INF. 37

International Civil Aviation Organization

WORKING PAPER

DGP-WG/05-WP/55
12/5/05

DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Montreal, 18 to 22 April 2005

REPORT OF THE MEETING OF THE WORKING GROUP OF THE WHOLE WG/05

(Presented by the Secretary)

1. INTRODUCTION

1.1 The meeting of the Working Group of the Whole Dangerous Goods Panel was opened by Mr. W. Voss, Director, Air Navigation Bureau, ICAO. Mrs. J. Code was elected Chairperson of the meeting, Mr. G. Leach was elected Vice Chairperson and Dr. K. Rooney acted as Secretary.

1.2 Mr. Voss noted the absence of Dr. Rooney had caused difficulty for the previous working group meeting and assured the group that ICAO, recognizing the importance of the work of the panel, would try to ensure full secretarial support for future meetings. He took the opportunity to thank Ms. Code and Ms. McLaughlin in their roles as chair and secretary for the additional work they had undertaken at WG04.

2. ATTENDANCE

2.1 The meeting was attended by the following panel members and advisers:

Member/Adviser*	Observer	State/International Organization
P. Steele	L. Willoughby	Australia
M. Hinoul	K. Vermeersch	Belgium
J.I. Code	L. Hume-Sastre	Canada
	D. Evans	
	D. McInnes	
	H. Deo	
	M. Man	

Member/Adviser*	Observer	State/International Organization
	P. Payette	
	D. Sylvestre	
J. Le Tonqueze		France
H. Brockhaus	R. Blumel	Germany
	M. Philippi	
	T. Seemann	
	C. Weber	
A. Ventresca	A. Furia	Italy
	Y. Watanabe	Japan
	S. Matsuo	
	M. Miyahara	
	K. Moriwaki	
	K. Muriwaki	
	J. Nishimura	
	M. Sato	
	N. Sawatari	
	K. Shimpo	
D. Raadgers	T. Muller	Netherlands
	S. Oosterhoff	
M.W. Evans		New Zealand
	D. Kurdchenko	Russian Federation
S.O. Sánchez Serrano		Spain
O. Alameri	N. Mohammed	United Arab Emirates
G.A. Leach	M. Castle	United Kingdom
	J. Hart	
	R. Wells	
R.A. Richard	J. Mc Laughlin	United States
	J. Nicolson	

Member/Adviser*	Observer	State/International Organization
J. Abouchaar	D. Brennan	IATA
	T. Ferguson	
	T. Gazetas	
	G. de Guzman	
	R. Jessop	
	P. Oppenheimer	
W.A. Schuurman		IFALPA
M.E. Wangler*	A.-M. Eriksson	IAEA
	A. Altemos	DGAC
	D. Warden	
	E. Sigrist	CEFIC
	A. McCulloch	IECC
	J. Servaites	USFCC
	J. Moir	
	D. Reichert	
	J. Paterson	

3. REVIEW OF REPORT

3.1 Report of the Meeting of the Working Group of the Whole WG/04 (DGP-WG/05-WP/1)

3.1.1 It was noted by the Secretary that the paper was presented for information at this time but that it would be issued as a working paper for the panel meeting. It was agreed to reissue DGP-WG/04-10 for this meeting. The Secretary confirmed that the she was co-ordinating with the Universal Postal Union Secretariat in order to follow up discussion on UN 3373 which had taken place in March 2005.

3.2 Draft amendments to the Technical Instructions arising from WG/04 (DGP-WG/05-WP/9)

3.2.1 The Secretary presented a paper containing draft amendments to the Technical Instructions based on the amendments agreed at WG/04. It was noted that the working papers for DGP/20 would contain all approved amendments agreed at both working group meetings.

4. ISSUES RELATED TO RADIOACTIVE MATERIAL

4.1 Denial of shipments of radioactive material (DGP-WG/05-IP/4) Security during the transport of radioactive material (DGP-WG/05-IP/7) IAEA Transport Safety Activities (DGP-WG/05-IP/10)

4.1.1 The issue of denial of shipments of radioactive material is of concern to member States of the IAEA. The working group was informed of work undertaken by the IAEA since the DGP-WG/04 meeting, especially that which related to training (DGP-WG/05-IP/4). Varying training courses of differing duration and contents were proposed based on the various needs of individuals involved in radioactive material transport. The Agency asked the group to review the proposed material and to provide feedback.

4.1.2 It was clarified that the training course for drivers of vehicles was aimed at those involved in land transport; it was suggested that IFALPA review the material and make suggestions as to how it could be modified for pilots and that the Agency would tailor it accordingly. It was queried how coordination with the training requirements from other bodies such as the UN would be achieved. It was suggested one mechanism would be the interagency coordination group. It was also suggested trade organizations would be consulted for their input.

4.1.3 It was recognized considerable effort had been devoted by the Agency in developing this material. It was agreed members should review it from an aviation perspective and would continue to cooperate with the Agency.

4.1.4 Information on the development of guidelines for security of radioactive material during transport was presented (DGP-WG/05-IP/7). It was recognized only nuclear materials had thus far been addressed thoroughly, however there was a need for a systematic evaluation of the potential consequences that could result from malicious events when categorizing materials and defining appropriate security provisions. It was further recognized that the categorization of radioactive material and the security provisions for identified categories of nuclear and other radioactive material should be harmonized.

4.1.5 A number of members welcomed the work undertaken by the IAEA but urged it be completed as quickly as possible so that provisions might be adopted in the next (15^{th}) edition of the UN Recommendations. It was noted that the thresholds presently included in the Recommendations had been developed without supporting scientific justification. The issue of confidentiality was raised; it was confirmed this paper (IP/7) could be distributed freely. The Secretary informed the meeting she would coordinate the issue with the Aviation Security Section, on the basis it was of interest to the two panels (Dangerous Goods and Security).

4.1.6 Transport safety activities of the IAEA were presented as information (DGP-WG/05-IP/10). It was noted that amendments to safety requirements and to safety guides had been distributed to member States and international organizations for comment.

5. ISSUES RELATED TO FUEL CELLS

5.1 Formic acid fuel cell systems (DGP-WG/05-WP/22 & IP/2) Methanol micro fuel cell (DGP-WG/05-WP36 & IP/11) Fuel cell cartridges containing flammable liquids (DGP-WG/05-WP/46)

5.1.1 Presentations on different fuel cell technologies were presented for information (IP/14-18).

5.1.2 A proposal to consider exemption for formic acid fuel cells in passenger and crew provisions was discussed (WP/22 & IP/2). It was noted that although formic acid when in concentrations of less than 85% was not flammable, it was corrosive which was of concern due to the possible interaction with the aluminium skin of an aircraft.

5.1.3 On the basis that the UN had just assigned an entry to fuel cell cartridges containing flammable liquid and that new technologies based on hydrides were being developed, it was suggested the UN be asked for a new entry for fuel cartridges containing corrosive liquids.

5.1.4 It was recognized that a number of different fuel cell technologies would shortly come to the marketplace and it was suggested a case by case analysis together with a risk assessment would be needed. It was suggested it would be essential to clearly identify which fuel cartridges were authorized for carriage on board so that screeners and passengers would be informed. It was suggested that the proposed fuel cartridges containing methanol was similar to exemptions already allowed, e.g. medicinal or toiletry articles.

5.1.5 A number of panel members queried whether the standard being developed by the IEC TC150 Group referred to tests (differential, drop), carbon monoxide emission and oxygen depletion. It was also queried whether the device would be hybrid in nature, i.e. battery plus fuel cartridge. It was stated that the rate of oxygen flow would not be sufficient for the reaction to be maintained should the device be placed in checked baggage.

