International Civil Aviation Organization

WORKING PAPER

DGP-WG/06-WP/54
5/12/06

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

Beijing, China, 25 October to 3 November 2006

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 carried by passengers and crew

REPORT OF THE AD HOC WORKING GROUP ON PASSENGER PROVISIONS

(Presented by the Rapporteur)

1. INTRODUCTION

1.1 Mr Brennan was nominated as Chairman and Mr Leach agreed to act as rapporteur.

1.2 It was decided that DGP-WG/06-WP/12, 18, 24, 29, 49 and 50 were related to the discussions on the passenger provisions and reference to some of these was made during the ad hoc working group meeting.

2. AVIATION SECURITY

2.1 A summary of the discussions at the recent AVSEC Panel was given. It was advised that because of recent events, the AVSEC Panel was taking more of an interest in dangerous goods, particularly in respect of how dangerous goods of other than Class 1 could be used for unlawful acts. It was also aware that any change in security provisions must also take account of the corresponding effect on safety. It had been agreed that the passenger provisions of the Technical Instructions would be revised, as would the information currently appearing in the ICAO *Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference* (Doc 8973).

2.2 The AVSEC Panel said that for carriage as carry-on baggage, liquids, gels and aerosols would be limited to 100 mL and would be so for the foreseeable future, at least five years. DGP were requested to revise the Part 8 provisions, taking account of security issues. There is an AVSEC Panel working group on training, which will look at dangerous goods in the context of security.

3. REVIEW OF THE PASSENGER PROVISION LIST

3.1 In line with the objectives stated in DGP-WG/06-AH/PAX-WP/1, the working group reviewed the existing list in Part 8;1.1. Initially, it was suggested that the quantity limitations introduced under the security restrictions (i.e. 100 mL) should be reflected in Part 8;1.1 for aerosols and liquids. It was suggested that the AVSEC Panel should be asked to differentiate between articles containing a liquid where the article must be broken before the liquid could be released and bottles of liquid. However, as an alternative, it was agreed that Part 8;1.1.2 should be revised to reflect the fact that the list of permitted items of dangerous goods is only valid if the security provisions of the applicable State allow them to be carried by passengers. The wording would need to be flexible enough to recognize that different standards will prevail in different States. Although a discussion was held on referring to restrictions of other agencies (e.g. Customs), it was agreed to only refer to security restrictions. It was also agreed to make the items listed in 8;1.1.2 subject to the incident reporting requirements of 7;4.4.

3.1.1 The following text was developed:

> " 1.1.2 Notwithstanding any additional restrictions which may be implemented by States in the interests of aviation security, except for the incident reporting provisions of 8;4.4, the provisions of these Instructions …."

3.1.2 The list or items currently permitted was reviewed on a case by case basis:

a) alcoholic beverages

Although 5 L seemed a high figure, there appeared to be no justification on the grounds of safety to reduce it. The current ability of passengers to purchase "duty free" alcohol after security screening led the working group to decide not to propose an amendment to this quantity;

b) non-radioactive medicinal or toilet articles

It was suggested that whilst the term "toilet articles" was intended to apply to cosmetic type items, it could be interpreted as permitting bleach and other substances used in a toilet and should therefore be revised. "Personal care" or "toiletry" were offered as alternatives. The term "toiletry" was preferred, possibly qualified as being for application on or in the person, although there was scope for changes to be made at the next working group.

It was queried whether flammable aerosols should continue to be permitted in passengers' baggage, but it was pointed out although it was believed aerosols may have been the cause of incidents, this had never been proven and it would be unjustified to forbid them. It was advised that research was being conducted in the United States into the possible dangers of flammable aerosols and information would be provided to the Panel. It was suggested that the provisions should be easily understandable and realistic; passengers would always want to carry aerosols and if restrictions were too tight there would be a danger of driving the issue underground.

It was pointed out that some aerosols are not subject to the provisions of the Technical Instructions because of quantity; this should be brought to the attention of the AVSEC Panel;

c) small gaseous oxygen or air cylinders

It was suggested that a maximum size should be specified, based on internationally accepted sizes of cylinders. Since the intention of this provision was to allow the carriage of a cylinder for use upon arrival, it was also suggested that there should be a requirement for adequate protection of the cylinder, particularly the valve, although it was pointed out that carriage was with the approval of the operator, who could impose restrictions. It was agreed that a maximum size of cylinder should be specified and expert opinion would be sought to determine an appropriate figure.

