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31/8/04

**DANGEROUS GOODS PANEL (DGP)**

**MEETING OF THE WORKING GROUP OF THE WHOLE**

**Abu Dhabi, 4 to 8 October 2004**

# FORMULATION OF A WORKING GROUP TO EXAMINE THE PROVISIONS OF ICAO TECHNICAL INSTRUCTION PART 8 – PROVISIONS CONCERNING PASSENGERS AND CREW

(Presented by J. Code)

## BACKGROUND

The ICAO Dangerous Goods Panel held its final meeting of the biennium in October/November of 2003. During that meeting the amendments to the 2005/2006 edition of the ICAO Technical Instructions were finalized and carry-over business items for the next biennium identified.

One of these carry-over items related to the establishment of an ICAO DGP Working Group tasked with the review of the provisions of 'Part 8 of the Technical Instructions - Provisions for Passenger and Crew'. The Panel agreed that such a Working Group should be established in the next biennium and should be assigned with the following objectives:

1. Develop criteria under which dangerous goods will be considered for inclusion in the list of exemptions;

2. Examine each of the provisions in Part 8;1.1.2 to determine if they should be retained, deleted or modified;

3. Determine if there are other items that should be added to the list of exemptions in Part 8; and

4. Develop recommendations on the user-friendliest way to present this information within Part 8, Provisions concerning passengers and crew.

The Canadian member to the Panel volunteered to create a Discussion Paper on this issue in advance of the next ICAO DGP Working Group of the Whole for the consideration of Panel.

In preparation for drafting this Discussion Paper two Canadian Working Group meetings were convened which involved:

- Members of the Canadian air operator community,
- Canadian Packaging specialists,
- Health Canada,
- The Canadian Nuclear Safety Commission,
- The Explosives Branch of Natural Resources Canada, and
- The Security Directorate, Civil Aviation Directorate and Transport Dangerous Goods Directorate of Transport Canada.

The following text is the product of those deliberations and is submitted to the ICAO DGP for their consideration when addressing the issues affecting the provisions of Part 8 of the ICAO Technical Instructions. It summarizes the recommendations of the Canadian Working Group on the objectives identified in the Canadian Working Paper and provides suggestions on what actions the ICAO DGP may consider taking to further clarify the provisions of Part 8 of the ICAO Technical Instructions.

## DISCUSSION PAPER

**Objectives**:

1. **Develop criteria under which dangerous goods will be considered for inclusion in the list of exemptions;**
2. **Examine each of the provisions in Part 8;1.1.2 to determine if they should be retained, deleted or modified;**
3. **Determine if there are other items that should be added to the list of exemptions in Part 8**

### General Conditions

The Canadian Working Group suggested that consideration be given to applying five general conditions to all dangerous goods identified in Part 8 of the ICAO Technical Instructions. They are:

- Dangerous goods must be contained in the original manufacturer's container, unless otherwise specified.

- The original manufacturer's container must not show signs of damage or leakage.

- The original manufacturer's container must be securely closed, unless otherwise specified.

- The original manufacturer's container must be stowed and secured to prevent movement during transport.

- That dangerous goods transported in compliance with Part 8 of the ICAO Technical Instructions must be subject to the reporting provisions of Part 7; 4.4 and 7; 4.5

### Categories of Use

The Canadian Working Group also suggested consideration be given to the creation of three categories under which dangerous goods may be considered for carriage in passenger/crew baggage. These categories:

1. **'Essential'** – includes dangerous goods required to sustain the health and/or mobility of a passenger or crew member. Methods of demonstrating that a dangerous goods is 'essential' include pharmaceutical prescriptions; for cylinders, written certification by a qualified/regulated supplier.

