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INLAND TRANSPORT COMMITTEE

Working Party on the Transport
of Dangerous Goods

Joint Meeting of Experts on the Regulations
annexed to the European Agreement concerning
the International Transport of Dangerous Goods
by Inland Waterways (ADN)*

(Tenth session, Geneva, 23-27 January 2006
Agenda item 4)

AMENDMENTS ADOPTED BY THE RID/ADR/ADN JOINT MEETING

Note by the UNECE secretariat**

The [informal document INF.4](#) was prepared by the secretariat on the basis of [ECE/TRANS/WP.15/AC.2/2006/3](#), [INF.3](#) and editorial modifications to [RID/ADR.](#)

* *This meeting is organized jointly by the Economic Commission for Europe and the Central Commission for the Navigation of the Rhine.*

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Draft amendments to ADN adopted by the RID/ADR/ADN Joint Meeting

PART 1

Chapter 1.1

1.1.3.1 (d) Amend as follows:

"(d) the carriage undertaken by or under the supervision of the emergency services, insofar as such carriage is necessary in relation to the emergency response, in particular carriage undertaken to contain and recover the dangerous goods involved in an incident or accident and move them to a safe place;"

1.1.3.1 Add a new sub paragraph (f) to read:

"(f) the carriage of uncleaned empty static or storage vessels and tanks which have contained gases of Class 2, groups A, O or F, substances of Class 3 or Class 9 belonging to packing group II or III or pesticides of Class 6.1 belonging to packing group II or III, subject to the following conditions:

- All openings with the exception of pressure relief devices (when fitted) are hermetically closed;
- Measures have been taken to prevent any leakage of contents in normal conditions of carriage; and
- The load is fixed in cradles or crates or other handling devices or to the vehicle, wagon, ~~vehicle~~, container or vessel in such a way that they will not become loose or shift during normal conditions of carriage.

This exemption does not apply to static or storage vessels and tanks which have contained desensitized explosives or substances the carriage of which is prohibited by ADN."

1.1.3.2 (d) Amend as follows:

"(d) gases contained in the equipment used for the operation of the vehicle (e.g. fire extinguishers), including in spare parts (e.g. inflated pneumatic tyres); this exemption also applies to inflated pneumatic tyres carried as a load;"

1.1.3.2 (f) Delete. Current (g) becomes (f).

1.1.4.2.1 In the last sentence replace "classes 1 to 8" with "classes 1 to 9".

1.1.4.3

(Reserved)

~~In the title insert "IMO type" before "portable tanks". In the first sentence, replace "Portable tanks" with "IMO type portable tanks (types 1, 2, 5 and 7)".~~

~~Add a reference "¹" to a footnote at the end. The footnote will read as follows:~~

~~"¹ The International Maritime Organization (IMO) has issued "Guidance on the Continued Use of Existing IMO Type Portable Tanks and Road Tank Vehicles for the Transport of Dangerous Goods" as circular DSC.1/Circ.12 and Corrigenda. Copies of this guidance can be found on the IMO website at: www.imo.org."~~

Chapter 1.2

1.2.1 Add the following definitions in alphabetical order:

"ASTM means 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);"

Consequential amendment:

In Chapter 3.3, SP 649, delete the address in footnote (2).

""Capacity of shell or shell compartment", for tanks, means the total inner volume of the shell or shell compartment expressed in litres or cubic metres. When it is impossible to completely fill the shell or the shell compartment because of its shape or construction, this reduced capacity shall be used for the determination of the degree of filling and for the marking of the tank."

"CGA means the Compressed Gas Association (CGA, 4221 Walney Road, 5th Floor, Chantilly VA 20151-2923, United States of America);"

"ICAO means the International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada);"

"IMO means the International Maritime Organization (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom);"

""Tank record" means a file containing all the important technical information concerning a tank, a battery-vehicle or a MEGC, such as certificates referred to in 6.8.2.3, 6.8.2.4 and 6.8.3.4. "

"UIC means the International Union of Railways (UIC, 16 rue Jean Rey, F-75015 Paris, France);"

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

Consequential amendment:

Wherever they appear in ADN replace the words "UN/ECE" and "UN-ECE" with "UNECE". (Apply to 5.4.1.4.2 footnote 2) and to section 5.4.2 footnote 3).

In the definition of "UN Model Regulations", replace "thirteenth" with "fourteenth" and "(ST/SG/AC.10/1/Rev.13)" with "(ST/SG/AC.10/1/Rev.14)".

In the definition of "Manual of Tests and Criteria", replace "(ST/SG/AC.10/11/Rev.4)" with "(ST/SG/AC.10/11/Rev.4 as amended by document ST/SG/AC.10/11/Rev.4/Amend.1)".