5.1.6 A similar proposal to exempt a fuel cell cartridge containing methanol was presented (WP36 & IP/11). A number of members supported the proposal in principal but suggested it would be premature to make a decision at this time as consultations were ongoing in a number of States. A modification to the proposal to limit the device to a fuel cell system of the direct methanol type and to refer to the standard being developed by IEC TC150 was made. It was confirmed a differentiation between spare cartridges would be allowed in checked baggage whereas cartridges contained in devices would be restricted to carry-on baggage. It was agreed that close consultation with the IEC TC150 Group was essential in order to allow adoption of an exemption at DGP/20.

5.1.7 The proposal in WP/46 to provide quantity limits and a new packing instruction for UN 3473, **Fuel cell cartridges** containing flammable liquids, was agreed following modification to the packing instruction. Amendments included replacing the word *outside* with *outer* and the deletion of the requirement for an internal pressure test on the basis that special provision A146 assigned to the entry already contained such a requirement.

6. ISSUES RELATED TO INFECTIOUS SUBSTANCES

6.1 **Draft Amendments of the Technical Instructions to Align to the UN Recommendations - Part 2 (DGP-WG/05-WP/3)**
Draft Amendments of the Technical Instructions to Align to the UN Recommendations - Part 4 (DGP-WG/05-WP/5)
Packaging for exempt human/animal specimens (DGP-WG/05-WP/41)
Classification of patient specimens (DGP-WG/05-WP/51)
Packing Instruction 650 (DGP-WG/05-WP/12)
Biological substance, category B with subsidiary risks - Packing Instruction 650 (DGP-WG/05-WP/50)
Guidance document for the transport of infectious substances (DGP-WG/05-IP/1)
Guidance document - infectious substances (DGP-WG/05-IP/3)
ICAO PI 602 vs UN PI 620 (DGP-WG/05-IP/5)

6.1.1 Draft amendments to the infectious substances provisions as developed by the UN were reviewed in WP/3 and WP/5. Amendments already included in the Addendum to the Instructions were explained and editorial corrections were noted.

6.1.2 The whole philosophy behind the creation of the exemption put forward in WP/3, Division 6.2, paragraph 6.3.2.3.6 was debated at length. While members noted this amendment reflected a compromise agreed at the UN, discussions focussed on two positions — the perception that industry would have difficulty applying this regulation, and the use of professional judgement with regard to classification of specimens. Unless these issues were resolved, States would pursue different applications.

6.1.3 The meeting agreed to establish an ad hoc working group to review the following questions raised on this item:: a) clarification of the term “minimal likelihood”; b) definition of “leak proof”; and c) clarification of the element of professional judgement required to make a classification as given in the Note to 6.3.2.3.6.

6.1.4 With regard to the inconsistent use of the terms human or animal specimens, clarification would be sought from UNCOE for discussion at DGP/20. One member suggested that human or animal specimens in 6.3.2.3.6 be replaced with patient specimens so as to align it with paragraph 6.3.1.4. Another suggested an editorial amendment to replace “materials”with “specimens”in 6.3.1.4. As agreed by the meeting, the Secretary sought the opinion of the UNCOE Secretary, and he indicated that . reference could be made to ‘human or animal patient specimens” in 6.3.2.3.6.

6.1.5 The Secretary pointed out that with the introduction of the comprehensive safety oversight audits, questions have been raised related to Annex 6 and airlines’ authorization to carry dangerous goods. This may have consequences for operators regarding the carriage of UN 3373. The meeting was informed that the Secretariat will review this question and the outcome will be provided to DGP.

6.1.6 Following lengthy discussion, the meeting agreed that the text as proposed in WP/3 to paragraph 6.3.2.3.6, with an amendment to replace “should”with “must”, as proposed in WP/41 to ensure mandatory packaging, be included in the 2007-2008 Edition of the TIs.

6.1.7 The meeting then reviewed WP/5. Comments were raised with regard to the proposed amendment to Packing Instruction 650 that the secondary or outer packaging be rigid. One member expressed concern that it was necessary to have an outer rigid packaging as flexible packaging had failed. Another suggested that shippers should have the choice in using either a rigid secondary or outer packaging. Most felt that text should not be amended;. the meeting agreed to retain the current text as given in the 2005-2006 Edition of the TIs. It was noted that the UN proposal concerning drop height in paragraph 6 had not been included and this would be taken into account in the editorial review conducted by the Secretary.

6.1.8 A question was raised as to whether items which were now exempted as being division 6.2 but which were accompanied by other dangerous goods such as for refrigerant purposes could be carried in passenger baggage onboard the aircraft. The chairperson pointed out that any other dangerous goods present would be subject to the Instructions.

6.1.9 Turning to WP/51, the meeting was informed that since the publication of the Addendum to the 2005-2006 Edition of the TIs, questions had been raised by industry concerning the classification of "patient specimens" in the transport of infectious substances.

6.1.10 With the introduction of the new definition for "patient specimens", the special provision A141 linked to UN 3337 had been deleted. This special provision clearly explained that UN 3373 applied to human or animal material being transported for purposes such as research, diagnosis, investigational activities, disease treatment or prevention. Although the introduction of the new definition for "patient specimens" made special provision A141 redundant, clear guidance was not provided elsewhere in the regulations on the classification and the transport of "patient specimens". The meeting agreed to the proposed text but with reference just to 6.3.2.3. One member suggested that UN 3291 should also be included; however, others believed the definition for patient specimens precluded such a possibility. It was agreed this would be referred to the ad hoc working group for review.

6.1.11 The meeting agreed to refer to an ad hoc working group the outstanding issues raised during debate on this item:

a) the note to 6.2.3.6 referring to the term professional judgement - some felt that it should be more than providing guidance, but rather be a requirement;

b) the definition of minimal likelihood - text to be developed to avoid potential misinterpretation;

c) the insertion of UN 3291, medical waste in the amendment proposed in WP/51; and

d) the best locations to insert the amendment proposed in WP/51.

6.1.12 The meeting agreed to a proposal in WP/12 to amend Packing Instruction 650 paragraph 10) to reference the overpack marking required by Part 5;2.4.9 and to include in paragraph 11) the name and address of the shipper and consignee marked on each package as is required for all packages containing dangerous goods as per Part 5;2.4.2.

6.1.13 As proposed by one member, this amendment, although still to be approved at DGP/20, would be brought to the attention of the UN in the form of an IP for the upcoming UN meeting.

6.1.14 Inconsistencies between the provisions for dangerous goods of classes 3, 8 or 9 when packed with infectious substances and those permitted under the excepted quantities provisions were presented in

WP/50. These included the possibility to exceed the quantity limits for excepted quantities when shipping multiple primary receptacles and the authorization to permit both class 8 packing group I substances and substances normally forbidden on passenger aircraft.

6.1.15 Some members supported the proposal in principle but suggested further refinements to the proposed text were necessary. . The proposal was modified and, following discussion, agreed.

6.1.16 A possible contradiction between packing instruction 602 in the Technical Instructions and packing instruction 620 in the UN Recommendations relating to the 95 kPa pressure differential test was discussed at the Abu Dhabi meeting (DGP-WG/04-WP/02) and presented as information in IP/5. An interpretation by a national packing authority was provided as information to the meeting; members were invited to provide interpretations from their national authorities.

6.1.17 Two contrasting views were expressed — the first supporting an interpretation of conducting the pressure differential test at the two temperature extremes i.e. two conditions of pressure differential and a temperature range whereas the second supported an alternative interpretation of conducting the test at ambient temperatures i.e. one condition. It was suggested that the purpose of the pressure differential test was to prove the quality of the packaging in the event of an explosive decompression, an event which would likely take place at high altitudes and consequentially, very low temperatures.

6.1.18 Although it was suggested that the UN be asked for clarification, it was noted that the UN would expect ICAO to provide guidance on aviation related matters. It was agreed that a survey of packing institutes would be done which would seek information as to how the requirement was interpreted together with a request for information as to what repercussion they would envisage should they be required to apply the alternative interpretation.

