International Civil Aviation Organization

WORKING PAPER

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1/3/05

DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Montreal, 18 to 22 April 2005

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions* for incorporation in the 2007/2008 edition
2.1: Part 1 — General

DRAFT AMENDMENTS OF THE TECHNICAL INSTRUCTIONS TO ALIGN TO THE UN RECOMMENDATIONS - PART 1

(Presented by the Secretary)

SUMMARY

Below are the draft amendments to Part 1 Chapters 1, 3 and 5 to reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and the Globally Harmonized System of Classification of Labelling of Chemicals at the second session (Geneva, 10 December 2004)

Chapter 1

SCOPE AND APPLICABILITY

Parts of this Chapter are affected by the State Variations BE 2, BE 4, BE 5, CA 6, CA 12, CH 3, DE 1, DE 4, FR 3, GB 2, IR 1, IT 1, IT 5, NL 3, NL 6,, US 1, VC 1, VC 2, VC 3, ZA 1; see Table A-1

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1.4 TRANSPORT OF RADIOACTIVE MATERIAL

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1.4.2 Radiation protection programme

1.4.2.1 The transport of radioactive material must be subject to a radiation protection programme, which must consist of systematic arrangements aimed at providing adequate consider-ation of radiation protection measures.

1.4.2.2 The nature and extent of the measures to be employed in the programme must be related to the magnitude and likelihood of radiation exposure. The programme must incor-porate the requirements in 1.4.2.3 to 1.4.2.5, 7;2.9.1.1; 7;2.9.1.2, 7;1.6.1.3 and applicable emergency response procedures. Programme documents must be available, on request, for inspection by the relevant competent authority.

1.4.2.3 Doses to persons shall be below the relevant dose limits. Protection and safety must be optimized in order that the magnitude of individual doses, the number of persons exposed, and the likelihood of incurring exposure must be kept as low as reasonably achievable, economic and social factors being taken into account, ~~and doses to persons must be below the relevant dose limits~~ within the restriction that the doses to individuals be subject to dose constraints. A structured and systematic approach must be adopted and must include consideration of the interfaces between transport and other activities.

1.4.2.4 Workers must receive appropriate training concerning ~~the radiation hazards involved and~~ radiation protection including and the precautions to be observed in order ~~to ensure restriction of their exposure and that~~ to restrict their occupational exposure and the exposure of other persons who might be affected by their actions.

1.4.2.5 For occupational exposures arising from transport activities, where it is assessed that the effective dose:

~~a) is most unlikely to exceed 1 mSv in a year, no special work patterns, detailed monitoring, dose assessment programmes or individual record keeping must be required;~~

~~b~~ a) is likely to be between 1 and 6 mSv in a year, a dose assessment programme via workplace monitoring or individual monitoring must be conducted; and

~~c~~ b) is likely to exceed 6 mSv in a year, individual monitoring must be conducted.

When individual monitoring or workplace monitoring is conducted, appropriate records must be kept.

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1.4.4 Special arrangement

1.4.4.1 Special arrangement must mean those provisions, approved by the competent authority, under which consignments of radioactive material that do not satisfy all the applicable requirements of these Instructions ~~applicable to radioactive material~~ may be transported.

1.4.4.2 Consignments for which conformity with any provision applicable to Class 7 is impracticable must not be transported except under special arrangement. Provided the competent authority is satisfied that conformity with the Class 7 provisions of these Instructions is impracticable and that the requisite standards of safety established by these Instructions have been demonstrated through alternative means, the competent authority may approve special arrangement transport operations for a single consignment or a planned series of multiple consignments. The overall level of safety in transport must be at least equivalent to that which would be provided if all the applicable requirements had been met. For ~~international~~ consignments of this type, multilateral approval must be required.

1.4.5 Non-compliance

In the event of a non-compliance with any limit in these Instructions applicable to radiation level or contamination:

a) the shipper must be informed of the non-compliance by the operator if the non-compliance is identified during transport;

b) the shipper and the operator must be informed of the non-compliance by the consignee if the non-compliance is identified at receipt;

c) the operator, shipper or consignee, as appropriate must:

   i) take immediate steps to mitigate the consequences of the non-compliance;

   ii) investigate the non-compliance and its causes, circumstances and consequences;

   iii) take appropriate action to remedy the causes and circumstances that led to the non-compliance and to prevent a recurrence of similar circumstances that led to the non-compliance; and

   iv) communicate to the relevant competent authority(ies) on the causes of the non-compliance and on corrective or preventative actions taken or to be taken; and

d) the communication of the non-compliance to the shipper and relevant competent authority(ies), respectively, must be made as soon as practicable and it must be immediate whenever an emergency situation has developed or is developing.

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Chapter 3

GENERAL INFORMATION

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

3.1 DEFINITIONS

3.1.1 The following is a list of definitions of commonly used terms in these Instructions. Definitions of terms which have their usual dictionary meanings or are used in the common technical sense are not included. Definitions of additional terms used solely in conjunction with radioactive material are contained in 2;7.2.

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Approval. An authorization issued by the appropriate national authority for:

a) transport of those entries listed in Table 3-1 as forbidden on passenger and/or cargo aircraft to which Special Provision A1, A2 or A109 has been assigned in column 7; or

b) other purposes as specified in these Instructions.