In the definition of "*Aerosol or aerosol dispenser*", insert "under pressure" after "liquefied or dissolved".

In the definition of "*Hermetically closed tank*", the second and fourth indents, replace "as allowed by special provision TE15 of 6.8.4 of ADR" with "in accordance with the requirements of 6.8.2.2.3 of ADR" at the end.

In the definition of "*Overpack*", replace "by a single consignor" with "(by a single consignor in the case of Class 7)".

In sub-paragraph (a), replace "plastic" with "plastics".

Chapter 1.3

1.3.2.4 Replace "the radiation hazards involved and" with "radiation protection including".

Replace "to ensure restriction of their exposure and that" with "to restrict their occupational exposure and the exposure".

Chapter 1.4

1.4.3.3 Add a new subparagraph (k) to read as follows:

"he shall, when filling vehicles, wagons or containers with dangerous goods in bulk, ascertain that the relevant provisions of Chapter 7.3 of RID or ADR are complied with."

Chapter 1.5

1.5.1.1 In the first sentence, delete "for the purpose of adapting the requirements of the annexed Regulations to technological and industrial developments,".

Renumber following sub-paragraphs accordingly.

Chapter 1.6

1.6.1.1 Replace "2005" with "2008" and "2004" with "2007".

1.6.1.2 Amend to read as follows:

"1.6.1.2 (a) The danger labels and placards which until 31 December 2004 conformed to models No. 7A, 7B, 7C, 7D or 7E prescribed up to that date may be used until 31 December 2010."

Insert a new 1.6.1.2 (b) to read as follows:

"1.6.1.2 (b) The danger labels and placards which until 31 December 2006 conformed to model No. 5.2 prescribed up to that date may be used until 31 December 2010."

Add a new transitional measure 1.6.3.11 to read as follows:

"1.6.1.11 Type approvals for drums, jerricans and composite packagings made of high or medium molecular mass polyethylene, and for high molecular mass polyethylene IBCs, issued

before 1 July 2007 in accordance with the requirements of 6.1.6.1 (a) of ADR in force up to 31 December 2006, but which are not in accordance with the requirements of 6.1.6.1 (a) of ADR applicable as from 1 January 2007, continue to be valid."

Chapter 1.7

1.7.2.3 Insert the following new first sentence "Doses to persons shall be below the relevant dose limits."

At the end of the ~~second current first~~ sentence (new second sentence), replace: "and doses to persons shall be below the relevant dose limits", with "within the restriction that the doses to individuals be subject to dose constraints."

1.7.2.4 In the French version, replace "dose effective" with "dose efficace".

Delete indent (a) and renumber (b) and (c) as (a) and (b).

1.7.4.1 Insert "of radioactive material" after "which consignments" and "applicable" after "satisfy all the".

Delete "applicable to radioactive material" at the end.

Chapter 1.8

1.8.3.10 Add a new second sentence to read as follows: "The examining body shall not be a training provider."

Amend sub-section 1.8.3.12 to read as follows:

"1.8.3.12 *Examinations*

1.8.3.12.1 The examination shall consist of a written test which may be supplemented by an oral examination.

1.8.3.12.2 The use in the written test of documentation other than international or national regulations is not permitted.

1.8.3.12.3 Electronic media may be used only if provided by the examining body. There shall be no means of a candidate introducing further data to the electronic media provided; the candidate may only answer to the questions posed.

1.8.3.12.4 Second sentence of current 1.8.3.12 followed by sub-paragraphs (a) and (b) with the following amendment: At the beginning of this second sentence, replace "written examination" by "written test" .".

Consequential amendment:

In 1.8.3.16.2, replace "1.8.3.12 (b)" with "1.8.3.12.4 (b)" at the end.

1.8.5.1 Amend to read as follows:

"If a serious accident or incident takes place during loading, filling, carriage or unloading of dangerous goods on the territory of a Contracting Party, the loader, filler, carrier or consignee, respectively, shall ascertain that a report [conforming to the model prescribed in 1.8.5.4] is made to the competent authority of the Contracting Party concerned."

Chapter 1.10

Table 1.10.5 For Class 6.2 insert "(UN Nos. 2814 and 2900)" after "Category A".
Delete NOTE.
For Class 6.2, in Column "Bulk", replace letter "a" by "0".

1.10.6 Add a new paragraph after Table 1.10.5 to read as follows:

"1.10.6 For radioactive material, the provisions of this Chapter are 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."

