DANGEROUS GOODS PANEL

Frankfurt, 16 to 20 September 2002

Agenda Item 3: Resolution, where possible, of the non-recurrent work items identified by the ANC or the panel
3.1: Packing instructions

REPORT OF THE PACKAGING INSTRUCTION WORKING GROUP

(Presented by G. Leach and R. Richard)

1. INTRODUCTION

1.1 At previous Panel working group meetings, informal work to align the Packing Instructions with those in the UN Recommendations and to make them more user friendly was undertaken. At the meeting of the Panel in October 2001 (see 2.10.4 of DGP/18 – WP/56) it was agreed that a small working group should attempt to update and streamline the Packing Instructions. The terms of reference for this work were set out in the report of the Panel.

1.2. The informal packing instruction (PI) working group met twice in Washington, DC in February and May 2002. The results of those meetings are summarised below. Detailed proposals and commentary identifying the implications of the proposed amendments are set out in the Annexes to this report.

2. DISCUSSION

2.1 The PI working group agreed that the current ICAO packing instructions can be significantly simplified and aligned with the UN packing instructions. During their evaluation, the group concentrated on maintaining the guidelines established by the panel by addressing two main goals:

2.1.1 Rationalize or verify authorized packaging and inner packaging quantity limits while maintaining an appropriate level of safety. The review lead to a minimal number of changes in authorized packaging and inner quantity limits. Changes to the authorized packaging are aligned with the UN Model Regulations. Changes to inner packaging limits were few and only done to align with similar substances where differences could not be justified. A conservative approach was used and in many cases the proposed amendments should result in a higher degree of safety. These changes are detailed in Annexes 1-3.

2.1.2 Maintain or improve on ease of customer use. The PI working group discussed in detail the

current format of the ICAO TI packing instructions, evaluating the advantages and disadvantages from a user perspective. As was discussed at the meeting of the Panel in October 2001, the group identified significant consolidation and streamlining that could be done to ease use. The recommendations were developed to improve the clarity of the packing instructions, particular packaging requirements, and the Dangerous Goods List.

a) Packing Instructions. Currently, the TI provides separate instructions for a substance depending on its assigned packing group, whether it is authorized for transport on passenger or cargo aircraft, or in limited quantities. Therefore, a single proper shipping name could be assigned multiple packing instructions. A worst case example would be Flammable Liquids, n.o.s., which will direct the user to choose from one of eight different packing instructions (PIs 302, 303, 305, Y305, 307, 309, Y309, or 310). A study of these instructions shows that the majority of the information is repeated and could easily be consolidated allowing the user to choose and identify requirements from one, maybe two, instructions rather than eight. In most cases, an effort to consolidate will provide the user with all packing requirements in one packing instruction location, simplifying the procedure for looking up packaging requirements. This simple consolidation will provide an approximate 40% reduction in the number of packing instructions and reduce the length of the Dangerous Goods List (DGL) by eliminating separate entries for different packing groups and limited quantities.

b) Particular Packaging Requirements (PPR). The PI working group further proposes simplifying the means in which PPRs are conveyed. Annex 2 identifies the current PPRs in Classes 3, 4, 5, and 9 and the group's decisions on each. These requirements could be simplified by the modifications as explained in the Annex and assigning the PPR to the individual substance in the DGL.

c) Dangerous Goods List (DGL). Annex 4 provides a sample page with a proposed modified layout incorporating the combined packing instructions and PPR designators. The proposed layout provides the advantage of a single column for packing instructions, identifying the relevant PPRs by substance, and aligning the quantity limits side-by-side.

2.2 Preliminary evaluation was done on Class 6.1 and Class 8 but is not submitted as part of this report. The PI working group did not consider the Packing Instructions for the following groups of dangerous goods:

Class 1	already aligned to UN
Class 2	will align to UN in 2003/4
Class 6.2	largely aligned to UN likely to need revision for 2005
Class 7	follows current UN text.