2. **'Necessary, but not essential'** – Dangerous goods used for:

    a. **Personal hygiene and grooming (e.g., aerosols, flammable liquid/gas, hair grooming devices)**
    b. **Consumer electronics (e.g., battery powered radios, TV's, phones, computers, CD players, cameras)**
    c. ***Commercial tools (e.g., tools of the trade, measuring instruments, medical kits)**
    d. ***Recreation**
    e. ***Safety Equipment**

*** The Working Group expressed doubt about whether dangerous goods used in these activities could be transported in passenger/crew baggage safely.**

3. **'Non-essential, but currently impractical to exclude from Passenger/Crew Baggage'** – Dangerous Goods that are sold at airport retail facilities after the security screening checkpoints (e.g., alcohol, dry ice for food, perfume, matches/lighters, etc.). Ideally this category will eventually be eliminated.

**Evaluation Protocol**

The Canadian Working Group suggested the ICAO DGP consider implementing an '**Evaluation Protocol'** to be conducted by each State prior to proposing a new addition to the exemptions for passenger/crew baggage found in Part 8 of the ICAO Technical Instructions. This Protocol would include the following:

- The State must conduct a formal Risk Management Process on the transport of any dangerous goods proposed for inclusion in Part 8. (Copies of Transport Canada's TP 13905 Risk Management and Decision-Making Type 2A, Short Process document can be obtained at the following website: http://www.tc.gc.ca/transact
- Any Working Paper submitted by a State to the ICAO DGP must include:
    - A description of the passenger's/crew's need to have the dangerous goods in their baggage
    - The results of the Risk Management Process, including easy to apply and easy to measure conditions under which the dangerous goods may be transported in passenger/crew baggage.

**OUTSTANDING ISSUES FOR ICAO DGP WORKING GROUP DISCUSSION**

The Canadian Working Group recommended the following issues be addressed by the ICAO DGP Working Group in an effort to further refine the criteria for the inclusion of dangerous goods in Part 8:

1. Define a measurable/quantifiable risk target

2. Ratify a risk management process(es) acceptable to all States *(Risk management should include consideration of conditions of transport, benefits to passengers, permissible quantities, whether the dangerous goods should be in carry-on or checked baggage, type of containment and their closures, circumstances where dangerous goods may not be available at destination, incident and accident data, etc.) (Agencies to be consulted during the Risk Management process should include Security, aviation industry, affected manufactures and stakeholders)*

3. Conduct a Risk Management on all existing entries in Part 8 with the initial focus being on:
   - Compressed gas cylinders, *(Consideration during that process should be given to the types of gases to be contained in the cylinder, Types, Size - length and dimension and water capacity of cylinder, Total number of cylinders permitted on board an aircraft, Valve protection and Stowage)*
   - Batteries, and
   - Aerosols

   (See Annex 1 – for a summary of the Canadian Working Group Discussions on the Current Part 8 Provisions)

4. Define the acceptable methods for recognizing 'Essential' dangerous goods in passenger/crew baggage

5. Conduct research into the types of non-dangerous goods that can be used as an alternative to dangerous goods, e.g., pump vs. aerosol and their availability.

6. Work with AVSEC to further identify and harmonize passenger/crew baggage restrictions.

7. Based on information about what is currently being seized at security check points, establish a list of items passengers are prohibited to take in their baggage and include this list of prohibited items in Part 8.

8. Publish a duplicate 'tear out' sheet of the Part 8 provisions in the ICAO Technical Instructions document that can be removed from the document for ease of reference.

The Canadian Working Group suggested the ICAO DGP Working Group address the following corresponding work items:

- Design public awareness material that will assist passengers, security screeners, and air operators to identify dangerous goods and to differentiate between those permitted in baggage and those not permitted.

- Decide whether the total quantity per passenger of 'essential' dangerous goods should take into account travel to destinations where the passenger may need to bring sufficient supplies for both the outbound and the return flight or to destinations where there is no possibility of cargo flights.

- Determine how to restrict the selling of dangerous goods at airport retail outlets located after security checkpoints to those that would be permitted in the 'Necessary, but not Essential' category.

- Decide whether aerosols of Division 2.1 should be limited to those required for medical purposes, 'Essential'

- Decide whether a Note should be added to Part 8 of the ICAO Technical Instructions that would recommend the use of pump products instead of aerosols.

- Decide whether establishing a limit on the total quantity of dangerous goods in a single piece of baggage will have an impact on parents traveling with children who combine the family dangerous goods related material into one piece of baggage.