6.1.19 A guidance document addressing the transport of infectious substances by all modes, originally developed by the European Dangerous Goods Liaison Group, was presented in IP/1. It was noted, following the decisions relating to exemptions taken earlier, some of the guidance was no longer applicable.

6.1.20 A further guidance document on the transport of infectious substances was presented in IP/3. It was noted the information should be reviewed to ensure it was consistent both with the decisions taken earlier and with the Addendum.

6.1.21 A number of members stressed the urgency in disseminating such information, when finalised, on the basis that many queries for clarification had already been received from hospitals, universities and medical authorities. It was suggested that the document should address issues such as the Addendum, packagings being leakproof, other dangerous goods being used as refrigerants for infectious substances and different scenarios involving transport of infectious substances, examples of which were given in IP/1. A second ad-hoc group was formed to review and finalize the text.

6.1.22 The working group reviewed the report of the first ad hoc group and agreed:

1) to clarify the reference to “minimum likelihood” in the note following 2;6.3.2.3.6 by the addition of text “In determining whether a patient specimen has a minimum likelihood that pathogens are present”;

2) to be consistent with the terminology with respect to patient specimens; and

3) to locate the new paragraph agreed in WP/51 as 2;6.3.7.

6.1.23 In light of the decisions taken by the working group, especially those in relation to exempt material, it was agreed there was a need for the proposed new provision on "exempt human specimens' and "exempt animal specimens" to be incorporated in the 2005-2006 edition of the Instructions rather than waiting until the 2007-2008 edition. It was recognized that only by issuing a second Addendum would the ambiguity, which currently exists with respect to what may be classified as UN 3373 and what may be considered exempt, be removed. Accordingly, the Secretary was asked to request ICAO to consider issuing a second Addendum.

7. DEVELOPMENT OF PROPOSALS, IF NECESSARY, FOR AMENDMENTS TO ANNEX 18 — *THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR*

7.1 Annex 18, Chapter 12 — Dangerous Goods Accident and Incident Reporting (DGP-WG/05-WP/26)

7.1.1 It was explained that although there are requirements in the Technical Instructions to report dangerous goods accidents, incidents, undeclared or misdeclared dangerous goods, there is no corresponding requirement in Annex 18 for States to establish procedures for investigating and compiling information concerning undeclared and misdeclared dangerous goods in cargo. It was suggested this was a serious omission in the Annex and a proposal was made to rectify the situation. It was also proposed to make a similar requirement for forbidden dangerous goods found in baggage.

7.1.2 It was clarified that the proposed amendment regarding investigating such undeclared or misdeclared dangerous goods referred to States having procedures to investigate in place. This was in recognition of the fact that for many States, the number of investigations could be very large. It was noted that such a procedure might simply consist of reporting a discrepancy by telephone. With regard to discovery of forbidden dangerous goods in passenger baggage, it was suggested that compilation of information would be sufficient.

7.1.3 The proposals were modified to refer to cargo only and were then agreed. The proposer said he would return to DGP/20 with another proposal regarding passenger baggage.

7.1.4 Members were asked to send to the Secretary examples of investigative procedures and compilation of information procedures on undeclared and misdeclared dangerous goods found in cargo so that it could be disseminated to all.

7.2 Additional Security Measures (DGP-WG/05-WP/37)

7.2.1 There was no support in favour of a suggestion, as a security measure, to require material safety data sheets (MSDS) to accompany consignments of chemical products. Several difficulties were noted - security could, in fact, be compromised by making such MSDS mandatory; no standard format for MSDS existed and MSDS were more likely to be used for safety rather than security. It was noted there are alternative emergency response documents, currently required by the Instructions , that are more pertinent to addressing dangerous goods emergencies in air transport.

7.3 Notification of Operator Variations by States (DGP-WG/05-WP/40) State variations (DGP-WG/05-WP/54)

7.3.1 Clarification was sought regarding the responsibilities of States with regard to notifying operator variations to ICAO. It was noted the majority of operators adopt more restrictive variations by virtue of using the IATA Dangerous Goods Regulations and it was queried whether States had to report all such variations.

7.3.2 Clarification was also sought regarding the status of State variations. Two contrasting interpretations were presented - the first believed the variations were part of the Instructions and hence had legal status, the second believed they were of an advisory nature, informing other States of different requirements in those States. It was noted that the text of the Annex and of the Instructions could be interpreted to support both arguments.

7.3.3 The Secretary informed the meeting of recent difficulties encountered during the preparation of questions for the comprehensive safety oversight system audit where differences of interpretation regarding what was meant by a difference and by a variation together with queries regarding the status of each for both a domestic and international perspective.

7.3.4 The working group agreed with a suggestion by the Secretary to seek advice from the Legal Bureau (LEB) on all aspects pertaining to variations and differences. A working paper containing the LEB remarks would be presented in sufficient time to allow members to prepare working papers for DGP/20.

8. DEVELOPMENT OF RECOMMENDATIONS FOR AMENDMENTS TO THE *TECHNICAL INSTRUCTIONS* FOR INCORPORATION IN THE 2007/2008 EDITION

Part 1 — General

8.1 Draft Amendments of the Technical Instructions to Align to the UN Recommendations - Part 1 (DGP-WG/05-WP/2)

8.1.1 Proposed amendments to Part 1 were presented. The Chairwoman noted the Secretary would check the text against the final UN text and all paragraph references in all the relevant working papers. It was agreed that members would assist the Secretary in this task.

8.1.2 A query was raised with respect to the proposed deletion of the word “international” in 1;1.4.4.2 which related to a multilateral approval. It was suggested this applied to instances when the State of shipment was different to that of the State of package design. It was agreed clarification would be sought from the IAEA.

8.1.3 With regard to the proposed new definitions, it was suggested those for CGA, IMO and UNECE were unnecessary. It was noted that reference was made to IMO in the Supplement. It was agreed the Secretary would review the definitions for possible deletion.

8.2 **Adoption of Addenda (DGP-WG/05-WP/20)**

8.2.1 There was general support for a proposal to clarify that addenda issued to the Instructions were part of those Instructions. Some members noted that , in their State, reference could only be made to an issued document. The proposal, following an editorial amendment, was agreed.

8.2.2 It was further agreed the Secretary should seek the advice of LEB regarding the word "issued". She informed the meeting that although the recent addendum had been approved by Council, further processing was required before it could be issued as an ICAO document, resulting in time lost. She noted that dissemination of information could be achieved by means other than by printed documents and suggested that other vocabulary, such as "promulgated" might be legally acceptable.

8.3 **Training and Definition of Cargo (DGP-WG/05-WP/27)**

8.3.1 It was explained that the present definition for cargo excluded persons loading mail from requiring dangerous goods training; it was proposed to amend the definition to address the issue. It was also believed the present definition excluded those loading COMAT.

8.3.2 Although there was general support to ensure such persons would require training, a number of difficulties with the proposed solution were observed. These included the necessity to maintain one definition for all annexes and a concern that by amending the definition other difficulties could inadvertently be caused. One member suggested consideration be given to including persons loading mail into the key in Table 1-4.

8.3.3 The proposer agreed to come back with a revised paper which would take into account the comments made.

8.4 **Chemical Oxygen Generators in Protective Breathing Equipment (DGP-WG/05-WP/29)**

8.4.1 A proposal to amend the provisions for protective breathing equipment to extend the alleviation for numbers in excess of those legally required and to permit inoperative equipment to be retained on board in their approved stowage was not agreed. One member believed this issue could be addressed through the operating or airworthiness specifications. Another pointed out that the alleviation did apply to those inoperative PBEs on the basis that 1;2.2.2 would only apply after they had been removed.

8.4.2 The proposer withdrew the paper. He asked members to consult with personnel dealing with the minimum equipment list and to consider how the issue was handled, and to provide comments so that the issue could be examined from a broader perspective.