A possible limit on the number of cylinders was discussed, with varying numbers offered. A figure of 2 was agreed but with the approval of the operator this figure could be increased to 3. These figures would be regarded as being in square brackets for the time being;

d) small cylinders of gas for mechanical limbs

It was suggested to amalgamate this provision with those for life jackets and avalanche rescue back packs. However, it was suggested that if such artificial limbs still existed (and this should be determined) these should be looked at separately with regard to determining a maximum size. It was agreed to amalgamate items of a medicinal nature i.e. mechanical limbs, pacemakers, medicinal aerosols, air/oxygen cylinders and wheelchairs, although it was accepted different provisions would apply to each specific item;

e) ammunition

It was queried why the Technical Instructions should provide for the carriage of ammunition when no explosives are permitted under the security requirements. However, it was pointed out that the list of forbidden items in the ICAO Security Manual was for the guidance of States only. It was also pointed out that the provision allowed for ammunition carried by law enforcement agencies. It was suggested that ICAO should highlight to States that there were explosives (e.g. nitro-glycerine) used for medicinal purposes, which would also need to be provided for;

f) dry ice

It was queried why operator approval was required only for checked baggage. It was suggested this was to ensure dry ice was not loaded in excessive quantities in close proximity to animals. However, it was then pointed out that the other provisions of the Technical Instructions (including the provisions of 7;2.11) did not apply to anything listed in 8;1.1.2. It was agreed that 8;1.1.2 f) should be amended such that operator approval was required for all dry ice carried by a passenger, irrespective of whether it is carried as carry on or checked baggage; if the latter, the provisions of 7;2.11 should apply;

g) safety matches or a lighter

No comments;

h) pacemakers

To be amalgamated under medical items. It was queried whether battery powered defibrillators, carried by passengers, would be permitted. Further information about such devices would be supplied at WG07;

i & j) wheel chairs

It was pointed out that the AVSEC Panel should be made aware of wheel chair batteries because "vehicle batteries" were forbidden for security reasons. It was agreed that batteries with non-spillable batteries should be separately identified and continue to be required to be secured to a wheelchair. It should also be required that wheelchairs should be protected against inadvertent operation;

k) hair curlers

It was queried whether it was justified to allow such items on an aircraft. However it was pointed out that there had been no reports of incidents involving them over the 25+ years they have been permitted in baggage. It was agreed that although it did seem unusual to allow for such items in baggage, removal would be premature without an appropriate safety basis.

Hair curlers were originally permitted only in checked baggage but were subsequently allowed in carry on baggage. They were originally limited to catalytic hair curlers.

An attendee demonstrated a modern set of hair curlers and showed the various safety features e.g. thermal fuse, two step trigger mechanism and safety cover. A major manufacturer advised that around 10 million spare cartridges were produced each year.

A discussion centred on whether such items should be restricted to either checked or carry on baggage. It was suggested that carriage in checked baggage would be more consistent with the new security rules, although some felt that on safety grounds carriage in the cabin was preferable,

From the discussion, it appeared that although the text was originally based on equipment, which could not be activated with the safety cover fitted, equipment produced since appeared not to have such safeguards in place. It was therefore suggested that if these items were to be retained in Part 8;1.1.2, the text should be reviewed, although before this is done, detailed technical specifications of the available types of hair curlers would be obtained.

l) mercurial barometers

It was advised that such items do travel. It was queried why, given the restrictions that applied, such items are not required to be shipped as cargo. In response it was pointed out that they were very sensitive and needed to be carried in the cabin, sometimes in its' own seat;

m) small cylinders in a self inflating life jacket

It was suggested that the current wording was confusing, in that 2 spare cylinders could be carried for a life jacket but similar cylinders for other purposes were not permitted, or what was meant by "small" It was not clear whether a life jacket had to accompany the spare cartridges. If it did, this would be a case of dangerous goods not permitted unless they were accompanied by an item, which was not subject to the Technical Instructions. Some attendees were in favour of allowing a specific number and size of cylinders whatever they may be used for, whereas others felt they should be tied to a particular use. It needed to be decided whether the hazard of an item, or it's intended use should be the main factor for consideration;

n) heat producing articles

It was queried why, if actions had been taken to remove the hazard (i.e. by removing the heat producing component or energy source), must the articles be carried in carry on baggage only. It was also suggested that the inclusion of "soldering equipment" suggested that gas powered devices were also address by the provisions, despite the statement "i.e. battery-operated equipment …". A view was expressed that this provision should address all types of heat producing articles, irrespective of the power source.