- Decide whether a definition is needed for the word 'baggage'.

- Decide, in those cases where the air operator is advised of the presence of dangerous goods, whether the pilot-in-command needs to be advised as well and if yes, must it in a written/electronic form?

**Objective:**

**4. <u>Develop recommendations on how the information in Part 8 can be made more user-friendly</u>**

The Canadian Working Group proposed consideration be given to the following format for the presentation of the provisions of Part 8, ICAO Technical Instructions:

**<u>General Conditions</u>**

1.1.1 Except as otherwise provided in 1.1.2 below, dangerous goods 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 Dangerous goods in accompanied passengers or crew member baggage, or in baggage transported by the operator, that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage) may be carried provided the following conditions are met:

**General Conditions**

a) Dangerous goods must be contained in the original manufacturer's container, unless otherwise specified.
b) The original manufacturer's container must not show signs of damage or leakage
c) The original manufacturer's container must be securely closed, unless otherwise specified.
d) The original manufacturer's container must be stowed and secured to prevent movement during transport.
e) Dangerous Goods permitted in passenger or crew baggage and the conditions associated with their safe transport are listed in Table 8-1 - **List of Dangerous Goods Permitted in Passenger and Crew Baggage**. Passengers and crew must comply with the provisions of Table 8-1.

**Table 8-1 – List of Dangerous Goods Permitted in Passenger and Crew Baggage**

| **Dangerous Goods** | **Checked Baggage Quantity Limit per package** | **Carry-on Baggage Quantity Limit per package** | **Air Operator Approval Required** | **Conditions** | **Example** |
|---|---|---|---|---|---|
| Ammunition | 5 kg gross mass per person | X | √ | A 1 | Cartridges for sporting purposes |
| Aerosols | | | | | |
| Compressed gas cylinders | | | | | |
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Note: √ means yes X means no

A 1 - securely boxed cartridges for sporting purposes, in Division 1.4S, 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.
A 2 - ……
A 3 - ……

1.1.3 Dangerous goods transported in compliance with Part 8 of the ICAO Technical Instructions must be subject to the reporting provisions of Part 7;4.4 and 7;4.5.

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**Annex 1**

**Summary of the Canadian Working Group Discussions on the Current Part 8 Provisions**

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| Medical Devices, Battery Operated, e.g., Mobility Aids (e.g., wheelchairs), Ventilators, CPAC's | **Conditions**<br>o Only non-spillable, Dry Cell, lithium or lithium ion batteries are permitted<br>o Batteries must be protected from short circuiting during transport<br>o Mobility Devices must be protected from accidental activation.<br>o Mobility Devices containing batteries must be secured during transport.<br>o Only the number of batteries necessary for the operation of the Mobility Aid is permitted.<br>o Mobility Aids, not used during flight must be transported as checked baggage only.<br><br>**Outstanding Issues**<br>The Working Group questioned whether:<br>• a total number of batteries per device should be stipulated;<br>• consideration should be given to prohibiting the use of spillable (wet cell) batteries; and<br>• the exemption for batteries used in mobility aids such as wheelchairs should be extended to spares and consideration given to the application of A67. |
| Medical or Clinical thermometers containing mercury<br><br>Other measuring devices such as Blood Pressures Devices containing mercury are prohibited from transport in passenger carry-on or checked baggage | **Conditions**<br>• For personal use,<br>• No air operator approval required<br>• One per person<br>• In its protective case. |
| Spare Gas cartridges/receptacle for artificial limbs | **Conditions**<br>• Primary hazard of the dangerous goods is 2.2 with no subsidiary risk.<br><br>**Outstanding Issues**<br>The Working Group questioned:<br>• whether all countries of origin prescribe markings on cartridges;<br>• what kinds of gases are used in cartridges;<br>• whether certain cartridges are re-usable;<br>• how cartridges are installed in a limb;<br>• whether Security has any requirements governing gas cartridges in artificial limbs; |