8.5 **Excepted Quantities: Packing Requirements (DGP-WG/05-WP/38)**

8.5.1 A proposal to provide specific packing requirements for gases in excepted quantities was agreed.

Part 2 — Classification

8.6 **Draft Amendments of the Technical Instructions to Align to the UN Recommendations - Part 2 (DGP-WG/05-WP/3)**

8.6.1 Draft amendments to Part 2 Chapters 1, 2, 3, 4, 6, 7 and 8 were proposed to reflect the decisions taken by the UN.

8.6.2 It was agreed a reference to the UN default table for fireworks was sufficient for incorporation in the Instructions.

8.6.3 It was noted the amendments relating to division 2.2 gases was an editorial rearrangement.

8.6.4 It was noted mandatory requirements were contained in two notes in 4.2.3.1.1; since this reflected the UN text, it was agreed the UN would be asked for clarification.

8.6.5 It was explained the amendments to Table 2-8 resulted from decisions taken by the UN GHS Sub-Committee.

8.6.6 With reference to the proposed change to 8.2.2, it was explained the corrosion test procedures for packing group III involved liquids, or substances which may become liquid, only and consequentially, no reference to solids was required.

Part 3 — Dangerous Goods List and Limited Quantities Exceptions

8.7 **Draft Amendments of the Technical Instructions to Align to the UN Recommendations - PART 3 (DGP-WG/05-WP/4)**

8.7.1 Draft amendments to Part 3 Chapter 3 were proposed to reflect the decisions taken by the UN.

8.7.2 With regard to A14, it was noted further discussion of the use of old and new organic peroxide labels would be necessary.

8.7.3 It was noted that waste aerosols should not be transported by air and that A145 should reflect this in the form of a prohibition.

8.7.4 The Secretary noted that amendments related to A149 for environmentally hazardous substances had yet to be developed in Part 5; she will prepare a paper on this issue for DGP/20

8.8 **Draft Amendments to the Technical Instructions to Align to the UN Recommendations — Table 3-1 (DGP-WG/05-WP/8)**

8.8.1 Draft amendments to Table 3-1 were presented. It was agreed the new presentation of information was helpful. The Secretary was congratulated on her effective presentation of the changes made to Table 3-1.

8.8.2 It was noted information for UN 3473 would be incorporated from WP/46.

8.9 **Transport of UN 3399, Organometallic Substance, Liquid, Water-reactive, Flammable (DGP-WG/05-WP/10)**

8.9.1 A proposal to amend an editorial error relating to incorrect transport provisions (packing instructions and quantities) for UN 3399 **Organometallic substance, liquid, water-reactive, flammable** was agreed, together with consequential amendments. It was further agreed that the amendment would be issued by the Secretary in a corrigendum, noting that the error will continue to cause significant problems for industry until the publication of the Corrigendum.

8.10 **Receptacles Small, Containing Gas and Gas Cartridges (DGP-WG/05-WP/13)**

8.10.1 A proposal to amend the cargo packing instruction for UN 2037, **Receptacles, small containing gas** without release device and UN 2037, **Gas cartridges** without release device was agreed. It was noted the proposal showed Y203 assigned to two entries which had an oxidizer subsidiary risk and that this had been inadvertently done.

8.11 **Special Provision A20 versus Special Provision A136 (DGP-WG/05-WP/14)**

8.11.1 Two proposals to amend special provision A20 and A136 were presented. A20 is assigned against self-reactive substances in Division 4.1 and Division 5.2 - Organic peroxides. It was explained the UN Model Regulations did not have a special provision equivalent to Special Provision A20 but did include similar, but not equivalent, text in Part 7 - Transport Operations that requires self-reactive substances and organic peroxides to be "protected from direct sunlight and all sources of heat and be placed in adequately ventilated areas." It was noted that minor differences in language used e.g. “sunshine” and “sunlight” had caused difficulties in training.

8.11.2 A136, based on UN special provision XXX, is assigned to four hypochlorite mixtures (UN 1748, UN 2208 UN 2880 and UN 2880). It, too, refers to the need to shade the substances “from direct sunlight and all sources of heat and be placed in adequately ventilated areas”.

8.11.3 It was suggested to align the text in A20 to that in A136 b) and to then consider adding a requirement to A136 to have a statement included on the dangerous goods transport document and a “Keep away from heat label”.

8.11.4 Considerable discussion ensued in which there was general support for aligning the wording of A20 to that in A136b). Some queries were raised regarding what was the difference between “adequately” and “well” ventilated and what was meant by “cool”. However, it was noted that only a small number of products were permitted for air transport; the majority requiring strict temperature control. A number of members believed the proposal to amend A136 was not necessarily a simple editorial rearrangement.

8.11.5 The first proposal to amend A20 together with a consequential amendment to 5;4.1.5.8.3 was agreed. The second proposal to amend A136 was withdrawn.

8.12 **Lithium Batteries (DGP-WG/05-WP/28 & IP/8)**

8.12.1 It was explained a significant difference existed between the Technical Instructions and the UN Recommendations in respect of the conditions which apply to lithium batteries, UN3090, specifically those stated in special provision A88. It was suggested the Instructions were less restrictive than the UN (and consequently the other modes of transport) in that untested batteries were not restricted to carriage only for the purposes of testing. Therefore, the Instructions allowed for packages containing small quantities of lithium batteries to be transported without ever being tested.

8.12.2 There was general support for the proposal but it was suggested clarification of "for testing" was required. One member indicated his belief this referred to both product development testing as well as design qualification testing. After discussion, this position was supported by the majority. An approval showing conditions, including a short circuit test, which were imposed in one State for such transport was presented as information. It was agreed the UN would be asked for clarification of the intent and that this information would be brought to DGP/20.

8.12.3 The proposal, after minor editorial rearrangement, was agreed

8.13 **Amendment to Special Provision A70 (DGP-WG/05-WP/16)**

8.13.1 An inconsistency in the application of special provision A70 to UN 3166 was discussed. It was noted that when shipping a vehicle that contains an internal combustion engine where the fuel tank has never contained any fuel, then it is not subject to these Instructions. However, when the same internal combustion engine is removed from the vehicle and is consigned under UN 3166, Engines, internal combustion, A70 does not appear to apply to an engine that is being shipped separately.

8.13.2 One member noted that although the fuel system might be completely empty of fuel, flammable vapour could still be present and pose a greater hazard. Some members had difficulty with the use of the word "never" in the first proposal in relation to the fuel tank not having contained fuel. Although there was general support for the second proposal which suggested removing A70 for the Engines, internal combustion entry and then adding a new special provision, the issue of ensuring the fuel tank being completely empty of fuel remained a problem. One member suggested using text similar to that in 4:1.1.15 regarding nullifying the hazard might be helpful. The proposer agreed to withdraw the paper and to look at the broader issues with a view to preparing a paper for DGP/20.

8.14 **Division 2.2 in Limited Quantities (DGP-WG/05-WP/24)**

8.14.1 A proposal to amend part 3;4.1.2 to remove redundancy in the provision relating to UN 2037 and UN 1950 was agreed.

8.15 **Aerosols with a Subsidiary Risk of Division 5.1 (DGP-WG/05-WP/25)**

8.15.1 It was proposed Table 3-1 should contain an entry for UN 1950, Aerosols with a subsidiary risk of division 5.1 on the basis such aerosols exist. A number of members were reluctant to agree, noting no information was provided regarding types of chemicals and the nature and quantity of a propellant. However, it was suggested passengers might carry these aerosols in their baggage since there was no subsidiary risk identified which would result in their prohibition. The proposal was agreed as amended by discussion.

8.15.2 The proposer noted an amendment to UN special provision 63 e) would be made at the upcoming session of the UN SCOE which would identify the subsidiary risk.