The following text was proposed as an alternative to the existing Part 8;1.1.2 n):

" with the approval of the operator, battery powered equipment capable of generating extreme heat which could cause a fire if activated (e.g. under-water high intensity lamps), providing that the heat producing component or the battery is packed separately so as to prevent activation during transport. Any battery which has been removed must be protected against short circuit."

o) mercury thermometer

Views were expressed both for and against retaining the provision to permit the carriage of a mercury thermometer. Before a decision to delete could be taken it was agreed that the original justification for inclusion needed to be obtained.

p) avalanche rescue backpacks

There were no comments.

q) consumer electronic devices containing lithium batteries

It was agreed that spare batteries should continue to be restricted to cabin baggage only.

The issue of fires caused by batteries was discussed. There appeared to be two causes, firstly short circuit due to inadequate protection of the terminals and secondly due to defects due to either unauthorised modification or defects in the manufacturing process.

DGP-WG/06-WP/29 was briefly discussed; it was suggested that in view of the number of battery fires that had been experienced, the larger types of batteries

permitted under 8;1.1.2 should no longer be permitted. However, it was pointed out that to forbid them in baggage would effectively stop television news crews from travelling by air, although a counter view was expressed that the provisions of the Technical Instructions should be based purely on risk and not on the needs of a specific group of passengers. One member cautioned the working group that in banning such items, there was a risk they would travel anyway in checked baggage. However, it was pointed out that film crews would be conspicuous due to the size of cameras they would be carrying and so detection should not be difficult.

It was advised that the UN had introduced new requirements for these larger batteries and consequently it was suggested the Technical Instructions should therefore not permit their carriage in baggage.

It was agreed the issue would be discussed further at the main Working Group meeting.

r) fuel cells

DGP-WG/06-AH/PAX-WP/3 was discussed; this was proposing that fuel cell cartridges should be allowed in checked baggage due to the new security provisions which rendered the provision developed at DGP/20, which required carriage as carry on baggage, as unworkable. It was pointed out that fuel cells were cautiously accepted as carry-on baggage because of the limited experience of the risks posed by such items; when experience was gained carriage in checked baggage could possibly be considered. It was suggested this experience had not yet been gained and consequently the provision developed at DGP/20 should not be changed because of the security restrictions. It was proposed the AVSEC Panel should be asked to consider allowing liquids contained in an article where access to the liquid could only be gained if the article were to be broken open. It was advised that one State was intending to conduct tests on fuel cells to determine more clearly the risk posed by such items, the results of which would be brought before the DGP.

The DGP Secretary stated that at this stage it was not clear how the AVSEC Panel would view fuel cells and consequently it would be premature for the DGP to change the decision taken at DGP/20.

There was no support for making the change proposed in DGP-WG/06-AH/PAX-WP/3 at this time.

4. GENERAL DISCUSSION

4.1 It was believed there should be some general text in Part 8 requiring any battery powered device (which are not themselves necessarily dangerous goods, e.g. portable power drills) to be protected against inadvertent activation.

4.2 The working group was asked whether they should advise the AVSEC Panel about those dangerous goods which could be used for unlawful interference. However, the consensus was that the group was not expert in security issues and should only express opinions based on safety. It was then clarified that the AVSEC Panel was looking for guidance in respect of whether an item should be in checked or carry-on baggage.

4.3 **Grouping of permitted items**

4.3.1 It was proposed to group the permitted items under four headings:

a) Medical items;

b) Personal grooming;

c) Consumer products; and

d) Miscellaneous (other).

4.3.2 An alternative method of grouping was suggested basis on the hazard posed by a particular item. However, the consensus was that the groups should be those which would be more readily understood by passengers. The existing list of items were grouped accordingly, the headings of which should be regarded as being in "square brackets":

a) Medical necessities:

Oxygen/air cylinders, medicines, pacemakers and radiopharmaceuticals, battery powered wheelchair and mobility aids, mechanical limbs, mercury thermometer;

b) Articles used in dressing or grooming:

Toiletry articles, hair curlers;

c) Consumer articles:

Fuel cells, consumer electronic devices containing lithium batteries, ammunition, alcohol, safety matches/lighter, avalanche rescue backpack, life jackets, battery powered heat-producing articles; and

d) Other:

Dry ice, mercurial barometer.

4.3.3 The draft of the reformatted Part 8 is included in the appendix to this working paper.

4.4 **Criteria for inclusion in Part 8**

4.4.1 The working group considered the criteria developed at DGP/20 (Report on Agenda Item 5 (DGP/20-WP/93)) for future proposals for items to be included in the list of permitted items.

4.4.2 It was agreed that whilst any new proposal would take account of security issues, the main consideration would be on the grounds of safety. This would require consideration of the hazardous characteristics and what the consequences would be of damage/leakage.

