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WORKING PAPER

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

Auckland, New Zealand, 4 to 8 May 2009

Agenda Item 5: Resolution, where possible, of the non-recurrent work items identified by the Air Navigation Commission or the panel
5.3: Review of provisions for dangerous goods relating to batteries
a) lithium batteries

LITHIUM BATTERY MARKING REQUIREMENTS

(Presented by the Dangerous Goods Advisory Council)

SUMMARY

This paper proposes to add new text to Packing Instructions 967 and 970 for packages containing more than four cells or more than two batteries, other than button cell batteries, installed in equipment which must be labelled with a lithium battery handling label.

Action by the DGP-WG is in paragraph 3.

1. INTRODUCTION

1.1 The UN Sub-Committee of Experts on the Transport of Dangerous Goods at its 34th Session (Geneva, December 2008) adopted an exception to requirements for marking packages containing lithium batteries with the newly adopted mark shown in Figure 5- 31 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284). The exception is for button cell batteries installed in equipment which pose no appreciable safety hazard. For safety and practical reasons, DGAC recommends that this change be adopted in the 2009-2010 Edition of the Technical Instructions through an addendum.

1.2 The UN Subcommittee amended UN Special Provision 188 paragraph (f) by revising the text so that button cells in equipment need not be considered in determining whether a lithium battery label is required. This was accomplished by revising the introduction to SP188(f) to read as follows:

> (f) Except for packages containing **button cell batteries installed in equipment (including circuit boards), or** no more than four cells installed in equipment or no more than two batteries installed in equipment, each package shall be marked with the following:

The consequent change to the Technical Instructions would be to the fourth bulleted item in the additional requirements of Section II of Packing Instructions 967 and 970. If adopted by the DGP, this bulleted item in each packing instruction could be revised to read:

> Each package containing more than four cells or more than two batteries**, other than button cell batteries,** installed in equipment must be labelled with a lithium battery handling label (Figure 5-31).

2. DISCUSSION

2.1 Button cell batteries are used extensively in items common to everyday life. They are important for maintaining a small amount of electrical power when normal electric service is interrupted or in other devices they serve as the only source of power. For example, most computers contain a button cell to maintain the correct time when the computer is turned off. Button cells are in a multitude of consumer electronic equipment including cellular phones, computers, MP3 players, printers, cordless phones, watches, calculators, electric clocks, and toys.

2.2 To comply with the current marking requirements, shippers must take the number of button cells into account. It is difficult for even the most conscientious person striving to comply with the regulations to know if button cell batteries are present and the number. Even companies that assemble computers from components are struggling to comply with the lithium battery marking requirement because the number of button cell batteries in computer components produced by others is often unknown to them. Determination will be even more difficult for consumers when shipping electronic items. The complexity of complying with the new requirements places consumers and industry at risk of unintentionally contravening the regulations.

2.3 Requiring button cells to be taken into account is also detrimental to safety. Quite often equipment will contain lithium primary button cell batteries as well as larger lithium ion batteries. Consequently, for such equipment, the required package marking will notify the presence of both lithium primary batteries and lithium ion batteries. Lithium primary and lithium ion batteries elicit different emergency response procedures. For lithium primary batteries more specialized fire fighting agents are needed whereas lithium ion battery fires may be extinguished by more readily available media. Identifying the presence of both types of batteries when lithium primary batteries are button cells may delay emergency response in that a responder upon seeing the lithium primary battery label may erroneously conclude that a specialized media is necessary even though no such response is necessary for these small button cell batteries in equipment.

2.4 In addition, applying the lithium battery requirement to button cell batteries for a two year period and excepting them in the next edition of the Technical Instructions, would have the effect of undermining confidence in regulatory requirements and undermine the level of importance some shippers attribute to regulatory compliance. A member of the US National Transportation Safety Board recently emphasized that establishing a safety conscious corporate culture is every bit as important as good regulations. DGAC believes that quickly correcting this unnecessary and difficult to follow requirement will also serve to avoid intangible, undesirable safety impacts relating to corporate culture.

3. ACTION BY THE DGP-WG

3.1 The DGP-WG is invited to adopt the following change to the fourth bulleted item in the additional requirements of Section II of Packing Instructions 967 and 970 in the 2009/2010 Edition of the Technical Instructions through an addendum:

SECTION II

. . .

ADDITIONAL PACKING REQUIREMENTS

— Each package containing more than four cells or more than two batteries, other than button cell batteries, installed in equipment must be labelled with a lithium battery handling label (Figure 5-31).

— END —