8.16 **UN2037 and Special Provision A98 (DGP-WG/05-WP/32)**

8.16.1 A proposal to extend the alleviation in special provision A98, assigned against aerosols of Division 2.2 without subsidiary risk in recognition of their medical application, to the corresponding entry for UN2037 (Gas cartridges or Receptacles, small, containing gas) was agreed. It was noted the pressure limit had been removed recently in A98 to align it with the equivalent special provision in the UN Recommendations and that gas cartridges are effectively aerosols without a release device.

8.17 **Special Provision A97 (DGP-WG/05-WP/34)**

8.17.1 At WG04, the problem regarding Special Provision A97 (assigned to UN 3077 and UN 3082) was introduced and discussed. It was agreed the designation of such substances by the appropriate national competent authority frequently caused delays in shipping.

8.17.2 A proposal to amend the text of special provision A97 such that shippers would make the classification on the basis they were knowledgeable with the classification criteria of the regulations was agreed in general. It was suggested and agreed reference to "the regulations of other modes of transport or criteria " should be replaced with " national or international regulations".

8.18 **Addition of Special Provision A2 to UN 3468 (DGP-WG/05-WP/43)**

8.18.1 Under the entry "Hydrogen in a metal hydride storage system "(UN 3468), transport of these storage systems — many of which are very small — is forbidden on both passenger and cargo only aircraft. However, it was noted hydrogen itself is permitted for transport on cargo only aircraft. The metal hydride is contained with the hydrogen in a hermetically sealed pressure receptacle that must be designed to contain the hydrogen gas at any internal pressure that may be encountered during transport. A proposal to add special provision A2 so that such storage systems would be permitted to be transported on cargo only aircraft with the approval of the appropriate authority of the State of origin was agreed.

8.18.2 To assist States, one member agreed to provide guidance material for incorporation in the Supplement.

8.19 **Proposed Amendment to Special Provision A66 (DGP-WG/05-WP/44)**

8.19.1 A proposal to remove a discrepancy which existed between special provision A66 in the Instructions and special provision 236 in the UN Model Regulations was agreed. It was noted more guidance regarding what was permitted in theses kits would now be given.

8.20 **Transport of Environmentally Hazardous Substances (UN 3077 and UN 3082) in Limited Quantities (DGP-WG/05-WP/48)**

8.20.1 Difficulties for shippers of limited quantities of UN 3077 and UN 3082 were presented It was noted since theses substances are only capable of posing a risk to the environment, they do not pose any danger to the safety of an aircraft or it's occupants. A proposal to permit these substances prepared in

accordance with a limited quantity requirements for the surface modes to be accepted directly for transport by air was discussed.

8.20.2 After discussion, the proposer withdrew his paper for consideration.

8.21 **Environmentally Hazardous Substances in Wipes (DGP-WG/05-WP/49)**

8.21.1 A proposal to alleviate the requirements for items impregnated with environmentally hazardous substances was withdrawn on the basis it was recognized to be a multi-modal problem. It was agreed to raise the issue at the upcoming July session of the UNSCOE and that a further paper might be presented to DGP/20.

Part 4 — Packing Instructions

8.22 **Draft Amendments to the Technical Instructions to Align to the UN Recommendations — Part 4 (DGP-WG/05-WP/5)**

8.22.1 Following presentation of WP/5, an oral report on the revision to the packing instructions was given - see paragraph 12.2.1.

8.23 **Packing Instruction 905 (DGP-WG/05-WP/11)**

8.23.1 It was explained that UN 3072 and UN 2990 frequently contained cylinders of carbon dioxide which were non refillable and which were not fitted with a pressure relief device. However, reference to packing instruction 200 in packing instruction 905 specified that cylinders must be fitted with a pressure relief device. It was noted the equivalent packing instruction 905 of the UN Recommendations permitted such gases in cylinders when specified by the competent authority.

8.23.2 There was general support for the proposal to align packing instruction 905 with the UN equivalent. It was noted it did not preclude those cylinders which required pressure relief devices from being permitted. It was noted "competent authority" should be replaced with "appropriate national authority" as was standard in the Instructions. It was also observed "of the country" was missing in packing instruction 200; a consequential change to both the proposal and to PI 200 was agreed.

8.23.3 The meeting agreed to the proposal as modified by the discussion.

8.24 **Amendments to Packing Instruction 900 (DGP-WG/05-WP/15)**

8.24.1 When packing instruction 900 was amended in the 2001/2002 edition, the requirement relating to the carriage of an internal combustion engine that is not contained within a vehicle was added to the list of requirements that govern the shipment of such vehicles rather than being added separately. It was agreed this was an editorial error and should be corrected. The Secretary noted this would be included in the Corrigendum. A suggestion to replace "leakproof cap" with "leakproof closure" was not agreed since it was believed the term "capped off" is commonly used in industry and the term "closure" is defined as being part of a combination packaging..

8.25 **1.4 S actuating devices in dangerous goods in apparatus (DGP-WG/05-WP/17)**

8.25.1 A problem relating to the packing instruction 916, assigned to dangerous goods and apparatus, was presented. It was noted 1.4S explosive actuating devices were not permitted although apparatus such as sonar buoys had squibs which contained very small quantities of 1.4S explosive.

8.25.2 A number of members expressed sympathy with the problem, noting the tiny quantities of explosive. One member suggested 2;1.1b) would indicate this squibs need not be classified as 1.4S. Some members noted that frequently such buoys contained lithium batteries and that these would be used as the basis for classification. It was suggested the problem might be a multi-modal one. The proposer agreed to check whether the classification as 1.4S was correct and that if confirmed, she would raise the issue at the UN.

8.26 **Dry Ice Contained in a Unit Load Device (DGP-WG/05-WP/19)**

8.26.1 A proposal to amend packing instruction 904 to specify a tag be placed on a ULD was presented. A number of issues were raised — the location for the requirement with the suggestion it should be in Part 5 with additional text in Part 7; the need for an acceptance check by an operator; the quantity that needed to be input on the NOTOC or AWB; whether an operator could act as a single shipper when consolidating shipments into one ULD. It was also noted that a single shipper could prepare ULDs containing magnetized material or consumer commodities.

8.26.2 Advice was sought whether the industry use of an IMP code was sufficient. One member suggested generally IMP codes could not be so considered. However, for dry ice, the code ICE was perhaps a better indication of the hazard that the class 9 label. It was agreed an ad hoc working group would meet at DGP/20 to review all the concerns raised; Mr. D. Brennan agreed to act as Rapporteur for the group.

Part 5 — Shipper's Responsibilities

8.27 **Draft Amendments to the Technical Instructions to Align to the UN Recommendations — Part 5 (DGP-WG/05-WP/6)**

8.27.1 WP/6 was presented and the following comments were noted.

8.27.2 On receiving confirmation that the term conveyance included aircraft, it was agreed to change "in a single conveyance" to "in an aircraft" in 1.2.2.2 c).

8.27.3 The need for a transitional period for the new organic peroxide label was noted.

8.27.4 Editorial corrections to 4.1.4.2 were noted.

8.28 **Total Quantity of Dangerous Goods (DGP-WG/05-WP/30)**

8.28.1 A proposal to clarify the quantity required under Part 5;4.1.5.1 for items such as UN 2990 or UN 3166, both of which contain more than one type of dangerous goods, was made. It was noted prior to 2003, a quantity was only required if a maximum quantity per package was shown in columns 10 or 12. A

number of members suggested information regarding quantity provided useful information for emergency responders; others suggested the difficulty in accurately knowing what quantity of dangerous goods was contained in, for example, vehicles when only the gross mass was given. It was suggested 30 entries were in Table 3-1 for which this problem existed. The proposer asked for guidance from those who had commented and offered to bring a new working paper to DGP/20.