2.3 The PI working group considers that it has met the objective set down in Appendix A of the Panel Report. The following summarizes the progress to date on each principle:

a) Principle 1.1. "As far as practical, the packing instructions should be aligned with those in the UN recommendations in content and in layout. The numbering of packing instructions should be reviewed as the work progresses to ensure that there can be no confusion between the packing instructions for the surface modes of

transport and those used in air transport." The Packing Instructions are aligned in layout, as far as possible with the UN. The numbering system has not been agreed except that where a Packing Instruction exactly mirrors that in the UN it should retain the same number allocated by the UN.

b) Principle 1.2. "The packing instructions should be clear and provide as a wide choice of packagings as possible, whilst providing an adequate level of safety for air transport." The new Packing Instructions have where appropriate, been expanded to permit as a wide a range of packagings as possible. A number of the restrictions usually listed in Particular Packing Requirements (PPR) have been removed or edited to reflect the UN format. As a general rule where the Packing Instruction restricted the use of a particular type of packaging on the basis of compatibility, this has been removed. The reasoning is based on the fact that the data behind the decisions is almost always at least 25 years old. New methods of coating metal and many new types of plastic material including special coatings have been introduced which overcome compatibility problems. In addition, the current compatibility provisions are not all encompassing and it was felt that this could lead to a false sense of security on the part of shippers that would serve to detract from their understanding that they must ensure that the dangerous goods are compatible with the packaging materials as specified in the general packing requirements of Part 4; Chapter 1 and in the packing instructions.

c) Principle 1.3. "The packing instructions should consist of (a) a small number of general instructions covering the majority of the dangerous goods; and (b) a limited number of more specific instructions for particularly hazardous goods or specialized articles and substances." This principle was followed.

d) Principle 1.4. "A rationalized approach should be used for allocating packing instructions to specific substances." This principle was followed.

e) Principle 1.5. "A rationalized approach should be used for establishing the types of inner packagings and outer packagings permitted." The rationalisation of inner packages has led to a small number of additions and deletions to inner packagings authorized. Inner and outer packagings authorized were harmonized with the UN Model Regulations to the extent they did not require air unique restrictions.

f) Principle 1.6. "The quantities per packaging (inner and outer) should not substantially vary from the current provisions of the Technical Instructions." Quantities per outer package for passenger and cargo aircraft have not been changed. The rationalization of inner packaging quantity limits led to some inner quantity limit changes (some upwards but most downwards). These are listed in Annex 3.

3. PROPOSAL

3.1 The Panel is invited to discuss and evaluate the results of the PI working group's efforts to harmonize and simplify use of the ICAO TI Packing Instructions. The PI working group requests comments and further direction on proceeding with this project. Additional issues for consideration by the Panel Working Group include:

a) How should the PPRs be conveyed to users? The UN includes special packing provisions in the Dangerous Goods List (DGL). If the new packing instructions cover both passenger and cargo aircraft requirements in a single packing instruction then reformatting of the DGL may be necessary and warranted. Annex 5 illustrates an additional column for PPRs.

b) Should further validation and possible rationalization of inner quantity limits be pursued? Those packing instructions where it is necessary to list an inner packaging quantity limit by UN# (i.e., proposed 3X3) could be subjected to an additional detailed technical review to determine if the limits can be further rationalized based on alignment with similar hazards. Result would likely raise and/or lower quantities for some of these substances. The Panel working group should carefully consider the inner packaging quantity changes that are highlighted in the Annexes in relation to safety and potential economic impacts to industry.

3.3 The Annexes to this document are as follows:

Annex 1	Draft Packing Instructions.
Annex 2	Modifications to Particular Packing Requirements
Annex 3	Proposed Changes to Quantity Limits
Annex 4	Restructured Dangerous Goods List
Annex 5	Cross Reference of Current and Proposed Packing Instructions

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