4.4.3 It was agreed that 5.2.2.1 a) of DGP/20-WP/93 should be extended to take account of any heat producing properties or the ability to produce a flammable atmosphere. It was also agreed that the sentence at the end of 5.2.2.1, relating to the ability to carry an item as cargo on a passenger aircraft, should become a sub paragraph m). A new n) should also be created to address previous experience.

4.4.4 It was believed this criteria should be recorded in the Guidance Document to Panel Members. It was suggested these criteria should be made publicly available, although a view was expressed that this might prompt many requests for new items to be included in 8;1.1.2. It was agreed that the Supplement would be the most appropriate location for this material.

4.5 **Limit on total dangerous goods carried per passenger**

4.5.1 The working group was asked whether there should be a limit on the total dangerous goods carried per passenger. However, it was felt this would be difficult to enforce. It was believed that the limits of the items should effectively self-limit the quantity.

4.6 **Operator approval and notification of the pilot in command**

4.6.1 Operator approval and notification of the pilot in command, which are required for some specific items, was discussed. There were no proposals to remove any of the current requirements. It was suggested that various operators interpret "operator approval" differently. It was agreed that if someone wished to pursue this matter they should prepare a paper for DGP-WG/07.

4.7 **Harmonization of the passenger provisions with the list of forbidden articles in the ICAO *Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference* (Doc 8973) (DGP-WG/06-WP/50)**

Review of Appendix 1 to the Security Manual (Appendix A to DGP-WG/06-WP/50, page A-10) — Examples of authorized, dangerous and prohibited Items

4.7.1 Appendix 1 to the Security Manual (Appendix A to DGP-WG/06-WP/50) was considered. It was not clear from the text what was meant to be permitted/forbidden in carry-on baggage or forbidden anywhere on the aircraft. The working group was concerned at the current state of the list, which was liable to cause confusion amongst security personnel. It clearly needed considerable review.

4.7.2 The group reviewed the list of items described in Appendix 1 to identify additional guidance text that should be incorporated. It was also agreed to identify those items that were not permitted in checked baggage and which if detected must not be carried on board an aircraft.

4.7.3 Category 0 (Passenger Authorized Items List (PAXAIL) was reviewed. It was agreed to make reference to fuel cell cartridges, even though these were greater than 100 mL. It is expected that the AVSEC Panel will consider the DGP's request on safety grounds, but may still restrict these in articles of more than 100 mL.

4.7.4 Categories I to III were then reviewed to identify items that should be referred to the Appendix on dangerous goods. In addition items, which are not permitted in passenger baggage, were also identified, these are:

a) Category I

Replica and imitation firearms, including lighters shaped like a firearm; lighters are not permitted in checked baggage.

b) Category II

Aerosol spray paint or equivalent — not permitted in checked or carry on baggage

Alcoholic beverages exceeding 70% by permitted in checked or carry on baggage

Ammunition — note 21 needs amendment to delete restriction to "sporting" cartridges. No other types of ammunition permitted

Blasting caps —not permitted in checked or carry on baggage;

Detonators and fuses —not permitted in checked or carry on baggage;

Explosive and explosive devices —provision must be made for ammunition referred to by note 21, avalanche rescue backpacks and explosives used for medicinal purposes (i.e. nitro-glycerine);

Fireworks etc. — not permitted in checked or carry on baggage;

Flammable liquid fuel — not permitted in checked or carry on baggage;

Gas and gas containers — allowance needs to be made for aerosols and oxygen carried by passengers for medicinal purposes;

Grenades — not permitted in checked or carry on baggage;

Mines etc — not permitted in checked or carry on baggage;

Non-safety matches — footnote 22 needs amendment to refer to "small packet" of matches and "cigarette" lighter;

Turpentine and paint thinner — not permitted in checked or carry on baggage.

c) Category III

Corrosive or bleaching substances — provision must be made for mercury thermometer and mercurial barometer;

Disabling or incapacitating sprays — not permitted in checked or carry on baggage;

Fire extinguishers — not permitted in checked or carry on baggage;

Infectious or biological hazardous material — not permitted in checked or carry on baggage;

Poisons — reference should be made to "toxic";

Radioactive material e.g. medicinal or commercial isotopes — footnote need to address pacemakers and implanted radiopharmaceuticals and if agreed at DGP chemical weapons detectors.