8.29 **Application of Labels on Small Packages (DGP-WG/05-WP/39)**

8.29.1 The problem to apply all required labels on packages containing small quantities of dangerous goods with multiple hazards and/or for dangerous goods which are only allowed on cargo aircraft was explained. Frequently, too big a packaging had to be used in comparison with the quantities transported; this could result in an unsafe situation since experience showed the difficulty in controlling the movement in the upright position of small inner packagings in a larger outer one. An alternative approach by some shippers who displayed the hazard labels at an angle of 90 degrees frequently results in the refusal of the package.

8.29.2 Most members accepted this caused significant difficulties for shippers and were supportive of the first proposal; others noted the historical acceptance of the traditional diamond shape and did not agree with a need to change.

8.29.3 The first proposal was agreed with a modification to add “or size”. A further proposal to permit the placing of labels on two different adjacent sides was not agreed. It was suggested such an amendment could cause difficulty with segregation and may lead to unsafe situations.

8.30 **Quantity and Type of Packaging (DGP-WG/05-WP/42)**

8.30.1 Problems with the wording of 5;4.1.5.1 as revised at WG04 were presented. These related to provision of information to the pilot in command and to the ability of the operator to conduct a proper acceptance check.

8.30.2 Although there was support for the intent behind the proposal, it was suggested the proposed text did not provide a solution. Members had difficulty with the word “content” in the phrase “same type and content and type of package”. It was explained this referred to the same item of dangerous goods i.e. having the same proper shipping name, contained in the same quantities and in the same type of packaging.

8.30.3 After considerable discussion, the proposer offered to prepare a revised paper for DGP/20.

8.31 **Magnetized Materials: Magnetic Field Strength and Loading Requirements (DGP-WG/05-WP/52)**

8.31.1 Problems with the loading of multiple packages of magnetized material was presented. It was suggested to facilitate such loading there should be a requirement for the shipper to state the magnetic field strength of each package on the shipping document and on the package.

8.31.2 One member suggested it was safer to encourage shippers to declare magnetized material. However, another noted no benefit would necessarily be gained by requiring the magnetic field strengths to be shown since the strengths could either add up or cancel out depending on the polarity. It was agreed it was an item of interest and the proposer offered to review the issue again at DGP/20.

Part 6 — Packaging Nomenclature, Marking, Requirements and Tests

8.32 **Draft Amendments of the Technical Instructions to Align to the UN Recommendations — Part 6 (DGP-WG/05-WP/7)**

8.32.1 During review of WP/7, attention was drawn to the frequent use of the word "required" in 7.21.1. The Secretary said she would review the paragraph to ensure optimal wording.

8.33 **"W" Packagings (DGP-WG/05-WP/33)**

8.33.1 It was noted the Instructions requires use of a "W" marked packaging only with the written approval of the State of Origin. It was suggested this involved extra paperwork for no apparent safety benefit. A proposal to align the Technical Instructions to the UN Recommendations was agreed.

8.34 **Plastic Aerosols (DGP-WG/05-WP/53)**

8.34.1 Following a brief presentation of WP/53 which proposed the incorporation of plastic aerosols into the Instructions, the proposer asked for comments to be sent to him so that a revised paper might be presented at DGP/20.

Part 7 — Operator's Responsibilities

8.35 **Part 7, Chapter 6 — Provisions to Aid Recognition of Undeclared Dangerous Goods (DGP-WG/05-WP/31)**

8.35.1 A proposal to clarifiy operator's responsibilities to provide information to passenger check-in staff was discussed. There was general support for the proposal, with the exception of the inclusion of reference to "place of work". Following minor editorial corrections and the deletion of the phrase "at their place of work" the proposal was agreed. The second proposal to include reference to ships' spares was also agreed.

Part 8 — Provisions Concerning Passengers and Crew

8.36 **Safety Matches and Lighters (DGP-WG/05-WP/18 & IP/12)**

8.36.1 Clarification was sought regarding 8;1.1.12g) in which provision is made permitting passengers to carry safety matches and lighters; it was proposed to restrict the number of packets of matches as well as to clarify the prohibition for transport in checked or carry-on baggage.

8.36.2 It was suggested "on the person" may need to be defined; one possibility was "under the control of". There was general support for the proposal; it was agreed with a modification to reduce the number of packets permitted to one small packet.

8.36.3 A member offered to provide a working paper to DGP/20 clarifying the intent behind lighters containing liquified gas referred to in the same subparagraph..

8.37 Lighters Carried by Passengers (DGP-WG/05-WP/47 & IP/6)

8.37.1 The decision by one State to extend the restriction on lighters for security purposes so that passengers may not carry them at all was discussed. It was noted a number of incidents have occurred involving lighters in checked and carry-on baggage causing fires but none have been reported for those carried on a person. A number of members agreed to share incident data with all panel members.

8.37.2 An overwhelming majority of members re-affirmed that safety matches and a lighter should, in the interests of flight safety, continue to be permitted on the person of a passenger. An overwhelming majority of members were of the opinion that prohibiting passengers from carrying lighters on their person would result in an increased possibility of their placing lighters in checked baggage and that placing such items in checked baggage could increase the risk of fire in cargo compartments. This was both in contravention of the safety provisions of the Technical Instructions and posed a significant safety risk.

9. DEVELOPMENT OF RECOMMENDATIONS FOR AMENDMENTS TO THE *SUPPLEMENT* TO THE *TECHNICAL INSTRUCTIONS* FOR INCORPORATION IN THE 2007/2008 EDITION

9.1 ICAO Technical Instructions Part 4, Chapter 3 (DGP-WG/0-WP/35)

9.1.1 A proposal to permit the transport of UN 3077 in IBCs was discussed. Some members supported the proposal in general, noting the standard use of IBCs for non-dangerous goods in their States. They further noted that UN 3077 posed no danger to aircraft or passengers and suggested it was preferable to transport large quantities in a single high quality packaging than in numerous, lower quality ones It was also noted the proposal was for incorporation in the Supplement at this time which would permit States to gain experience with these packagings.

9.1.2 Other members disagreed with the need to permit IBCs and suggested the mass of such packagings could pose problems from an airworthiness viewpoint related to centre of gravity issues. One member suggested more information was required before he would be able to support such a proposal. Such information included the tests the packagings would be required to pass, whether the state of the substance in powder form created additional problems, restraint criteria, etc.

9.1.3 The proposal in WP/35 was rejected. One member indicated that the transport of environmentally hazardous substances in IBCs would become possible since the amendment to A97 (see WP/34) gives the option to the shipper either to classify it for air transport as dangerous goods or as non-dangerous goods.

10. AMENDMENTS TO DOC 9481 *EMERGENCY RESPONSE GUIDANCE FOR AIRCRAFT INCIDENTS INVOLVING DANGEROUS GOODS*

10.1 No papers were presented on this issue at this time.

11. DISCUSSION OF MISCELLANEOUS DANGEROUS GOODS ISSUES

11.1 ICAO DGP WEBSITE (DGP-WG/05-WP/21 & IP/1)

11.1.1 There was strong support for the proposal to make the DGP website open to public access. It was noted this would assist the work of panel members by allowing for wider consultation with those who had technical expertise.

11.2 Limited Quantities and Consumer Commodities (DGP-WG/05-WP/45 & IP/3)

11.2.1 An ad hoc working group reviewed WP/45 and IP/3 and presented their report. It was explained that the panel should reaffirm to the UNSCOE that the air mode wished to retain its limited quantity, consumer commodity and excepted quantity provisions.

11.2.2 Problems at the intermodal interface in relation to handling of consumer commodities were explained. A suggestion to ask the UN to provide a UN number to replace the current ICAO ID 8000 entry was considered unlikely to succeed whilst the present discussion on limited quantities continued at the UN. A member said he would prepare a working paper for DGP/20 in which a unique mark or label for consumer commodities would be proposed with the consequential deletion of the Class 9 label.