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| | • Whether there should be a maximum quantity established for these cartridges and suggested the following be considered:<br>  • Maximum size per cylinder should be 250ml water capacity (This may prove impossible if the water capacity is not indicated on the cartridge.)<br>  • Maximum quantity should depend on the artificial limb requirement; and<br>• whether a maximum working pressure limit for the cartridge should be established. Without marking it will be difficult to determine if a cartridge was in compliance with a working pressure limit. |
| Oxygen cylinders for medical use | **Conditions**<br>• Cylinder is as approved by the competent authority of the country of origin and maintained in accordance with that country's standards<br>• Maximum quantity per cylinder does not exceed 5 litres water capacity<br>• Spare cylinders are packaged in such a way to protect the valves when transported as checked baggage<br><br>**Outstanding issue**<br>The Working Group questioned:<br>• whether the designator 'Medical E' for cylinders was used worldwide;<br>• whether all types of cylinders can be packaged to protect the valves;<br>• what impact would State legislation have on cylinders arriving from another country; and<br>• how one confirms the contents of the cylinder. |
| Aerosol Inhalers or sprays of more than 50 ml (see A 98)<br>Note: UN just starting to establish specifications for aerosols | **Conditions**<br>• Maximum size per container is 0.5 litre water capacity<br>• Valve must be protected by a firmly secured cap<br><br>**Outstanding issue**<br>The Working Group questioned whether aerosols containing oxygen for breathing be permitted in passenger/crew baggage. |
| **Flammable liquids/solids (**e.g., Rubbing alcohol, Alcohol swabs, acne pads)<br>**Corrosive Liquids/solids** (e.g., wart remover)<br>**Toxic Substances,**<br>(e.g., medicine, toxic, n.o.s.) in plastic, glass or metal containers | **Conditions**<br>• Maximum quantity per means of containment 0.5l water capacity or 0.5 kg<br>• No air operator approval required<br>• Regular screw cap closure or friction type closure such as a cork or rubber stopper held in place by a positive means |

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| Ammunition | **Conditions**<br>• Securely packaged cartridges of Division 1.4S with UN number UN0012 or UN 0014 only<br>• In quantities not exceeding 5 kg gross mass per person for that person's own use<br><br>**Outstanding Issues**<br>• The explosives expert from Natural Resources Canada advised the Canadian Working Group that UN marking must appear on the cartridge package for them to be considered Division 1.4S.<br>• The Explosive expert noted that all ammunition packed in appropriate UN packaging has a default classification of 1.4S. |
| Alcohol | **Conditions**<br>• No air operator approval<br>• Limited to alcoholic beverages containing more than 24 per cent but not more than 70 per cent alcohol by volume.<br>• In retail receptacles not exceeding 5 L, with a total net quantity per person of 5 L for such beverages.<br><br>**Outstanding Issue**<br>The Working Group questioned whether:<br>• consideration should be given to permitting alcohol over 70 per cent but limiting the size of the receptacle to 2L with a maximum of one receptacle per person; and<br>• it was feasible to require bottles containing alcohol to be sealed. |
| Consumer Electronics | **Conditions**<br>• No air operator approval required<br>• Adopt the provisions of 8;1.1.2 (q)<br><br>**Outstanding Issue**<br>The Working Group questioned:<br>• whether there was another method to determine if a spare battery is acceptable for transport in passenger/crew baggage, other than specifying a quantity limit for lithium;<br>• whether consideration should be given to limiting the number of spare batteries that can be transported by a passenger/crew; and<br>• whether a Note should be included into Part 8 to clearly exclude those transporting film industry related dangerous goods in their baggage. |
| Dry Ice | **Conditions**<br>• Adopt the provisions of 8; 1.1.2 f |

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| | **Outstanding Issue**<br>The Working Group recommended that any Security provisions regarding the transport of dry ice be considered when finalizing this provision. |
| Matches & Lighters | **Conditions**<br><br>**Outstanding Issue**<br>The Working Group questioned:<br>• why there was no limit to the number of matches permitted per person and recommended that a limit be set at one book per person; and<br>• the meaning of the term 'on the person', wondering if it included a purse. |

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