Review of the appendix on Dangerous Goods in the Security Manual (Appendix B to DGP-WG/06-WP/50)

4.7.5 It was agreed to study Appendix B during the main working group meeting at an after hours working group.

4.7.6 The "Appendix on Dangerous Goods" (to the ICAO Security Manual) was the subject of review against the current requirements of Part 8 of the Technical Instructions by an ad-hoc working group.

a) "or" after "their" needs to be deleted on line 4 of paragraph 1.

b) A reference to wheelchair batteries needs to be added against the example against "corrosives";

c) The extract of the Technical Instructions (8;1.1.1) between points 3. and 4. needs to be amended to reflect the current edition. However, it was essential that this information be reviewed by the DGP every time the Technical Instructions is reviewed;

d) A provision needs to be added to state that some items are not permitted in hold baggage for safety reasons. It was suggested to create a new 5. as follows:

" A number of items are only permitted for carriage in the cabin and therefore are not permitted as checked baggage. This is because these items pose a greater safety risk when carried in the hold. The items which must not be placed in hold baggage under any circumstances are:

i) safety matches/cigarette lighter;
ii) spare lithium batteries;
iii) fuel cells and cartridges;
iv) mercurial barometers carried by a Government official;
v) heat producing articles (e.g. underwater high intensity torches/lamps)"

e) it was suggested to create a new heading of "Training" with a new 6. as follows:

" Security personnel must receive dangerous goods training as specified in Part 1;4 of the Technical Instructions. Recurrent training must be undertaken every 24 months."

f) It was suggested to replicate the latest list in Part 7; Chapter 6 under "Aid to the Recognition of Dangerous Goods" (and state in alphabetical order);

g) Attachment A

1) Non-radioactive medicinal or toilet articles - the maximum permitted quantity of 2L or 2 kg per person should be reflected under "Allowed", as should the requirement for a protective cap. "Solarcaine" should be removed since it is a trade name. "500g" should be added with "500 mL". Under "Forbidden", "insect repellent" should be replaced with "insecticide" and "leather conditioner" should be replaced with "water proofing spray". Regulatory Text needs to be amended to reflect current Technical Instructions;

2) Oxygen cylinders — under "item" delete "cylinders" under "Allowed", delete "air". Under "Forbidden" add "filled" before "scuba";

3) Mechanical limbs — Regulatory Text needs to be amended to reflect current Technical Instructions;

4) Life jackets — The maximum per life jacket (2) must be inserted under "Allowed"

5) Cartridges — should read "Ammunition" under "Item". Regulatory Text needs to be amended to reflect current Technical Instructions;

6) Dry ice — Quantity under "Allowed" needs to be amended to 2.5 kg; Regulatory Text needs to be amended to reflect current Technical Instructions;

7) Safety matches or lighters — under "Allowed", "One small packet" needs to be added against safety matches. Lighters needs to be qualified in respect of unabsorbed liquefied gas lighters. Regulatory Text needs to be amended to reflect current Technical Instructions;

8) Provisions for fuel cells and lithium batteries need to be added;

9) Attachment A to the Appendix on Dangerous Goods:

Item	**Allowed**	**Forbidden**	**Regulatory Text (ICAO TIs Part 8)**
Consumer electronic devices containing lithium batteries, including spare batteries.	Items such as laptop computers, cameras, cellular telephones, etc., that contain lithium and lithium ion batteries. Spare batteries are permitted in carry-on baggage only.	Large batteries exceeding 25 g (312 Wh), any spare lithium batteries in checked baggage.	"consumer electronic devices (watches, calculating machines, cameras, cellular phones, laptop computers, camcorders, etc.) containing lithium or lithium ion cells or batteries when carried by passengers or crew for personal use. Spare batteries must be individually protected so as to prevent short circuits and carried in carry-on baggage only. In addition, each spare battery must not exceed the following quantities: —for lithium metal or lithium alloy

Item	Allowed	Forbidden	Regulatory Text (ICAO TIs Part 8)
			batteries, a lithium content of not more than 2 grams; or —for lithium ion batteries, an aggregate equivalent lithium content of not more than 8 grams. Lithium ion batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried in carry-on baggage if they are individually protected so as to prevent short circuits and are limited to two spare batteries per person.
Fuel Cells and spare cartridges	Fuel cell powered electronic devices and two spare fuel cell cartridges bearing the certification "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" 	Fuel Cell Refills for refilling fuel cells in flight Fuel Cells using Hydrogen in Metal Hydride or Borohydride Compounds Fuel Cells not marked "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" Fuel cells and cartridges in checked baggage	"portable electronic devices (for example cameras, cellular phones, laptop computers, and camcorders) powered by fuel cell systems, and spare fuel cartridges, under the following conditions: 1) fuel cell cartridges may only contain flammable liquids (including methanol), formic acid and butane; 2) fuel cell cartridges must comply with IEC PAS 62282-6-1 Ed. 1; 3) fuel cell cartridges must