11.2.3 With regard to excepted quantities, it was noted that a paper would be presented at the July 2005 UNSCOE meeting in which it was proposed to adopt multi-modal excepted quantity provisions. Although the proposed provisions were based on the current ICAO provisions, it was agreed the issue would need to be considered further following discussion at the UN.

11.2.4 With regard to limited quantities, it was noted that the use of the term was perhaps misleading as provisions for air transport were markedly different to those for other modes. In order to reduce confusion, it was suggested consideration be given to adopting a new name such as “small quantity” or “Y pack”. It was noted if a marking system acceptable to both the panel and the UNSCOE could be devised, most of the problems which presently exist at intermodal interfaces would be removed. It was agreed the issue needed further discussion.

12. RESOLUTION, WHERE POSSIBLE, OF THE NON-RECURRENT WORK ITEMS IDENTIFIED BY THE COMMISSION OR THE PANEL

12.1 Principles governing the transport of dangerous goods on cargo only aircraft

12.1.1 No papers were presented on this issue at this time.

12.2 Reformatting of the packing instructions

12.2.1 An oral report on the work of an ad hoc working group on the revision of packing instructions was given. It was explained that a meeting had been held in Brussels in March, that the terms of reference endorsed by the Panel had been followed and that substantial progress had been made. It was noted another working group would meet shortly in order to finalize the contents of a working paper on the subject which would allow sufficient time for consultation before DGP/20. It was noted that decisions regarding the best location for the revised packing instructions together with the issue of a transitional period would need to be discussed at DGP/20.

12.3 Review of provisions for dangerous goods carried by passengers and crew

Passenger Exceptions Survey (DGP-WG/05-IP/9)

12.3.1 An ad hoc working group reviewed IP/9 and presented their report. It was agreed further study of the results of the passenger exceptions survey was required. It was further agreed to add as a future work item of the ad hoc working group the issue of inconsistency in State interpretations of the current Part 8 provisions. Discussion of the criteria to be used when proposing dangerous goods substances or articles for inclusion in Part 8 resulted in a list of questions that could be used to facilitate the decision making process. It was agreed further discussion concerning improvement of the user friendliness was required; one member said he would provide information to the Secretary for onward distribution to the panel regarding how his State approached this issue.

13. MISCELLANEOUS

13.1 The Secretary informed the meeting that the dates for DGP/20 had been agreed by the Air Navigation Commission and provided a draft copy of the invitation for information. She noted the deadline of 12 August 2005 for submission of working papers and stressed the need for this deadline to be requested in order for member to have sufficient time for discussion in preparation for DGP/20.

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APPENDIX

AMENDMENTS AS MODIFIED BY DISCUSSIONS AT WG/05

Annex 18:

12.3 With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, ~~[or dangerous goods of a type not permitted by the Technical Instructions for carriage by passengers discovered in passengers' baggage],~~ each Contracting State shall establish procedures for investigating and compiling information concerning such occurrences which occur in its territory and which involve the transport of dangerous goods originating in or destined for another State. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions.

12.4 With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, ~~[or dangerous goods of a type not permitted by the Technical Instructions for carriage by passengers discovered in passengers' baggage],~~ each Contracting State should establish procedures for investigating and compiling information concerning such occurrences which occur in its territory other than those described in 12.3. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions.

(DGP-WG/05-WP/26)

Part 1; Chapter 1

Add the following text to 1; 1.1.1:

An addendum to ~~the 2007-2008~~ this Edition of the ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air* [issued] by ICAO is part of ~~that edition of the~~ these Instructions.

(DGP-WG/05-WP/20)

Part 2, Chapter 6

6.3.1.3 *Cultures* ~~(laboratory stocks)~~ are the result of a process by which pathogens are intentionally propagated. This definition does not include ~~human or animal~~ patient specimens as defined below in 6.3.1.4. ~~are amplified or propagated in order to generate high concentrations, thereby increasing the risk of infection when exposure to them occurs. This definition refers to cultures prepared for the intentional generation of pathogens and does not include cultures intended for diagnostic or clinical purposes.~~

6.3.1.4 Patient specimens are ~~human or animal materials,~~ those collected directly from humans or animals, including, but not limited to, excreta, secreta, blood and its components, tissue and tissue fluid swabs, and body parts being transported for purposes such as research, diagnosis, investigational activities, disease treatment and prevention.

. . .

6.3.2.3.6 ~~Human or animal~~ Patient specimens for which there is minimal likelihood that pathogens are present are not subject to these Instructions if the specimen is transported in a packaging which will prevent any leakage and which is marked with the words "Exempt human specimen" or "Exempt animal specimen", as appropriate. The packaging ~~should~~ must meet the following conditions:

(a) The packaging ~~should~~ must consist of three components:

(i) a leak-proof primary receptacle(s);

(ii) a leak-proof secondary packaging; and

(iii) an outer packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of 100 mm × 100 mm;

(b) For liquids, absorbent material in sufficient quantity to absorb the entire contents ~~should~~ must be placed between the primary receptacle(s) and the secondary packaging so that, during transport, any release or leak of a liquid substance will not reach the outer packaging and will not compromise the integrity of the cushioning material;

(c) When multiple fragile primary receptacles are placed in a single secondary packaging, they ~~should~~ must be either individually wrapped or separated to prevent contact between them.

Note — In determining whether a patient specimen has a minimum likelihood that pathogens are present, an element of professional judgment is required to determine if a substance is exempt under this paragraph. That judgment should be based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic local conditions. Examples of specimens which may be transported under this paragraph include the blood or urine tests to monitor cholesterol levels, blood glucose levels, hormone levels, or prostate specific antibodies (PSA); those required to monitor organ function such as heart, liver or kidney function for humans or animals with non-infectious diseases, or therapeutic drug monitoring; those conducted for insurance or employment purposes and are intended to determine the presence of drugs or alcohol; pregnancy test; biopsies to detect cancer; and antibody detection in humans or animals.

. . .

6.3.~~2~~.6.1 A live animal that has been intentionally infected and is known or suspected to contain an infectious substance must not be transported by air unless the infectious substance contained cannot be consigned by any other means. Infected animals may only be transported under terms and conditions approved by the appropriate national authority.

6.3.6.2 Unless an infectious substance cannot be consigned by any other means, live animals ~~shall~~ must not be used to consign such a substance.".

6.3.6.3 Animal carcasses affected by pathogens of category A or which would be assigned to Category A in cultures only, ~~shall~~ must be assigned to UN 2814 or UN 2900 as appropriate.

Other animal carcasses affected by pathogens included in Category B ~~shall~~ must be transported in accordance with provisions determined by the competent authority.

6.3.7 Patient specimens

Patient specimens must be assigned to UN 2814, UN 2900 or UN 3373 as appropriate except if they comply with 6.3.2.3.

