUM BATTERIES PACKED WITH, AND CONTAINED IN EQUIPMENT

(Presented by D. Brennan)

SUMMARY

This paper proposes that the permitted net mass for lithium batteries packed with equipment, and contained in equipment as shown in Table 3-1 and the applicable packing instructions be aligned with the way that fuel cell cartridges are shown.

Action by the DGP-WG is in paragraph 2.

1. **INTRODUCTION**

- 1.1 This working paper continues the theme set out in working papers DGP-WG/11-WP/36 and DGP-WG/11-WP/37 in standardising the way that the net mass limits are shown in Table 3-1 and the applicable packing instructions.
- 1.2 Currently lithium batteries packed with equipment and contained in equipment are shown in Table 3-1 with "see xxx" across columns 10/11 and 12/13, where "xxx" is the applicable packing instruction.
- 1.3 For UN 3091 and UN 3481, lithium metal batteries packed with equipment and lithium ion batteries packed with equipment the limits shown in Packing Instructions 969 and 966 respectively apply to the net mass of lithium batteries contained in a single package. However, for lithium ion batteries contained in equipment and lithium metal batteries contained in equipment the limits shown in Packing Instructions 967 and 970 respectively apply to the net mass of lithium batteries per piece of equipment.

- 1.4 The way that the net mass limits are applied and shown deviates completely from the way that the limits are applied and shown for fuel cell cartridges, where in all instances the net mass applies to the mass of fuel cell cartridges in a single package regardless of whether the fuel cell cartridges are shipped by themselves, packed with equipment, or contained in equipment. Also, for fuel cell cartridges the net mass is shown in Table 3-1, rather than as a "see xxx" entry.
- 1.5 It is therefore proposed to modify the entries for the lithium battery entries when packed with or contained in equipment to remove the "see xxx" entry and instead replace this with a net mass in column 11 and column 13. At the same time it is proposed to align the text in the applicable packing instructions to just refer to the net mass of lithium batteries.

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

2.1 The DGP-WG is invited to amend the entries in Table 3-1 for the applicable UN numbers as shown:

										Passenger aircraft		Cargo aircraft	
	Name	UN No.	Class or divi- sion	Sub- sidiary risk	Labels	State varia- tions	Special provi- sions	UN packing group	Excepted quantity	Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
	1	2	3	4	5	6	7	8		9	10	11	12
Î	Lithium ion batteries contained in equipment	3481	9		Miscellaneous		A48 A99	II	E0	see <u>967</u>	967 <u>5 kg</u>	see <u>967</u>	967 <u>35 kg</u>
1	(including lithium ion polymer batteries) Lithium ion batteries	3481	9		Miscellaneous		A154 A164 A181 A88		E0		066		966
	packed with equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A88 A99 A154 A164 A181	II	EU	see <u>966</u>	966 <u>5 kg</u>	see <u>966</u>	35 kg
	Lithium metal batteries contained in equipment (including lithium alloy batteries)	3091	9		Miscellaneous	US 2 US 3	A48 A99 A154 A164 A181	II	E0	see <u>970</u>	970 <u>5 kg</u>	see <u>970</u>	970 35 kg
	Lithium metal batteries packed with equipment (including lithium alloy batteries)	3091	9		Miscellaneous	US 2 US 3	A88 A99 A154 A164 A181	II	E0	sec <u>969</u>	969 <u>5 kg</u>	sec <u>969</u>	969 35 kg
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2.2 If the proposal to revise Table 3-1 is adopted, the DGP-WG is invited to revise Packing Instructions 966, 967, 969 and 970 as shown:

Packing Instruction 966

Passenger and cargo aircraft for UN 3481 (packed with equipment) only

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General requirements

Part 4;1 requirements must be met.

Contents	Package quantity (Section I)			
<u>UN Number and Name</u>	Passenger	Cargo		
Quantity of lithium ion cells and batteries per package, excluding equipment UN 3481 Lithium ion batteries packed with equipment	5 kg of lithium ion cells or batteries	35 kg of lithium ion cells or batteries		

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Packing Instruction 967

Passenger and cargo aircraft for UN 3481 (contained in equipment) only

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General requirements

Equipment must be packed in strong outer packagings that conform to Part 4;1.1.1, 1.1.3.1 and 1.1.9 (except 1.1.9.1).

Contents	Net quantity per piece of equipment Package quantity (Section I)		
<u>UN Number and Name</u>	Passenger	Cargo	
UN 3481 Lithium ion batteries contained in equipment	5 kg of lithium ion cells or batteries	35 kg <u>of</u> lithium ion cells or batteries	

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Packing Instruction 969

Passenger and cargo aircraft for UN 3091 (packed with equipment) only

General requirements

Part 4;1 requirements must be met.

Contents	Package quantity (Section I)			
<u>UN Number and Name</u>	Passenger	Cargo		
Quantity of lithium metal cells and batteries per overpack, excluding equipment UN 3091 Lithium metal batteries packed with equipment	5 kg of lithium metal cells or batteries	35 kg of lithium metal cells or batteries		

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Packing Instruction 970

Passenger and cargo aircraft for UN 3091 (contained in equipment) only

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General requirements

Equipment must be packed in strong outer packagings that conform to Part 4;1.1.1, 1.1.3.1 and 1.1.10 (except 1.1.10.1).

Package contents	Net quantity per piece of equipment Package quantity (Section I)			
UN Number and Name	Passenger	Cargo		
Lithium metal batteries UN 3091 Lithium metal batteries contained in equipment	5 kg of lithium metal cells or batteries	35 kg of lithium metal cells or batteries		

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