Item	Allowed	Forbidden	Regulatory Text (ICAO TIs Part 8)
			not be refillable by the user. Refuelling of fuel cell systems is not permitted except that the installation of a spare cartridge is allowed. Fuel cell cartridges which are used to refill fuel cell systems but which are not designed or intended to remain installed (fuel cell refills) are not permitted to be carried; 4) the maximum quantity of fuel in any fuel cell cartridge must not exceed: a) for liquids 200 ml; b) for liquefied gases, 120 ml for non-metallic fuel cell cartridges or 200 ml for metal fuel cell cartridges; 5) each fuel cell cartridge must be marked with a manufacturer's certification that it conforms to IEC PAS 62282-6-1 Ed. 1, and with the maximum quantity and type of fuel in the cartridge; 6) each fuel cell system must conform to IEC PAS 62282-6-1 Ed. 1, and must be marked with a

Item	Allowed	Forbidden	Regulatory Text (ICAO TIs Part 8)
			manufacturer's certification that it conforms to the specification; 7) no more than two spare fuel cell cartridges may be carried by a passenger; 8) fuel cell systems containing fuel and fuel cell cartridges including spare cartridges are permitted in carry-on baggage only; 9) interaction between fuel cells and integrated batteries in a device must conform to IEC PAS 62282-6-1 Ed. 1. Fuel cell systems whose sole function is to charge a battery in the device are not permitted; 10) fuel cell systems must be of a type that will not charge batteries when the portable electronic device is not in use and must be durably marked by the manufacturer: "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" to so indicate; and 11) in addition to the languages which may be required by the State of Origin for the markings

Item	Allowed	Forbidden	Regulatory Text (ICAO TIs Part 8)
			specified above, English should be used.”

h) Attachment B

1) 15. Class 3, flash point needs to be changed to 60°C;

2) 4.1 label needs to be modified;

3) New division 5.2 label needs to be added;

4) Text under division 6.2 needs to be amended and reference to Category B infectious substances added;

5) The first radioactive material label and reference to specific activity need to be deleted, and the label for excepted package of radioactive material inserted;

6) Class 8 label needs a number “8” in the bottom apex;

7) Label for cryogenic liquids and “keep away from heat” labels need to be added “Handling Labels”

8) Class 9 label needs to be replaced with latest version.

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APPENDIX A

PROPOSED AMENDMENTS TO PART 8

Chapter 1

PROVISIONS FOR DANGEROUS GOODS CARRIED BY PASSENGERS OR CREW

Parts of this Chapter are affected by State Variations CH 1, US 5; see Table A-1

1.1 DANGEROUS GOODS CARRIED BY PASSENGERS OR CREW

1.1.1 Except as otherwise provided in 1.1.2, dangerous goods, including excepted packages of radioactive material, must not be carried by passengers or crew members, either as or in carry-on baggage or checked baggage or on their person. Security type equipment such as attaché cases, cash boxes, cash bags, etc., incorporating dangerous goods, for example lithium batteries or pyrotechnic material, are totally forbidden; see entry in Table 3-1.

1.1.2 Notwithstanding any additional restrictions which may be implemented by States in the interests of aviation security, except for the incident reporting provisions of 7;4.4, ~~T~~the provisions of these Instructions do not apply to the following when carried by passengers or crew members or in baggage, transported by the operator, that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage):

Medical necessities

Editorial Note.—	It was agreed that a maximum size of cylinder should be specified for the following item and an expert opinion would be sought to determine an appropriate figure.

~~e~~a) with the approval of the operator(s), ~~small~~[LM1] gaseous oxygen or air cylinders required for medical use;

~~d~~b) ~~small~~ cylinders of a gas of Division 2.2 worn for the operation of mechanical limbs, also spare cylinders of a similar size if required to ensure an adequate supply for the duration of the journey;

~~b~~c) non-radioactive medicinal ~~or toilet~~ articles (including aerosols). ~~Also aerosols in Division 2.2, with no subsidiary risk, for sporting or home use is permitted in checked baggage only.~~ The total net quantity of all such articles carried by each person must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents~~. The term "medicinal or toilet articles (including aerosols)" is intended to include such items as hair sprays, perfumes, colognes and medicines containing alcohols~~;

~~h~~d) radioisotopic cardiac pacemakers or other devices, including those powered by lithium batteries, implanted into a person, or radio-pharmaceuticals contained within the body of a person as the result of medical treatment;

~~i~~e) with the approval of the operator(s), wheelchairs or other battery-powered mobility aids with non-spillable batteries (see Packing Instruction 806 and Special Provision A67), as checked baggage provided the battery terminals are protected from short circuits and the battery is securely attached to the wheelchair or mobility aid;