(DGP-WG/05-WP/3, DGP-WG/05-WP/41, DGP-WG/05-WP/51)

Part 3, Chapter 3

Table 3-1. Dangerous Goods List

Name	*UN No.*	*Class or division*	*Subsidiary risk*	*Labels*	*State variations*	*Special provisions*	*UN packing group*	*Passenger aircraft*		*Cargo aircraft*	
								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
Fuel cell cartridges containing flammable liquids	3473	3		Liquid flammable	A146			31X	5L	31X	60L

(DGP-WG/05-WP/46)

Name	*UN No.*	*Class or division*	*Subsidiary risk*	*Labels*	*State variations*	*Special provisions*	*UN packing group*	*Passenger aircraft*		*Cargo aircraft*	
								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
Aerosols, oxidizing	1950	2.2	5.1	Gas non-flammable & Oxidizer				203 ~~Y203~~	75 kg ~~30 kg G~~	203	150 kg

(DGP-WG/05-WP/25)

Name	*UN No.*	*Class or division*	*Subsidiary risk*	*Labels*	*State variations*	*Special provisions*	*UN packing group*	*Passenger aircraft*		*Cargo aircraft*	
								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
Gas cartridges, (oxidizing) without a release device, non-refillable	2037	2.2	5.1	Gas non-flammable & Oxidizer				203 ~~Y203~~	1 kg ~~1kg~~	~~200~~ 203	15 kg
Receptacles, small containing gas, (oxidizing) without a release device, non-refillable	2037	2.2	5.1	Gas non-flammable & Oxidizer				203 ~~Y203~~	1 kg ~~1kg~~	~~200~~ 203	15 kg

(DGP-WG/05-WP/13)

Name	*UN No.*	*Class or division*	*Subsidiary risk*	*Labels*	*State variations*	*Special provisions*	*UN packing group*	*Passenger aircraft*		*Cargo aircraft*	
								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
Organometallic substance, liquid, water reactive, flammable*	3399	4.3	3	Danger if wet & Liquid flammable		A3	I	FORBIDDEN		409	1 L
							II	409	1 L	431	5 L
							III	431	5 L	432	60 L

409	**PACKING INSTRUCTION 409**	**409**

. . .

COMBINATION PACKAGINGS:

INNER:

UN No.	*Glass or earthenware IP.1 (L)*	*Metal (not aluminium) IP.3 (L)*	*Glass ampoule IP.8 (L)*	*Particular packing requirements*
. . .				
~~3207~~3399	1	1	0.5	8,13
. . .				

(DGP-WG/05-WP/10)

Part 3; Chapter 3

"A88 Prototype lithium batteries and cells to be tested ….may be transported ~~for testing~~ aboard a cargo aircraft……."

(DGP-WG/05-WP/28)

A97 ~~The designation of this substance is to be decided by the appropriate national authority. Substances classified as UN 3077 or UN 3082 by the regulations of other modes of transport may also be transported by air under these entries. This designation~~ These entries may be used for substances ~~and mixtures~~ which are ~~dangerous~~ hazardous to the ~~aquatic~~ environment ~~or which are marine pollutants that~~ but do not meet the classification criteria of any other class or ~~an~~other substance within Class 9. This must be based on the criteria in ~~the~~ national or international Regulations ~~of other modes of transport or criteria~~ recognized by the appropriate authority of the State of origin, transit or destination. This designation may also be used for wastes not otherwise subject to these Instructions, but which are covered under the *Basle Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* ~~and for substances designated to be environmentally hazardous substances by the appropriate authority of the State of Origin, transit or destination~~..

(DGP-WG/05-WP/34)

Part 4

31X	PACKING INSTRUCTION 31X	31X

This instruction applies to UN 3473 on Passenger aircraft and Cargo Aircraft Only.

The general packing requirements of Part 4, Chapter 1 must be met, except that the requirements of 4;1.1.2, 1.1.13, and 1.1.16 to 1.1.21 do not apply.

Fuel cell cartridges must be packed in strong ~~outside~~ outer packagings. 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.

~~Fuel cell cartridge design types must be shown without their packaging to pass an internal pressure test at a pressure of 100 kPa (gauge).~~

(DGP-WG/05-WP/46)

650	PACKING INSTRUCTION 650	650

. . .

10) When packages are placed in an overpack, the package markings required by this packing instruction must either be clearly visible or the markings must be reproduced on the outside of the overpack and the overpack must be marked with the word "Overpack".

11) Infectious substances assigned to UN 3373 which are packed and marked in accordance with this packing instruction are not subject to any other requirement in these Instructions except for the following:

a) the name and address of the shipper and of the consignee must be provided on each package;

~~a~~b) the proper shipping name, UN number and the name, address and telephone number of a person responsible must be provided on a written document (such as an air waybill) or on the package;

~~b~~c) classification must be in accordance with 2;6.3.2;

~~c~~d) the incident reporting requirements in 7;4.4 must be met; and

~~d~~e) the inspection for damage or leakage requirements in 7;3.1.3 and 7;3.1.4;

~~e~~f) passengers and crew members are prohibited from transporting infectious substances either as, or in, carry-on baggage or checked baggage or on their person.

Note.— When the shipper or consignee is also the 'person responsible' as referred to in b) above, the name and address need be marked only once in order to satisfy the name and address marking provisions in both a) and b), above.

(DGP-WG/05-WP/12)

Part 4; Chapter 11

Packing Instruction 905

905	PACKING INSTRUCTION 905	905

The description "Life-saving appliances, self-inflating" (UN 2990) is intended to apply to life-saving appliances that present a hazard if the self-inflating device is activated accidentally.

Life-saving appliances, such as life-rafts, life vests, aircraft survival kits or aircraft evacuation slides, may only contain the dangerous goods listed below:

... a) ~~Division 2.2 gases, in cylinders that conform to the requirements of Packing Instruction 200; these may be connected to the life-saving appliance.~~ Division 2.2 gases, ~~must be contained~~ in cylinders which conform to the requirements of the appropriate national authority of the country in which they are approved and filled. ~~as specified by the competent authority, which~~ Such cylinders may be connected to the life-saving appliance. These cylinders may include installed actuating cartridges (cartridges, power device of Division 1.4C and 1.4S) provided the aggregate quantity of deflagrating (propellant) explosives does not exceed 3.2 grams per unit. When the cylinders are shipped separately, they shall be classified as appropriate for the Division 2.2 gas contained and need not be marked, labelled or described as explosive articles;

...

(DGP-WG/05-WP/11)

Part 5; Chapter 3

3.2.7 Except as provided in 3.4.1.1 d), each label must:

a) be affixed to a background of contrasting colour or must have a dotted or solid line outer boundary;

b) be located on the same surface of the package near the proper shipping name marking, if the package dimensions are adequate;

c) be so placed on the packaging that they are not covered or obscured by any part of or attachment to the packaging or any other label or marking; and

d) when primary and subsidiary risk labels are required, be displayed next to each other.

e) in case of hazard warning labels, be affixed at an angle of 45° (diamond shaped), unless the package dimensions [or size] are inadequate.

(DGP-WG/05-WP/39)

Part 5; Chapter 4

4.1.5.8.3 When self-reactive substances of Division 4.1, or organic peroxides of division 5.2 or other substances having similar properties, are offered for transport, the shipper must indicate on the dangerous goods transport document that the packages containing such substances must be protected from direct ~~sunshine~~ sunlight and all sources of heat ~~stored in a cool~~ and be placed in ~~well~~ adequately ventilated areas~~place, away from all sources of heat~~.

(DGP-WG/05-WP/14)

Part 7, Chapter 6

Amend the first paragraph of Part 7; 6.1:

"…..which they are not permitted to have in their baggage (see 8;1.1.2), ~~cargo acceptance staff and passenger check-in staff should be given~~ information about:

a) general descriptions that are often used for items in cargo or in passengers' baggage which may contain dangerous goods;

b) other indications that dangerous goods may be present (e.g. labels, markings); and

c) ~~information on~~ those dangerous goods which may be carried by passengers in accordance with 8;1.1.2,

~~shall~~ must be provided to cargo acceptance staff and passenger check-in staff as appropriate and ~~shall~~ must be readily available to such staff. ~~at their place of work~~ The following is a list of ~~such~~ general descriptions……"

Add to Part 7; 6.1:

ships' spares – may contain explosives (flares), cylinders of compressed gas (life rafts), paint, lithium batteries (emergency locator transmitters) etc.

(DGP-WG/05-WP/31)

Part 8, Chapter 1

Amend paragraph 8;1.1.2 g) as follows:

g) no more than ~~three packets~~ one small book of safety matches or one lighter ~~intended for use by an individual~~ when carried on the person and not in checked or carry-on baggage. However, Lighters containing unabsorbed liquid fuel (other than liquefied gas), lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage;

(DGP-WG/05-WP/18)

— END —