Note.— Unless otherwise indicated, approval is only required from the State of Origin.

ASTM. The American Society for Testing and Materials (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, United States of America).

Bags. Flexible packagings made of paper, plastic film, textiles, woven material or other suitable materials.

Boxes. Packagings with complete rectangular or polygonal faces, made of metal, wood, plywood, reconstituted wood, fibreboard, plastic or other suitable material. Small holes for purposes such as ease of handling or opening, or to meet classification requirements, are permitted as long as they do not compromise the integrity of the packaging during transport.

Bundles of cylinders. (See UN Recommendations, Chapter 1.2). Not permitted for air transport.

Cargo aircraft. Any aircraft, other than a passenger aircraft, which is carrying goods or property.

CGA. The Compressed Gas Association (CGA, 4221 Walney Road, 5th Floor, Chantilly VA 20151-2923, United States of America).

Closures. Devices which close an opening in a receptacle.

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Drums. Flat-ended or convex-ended cylindrical packagings made of metal, fibreboard, plastic, plywood or other suitable materials. This definition also includes packagings of other shapes, e.g. round taper-necked packagings, or pail-shaped packagings. Jerricans are not covered by this definition.

Elevated temperature substance. A substance which is transported or offered for transport:

— in the liquid state at a temperature at or above 100°C;

— in the liquid state with a flashpoint above ~~60.5~~ 60°C and which is intentionally heated to a temperature above its flashpoint; or

— in a solid state and at a temperature at or above 240°C.

EN *(standard)*. A European standard published by the European Committee for Standardization (CEN) (CEN - 36 rue de Stassart, B-1050 Brussels, Belgium).

Exception. A provision in these Instructions which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

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Gross mass. The total mass of the package.

IAEA. The International Atomic Energy Agency (IAEA, P.O. Box 100 - A -1400 Vienna, Austria).

ID number. A temporary identification number for entries in Table 3-1 — Dangerous Goods List — which have not been assigned a UN number.

IMO. The International Maritime Organization (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom).

Incompatible. Describing dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.

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International System of Units (SI). A rational and coherent system of units which provides the basis for the units of measurement used for air and ground operations as contained in Annex 5 to the Convention on International Civil Aviation.

ISO (standard). An international standard published by the International Organization for Standardization (ISO - 1, rue de Varembé, CH-1204 Geneva 20, Switzerland).

Jerricans. Metal or plastic packagings of rectangular or polygonal cross-section.

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UN number. The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

UNECE. The United Nations Economic Commission for Europe (UNECE, Palais des Nations, 8-14 avenue de la Paix, CH-1211 Geneva 10, Switzerland).

Working pressure. The settled pressure of a compressed gas at a reference temperature of 15°C in a full pressure receptacle.

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Chapter 5

DANGEROUS GOODS SECURITY

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5.3 SECURITY PLANS

5.3.1 Operators, shippers and others engaged in the transport of high consequence dangerous goods should adopt, implement and comply with a security plan that addresses at least the elements specified in 5.3.2. High consequence dangerous goods are those which have the potential for misuse in a terrorist incident and which may, as a result, produce serious consequences such as mass casualties or mass destruction. An indicative list of high consequence dangerous goods is provided in Table 1-5.

Note.— When national authorities issue exemptions, they should consider all of the provisions in this Chapter.

5.3.2 The security plan should comprise at least the following elements:

a) specific allocation of responsibilities for security to competent and qualified persons with appropriate authority to carry out their responsibilities;

b) records of dangerous goods or types of dangerous goods transported;

c) review of current operations and assessment of vulnerabilities, including inter-modal transfer, temporary transit storage, handling, and distribution, as appropriate;

d) clear statement of measures including training policies (including response to higher threat conditions, new employee/employment verifications, etc.), operating practices (e.g. access to dangerous goods in temporary storage proximity to vulnerable infrastructure, etc.), equipment and resources that are to be used to reduce security risks;

e) effective and up to date procedures for reporting and dealing with security threats, breaches of security or security incidents;

f) procedures for the evaluation and testing of security plans and procedures for periodic review and update of the plans;

g) measures to ensure the security of transport information contained in the plan; and

h) measures to ensure that the security of the distribution of transport documentation is limited as far as possible. (Such measures must not preclude provision of the transport documentation required by Part 5, Chapter 4 of these Instructions.)

Note.— Operators, shippers and others with responsi-bilities for the safe and secure transport of dangerous goods should cooperate with each other and with appropriate authorities to exchange threat information, apply appropriate security measures and respond to security incidents.

Table 1-5. Indicative list of high consequence dangerous goods

Class 1 Division 1.1 explosives
Class 1 Division 1.2 explosives
Class 1 Division 1.3 compatability group C explosives
Division 2.3 toxic gases (excluding aerosols)
Division 6.1 substances of Packing Group 1; except when transported under the excepted quantity provisions in 2.4
Division 6.2 infectious substances of Category A (UN Nos. 2814 and 2900)
Class 7 radioactive materials in quantities greater than 3000 A_1 (special form) or 3000 A_2, as applicable in Type B and Type C packages.

5.4 RADIOACTIVE MATERIAL

For radioactive material, the provisions of this Chapter is deemed to be complied with when the provisions of the Convention on Physical Protection of Nuclear Material and of IAEA INFCIRC/225 (Rev.4) are applied.

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