~~j~~f) with the approval of the operator(s), wheelchairs or other battery-powered mobility aids with spillable batteries as checked baggage, provided that the wheelchair or mobility aid can be loaded, stowed, secured and unloaded always in an upright position and that the battery is disconnected, the battery terminals are protected from short circuits and the battery is securely attached to the wheelchair or mobility aid. If the wheelchair or mobility aid cannot be loaded, stowed, secured and unloaded always in an upright position, the battery must be removed and the wheelchair or mobility aid may then be carried as checked baggage without restriction. The removed battery must be carried in strong, rigid packagings as follows:

1) these packagings must be leaktight, impervious to battery fluid and be protected against upset by securing them to pallets or by securing them in cargo compartments using appropriate means of securement (other than by bracing with freight or baggage) such as by use of restraining straps, brackets or holders;

2) batteries must be protected against short circuits, secured upright in these packagings and surrounded by compatible absorbent material sufficient to absorb their total liquid contents; and

3) these packagings must be marked "Battery, wet, with wheelchair" or "Battery, wet, with mobility aid" and be labelled with a "Corrosive" label (Figure 5-21) and with a package orientation label (Figure 5-25).

The pilot-in-command must be informed of the location of a wheelchair or mobility aid with an installed battery or the location of a packed battery.

It is recommended that passengers make advance arrangements with each operator; also unless batteries are non-spillable they should be fitted, where feasible, with spill-resistant vent caps;

~~o~~g) one small medical or clinical thermometer which contains mercury, for personal use, when in its protective case;

Articles used in dressing or grooming

~~b~~h) ~~non-radioactive medicinal or~~ toiletry articles (including aerosols). ~~Also aerosols in Division 2.2, with no subsidiary risk, for sporting or home use is permitted in checked baggage only.~~ The total net quantity of all such articles carried by each person must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents. The term ~~"medicinal or~~ "toiletry articles (including aerosols)" is intended to include such items as hair sprays, perfumes~~,~~ and colognes ~~and medicines containing alcohols~~;

Editorial Note.— Text of the following item to be reviewed against currently available items.

~~k~~i) hair curlers containing hydrocarbon gas, no more than one per person, provided that the safety cover is securely fitted over the heating element. Gas refills for such curlers must not be carried;

Consumer articles

~~a~~i) when in retail packagings, alcoholic beverages containing more than 24 per cent but not more than 70 per cent alcohol by volume, in receptacles not exceeding 5 L, with a total net quantity per person of 5 L for such beverages;

Note.— Alcoholic beverages containing not more than 24 per cent alcohol by volume are not subject to any restrictions.

~~b~~k) ~~non-radioactive medicinal or toilet articles (including aerosols). Also a~~Aerosols in Division 2.2, with no subsidiary risk, for sporting or home use is permitted in checked baggage only. The total net quantity of all such articles carried by each person must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents~~. The term "medicinal or toilet articles (including aerosols)" is intended to include such items as hair sprays, perfumes, colognes and medicines containing alcohols~~;

~~e~~l) with the approval of the operator(s), as checked baggage only, securely packaged cartridges (UN 0012 or UN 0014 only), in Division 1.4S, in quantities not exceeding 5 kg gross mass per person for that person's own use, excluding ammunition with explosive or incendiary projectiles. Allowances for more than one person must not be combined into one or more packages;

≠ ~~g~~m) one small packet of safety matches or a cigarette lighter that does not contain unabsorbed liquid fuel (other than liquefied gas), intended for use by an individual when carried on the person. Matches and lighters are not permitted in checked or carry-on baggage. Lighter fuel and lighter refills are not permitted on one's person, in carry-on or checked baggage;

Note.— "Strike anywhere" matches are forbidden for air transport.

n) with the approval of the operator(s), ~~heat producing articles (i.e. battery-operated~~ equipment ~~such as underwater torches and soldering equipment which, if accidentally activated, will generate extreme heat and can cause fire) may be carried in carry-on baggage only. The heat producing component, or the energy source, must be removed so as to prevent unintentional functioning during transport~~ battery-powered equipment capable of generating extreme heat, which could cause a fire if activated (e.g. underwater high intensity lamps) providing that the heat producing component or the battery is packed separately so as to prevent activation during transport. Any battery which has been removed must be protected against short circuit;

≠ ~~p~~o) with the approval of the operator(s), one avalanche rescue backpack per person equipped with a pyrotechnic trigger mechanism containing not more than 200 mg net of Division 1.4S and a cylinder of compressed gas of Division 2.2 not exceeding 250 mL. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpack must be fitted with pressure relief valves;

~~m~~p) with the approval of the operator(s), no more than two small cylinders of carbon dioxide or another suitable gas in Division 2.2, per person, fitted into a self-inflating life-jacket for inflation purposes, plus no more than two spare cartridges;

q) consumer electronic devices (watches, calculating machines, cameras, cellular phones, laptop computers, camcorders, etc.) containing lithium or lithium ion cells or batteries when carried by

passengers or crew for personal use. Spare batteries must be individually protected so as to prevent short circuits and carried in carry-on baggage only. In addition, each spare battery must not exceed the following quantities:

— for lithium metal or lithium alloy batteries, a lithium content of not more than 2 grams; or

— for lithium ion batteries, an aggregate equivalent lithium content of not more than 8 grams.

Editorial Note.— In the 2007-2008 Edition of the Technical Instructions, the following paragraph mistakenly appears after list item r).

Lithium ion batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried in carry-on baggage if they are individually protected so as to prevent short circuits and are limited to two spare batteries per person.

+ r) portable electronic devices (for example cameras, cellular phones, laptop computers and camcorders) powered by fuel cell systems, and spare fuel cartridges, under the following conditions:

1) fuel cell cartridges may only contain flammable liquids (including methanol), formic acid and butane;

2) fuel cell cartridges must comply with International Electrotechnical Commission (IEC) PAS 62282-6-1 Ed. 1;

3) fuel cell cartridges must not be refillable by the user. Refuelling of fuel cell systems is not permitted except that the installation of a spare cartridge is allowed. Fuel cell cartridges which are used to refill fuel cell systems but which are not designed or intended to remain installed (fuel cell refills) are not permitted to be carried;

4) the maximum quantity of fuel in any fuel cell cartridge must not exceed:

a) for liquids 200 mL;

b) for liquefied gases, 120 mL for non-metallic fuel cell cartridges or 200 ml for metal fuel cell cartridges;

5) each fuel cell cartridge must be marked with a manufacturer's certification that it conforms to IEC PAS 62282-6-1 Ed. 1, and with the maximum quantity and type of fuel in the cartridge;

6) each fuel cell system must conform to IEC PAS 62282-6-1 Ed. 1, and must be marked with a manufacturer's certification that it conforms to the specification;

7) no more than two spare fuel cell cartridges may be carried by a passenger;

8) fuel cell systems containing fuel and fuel cell cartridges including spare cartridges are permitted in carry-on baggage only;

9) interaction between fuel cells and integrated batteries in a device must conform to IEC PAS 62282-6-1 Ed. 1. Fuel cell systems whose sole function is to charge a battery in the device are not permitted;

10) fuel cell systems must be of a type that will not charge batteries when the portable electronic device is not in use and must be durably marked by the manufacturer: "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" to so indicate; and

11) in addition to the languages which may be required by the State of Origin for the markings specified above, English should be used.

Secretariat Note.— In the 2007-2008 Edition of the Technical Instructions, the following paragraph mistakenly appears after list item r). It is now moved to it's correct position after sub-paragraph q).

~~Lithium ion batteries with an aggregate equivalent lithium content of more than 8 grams but not more than 25 grams may be carried in carry-on baggage if they are individually protected so as to prevent short circuits and are limited to two spare batteries per person.~~

Other

≠ ~~f~~s) with the approval of the operator, dry ice in quantities not exceeding 2.5 kg per person, when used to pack perishables that are not subject to these Instructions, provided the package permits the release of carbon dioxide gas. ~~The dry ice may be either:~~

~~— in carry-on baggage; or~~

~~— with the approval of the operator(s), in checked baggage.~~

When carried in checked baggage, each package must be marked:

— "DRY ICE" or "CARBON DIOXIDE, SOLID"; and

— with the net weight of dry ice or an indication that the net weight is 2.5 kg or less;

~~l~~t) with the approval of the operator(s), as carry-on baggage only, a mercurial barometer or mercurial thermometer carried by a representative of a government weather bureau or similar official agency. The barometer or thermometer must be packed in a strong outer packaging, having a sealed inner liner or a bag of strong leakproof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position. The pilot- in-command must be informed of the barometer or thermometer;

u) with the approval of the operator(s), as carry-on or checked baggage, instruments containing radioactive material not exceeding the activity limits specified in Table 2-12 (i.e. chemical agent monitor (CAM) and/or rapid alarm and identification device-monitor (RAID-M)), securely packed and without lithium batteries, when carried by staff members of the Organisation for the Prohibition of Chemical Weapons (OPCW) on official travel.

1.1.3 Any organization or enterprise other than an operator (such as a travel agent), involved in the air transport of passengers, should provide passengers with information about the types of dangerous goods which they are forbidden to transport aboard an aircraft. This information should consist of, as a minimum, notices at those locations where there is an interface with the passengers.

— END —