PART 2

Chapter 2.2

2.2.1.1.7 Current 2.2.1.1.7 becomes new 2.2.1.1.8. Insert the following new paragraphs:

"2.2.1.1.7 *Assignment of fireworks to ~~hazard~~ divisions*

2.2.1.1.7.1 Fireworks shall normally be assigned to ~~hazard~~ divisions 1.1, 1.2, 1.3, and 1.4 on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria. However, since the range of such articles is very extensive and the availability of test facilities may be limited, assignment to ~~hazard~~ divisions may also be made in accordance with the procedure in 2.2.1.1.7.2.

2.2.1.1.7.2 Assignment of fireworks to UN Nos. 0333, 0334, 0335 or 0336 may be made on the basis of analogy, without the need for Test Series 6 testing, in accordance with the default fireworks classification table in 2.2.1.1.7.5. Such assignment shall be made with the agreement of the competent authority. Items not specified in the table shall be classified on the basis of test data derived from Test Series 6.

NOTE 1: *The addition of other types of fireworks to column 1 of the table in 2.2.1.1.7.5 shall only be made on the basis of full test data submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for consideration.*

NOTE 2: *Test data derived by competent authorities which validates, or contradicts the assignment of ~~Hazard Division to firework types and/or sub divisions by the specification fireworks specified~~ in column 4 of the table in 2.2.1.1.7.5 to ~~hazard~~ divisions in column 5 should be submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for information.*

2.2.1.1.7.3 Where fireworks of more than one ~~hazard~~ division are packed in the same package they shall be classified on the basis of the highest ~~hazard~~ division unless test data derived from Test Series 6 indicate otherwise.

2.2.1.1.7.4 The classification shown in the table in 2.2.1.1.7.5 applies only for articles packed in fibreboard boxes (4G).

2.2.1.1.7.5 *Default fireworks classification table*¹

NOTE 1: *References to percentages in the table, unless otherwise stated, are to the mass of all pyrotechnic composition (e.g. rocket motors, lifting charge, bursting charge and effect charge).*

NOTE 2: *"Flash composition" in this table refers to pyrotechnic compositions containing an oxidizing substance, or black powder, and a metal powder fuel that are used to produce an aural report effect or used as a bursting charge in fireworks devices.*

NOTE 3: *Dimensions in mm refer to:*

- *for spherical and peanut shells the diameter of the sphere of the shell;*
- *for cylinder shells the length of the shell;*
- *for a shell in mortar, Roman candle, shot tube firework or mine the inside diameter of the tube comprising or containing the firework;*
- *for a bag mine or cylinder mine, the inside diameter of the mortar intended to contain the mine.*

¹ *This table contains a list of firework classifications which may be used in the absence of Test Series 6 data (see 2.2.1.1.7.2).*

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical	Spherical display shell: aerial shell, colour shell, dye shell, multi-break shell, multi-effect shell, nautical shell, parachute shell, smoke shell, star shell; report shell: maroon, salute, sound shell, thunderclap, aerial shell kit	Device with or without propellant charge, with delay fuse and bursting charge, pyrotechnic unit(s) or loose pyrotechnic composition and designed to be projected from a mortar	All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: < 180 mm with $> 25\%$ flash composition, as loose powder and/ or report effects	1.1G
			Colour shell: < 180 mm with $\leq 25\%$ flash composition, as loose powder and/ or report effects	1.3G
			Colour shell: ≤ 50 mm, or ≤ 60 g pyrotechnic composition, with $\leq 2\%$ flash composition as loose powder and/ or report effects	1.4G
	Peanut shell	Device with two or more spherical aerial shells in a common wrapper propelled by the same propellant charge with separate external delay fuses	The most hazardous spherical aerial shell determines the classification	
	Preloaded mortar, shell in mortar	Assembly comprising a spherical or cylindrical shell inside a mortar from which the shell is designed to be projected	All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: > 50 mm and < 180 mm	1.2G
			Colour shell: ≤ 50 mm, or < 60 g pyrotechnic composition, with $\leq 25\%$ flash composition as loose powder and/ or report effects	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical (cont'd)	Shell of shells (spherical) (Reference to percentages for shell of shells are to the gross mass of the fireworks article)	Device without propellant charge, with delay fuse and bursting charge, containing report shells and inert materials and designed to be projected from a mortar	> 120 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing report shells ≤ 25g flash composition per report unit, with ≤ 33% flash composition and ≥ 60% inert materials and designed to be projected from a mortar	≤ 120 mm	1.3G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells and/or pyrotechnic units and designed to be projected from a mortar	> 300 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells ≤ 70mm and/or pyrotechnic units, with ≤ 25% flash composition and ≤ 60% pyrotechnic composition and designed to be projected from a mortar	> 200 mm and ≤ 300 mm	1.3G
		Device with propellant charge, with delay fuse and bursting charge, containing colour shells ≤ 70 mm and/or pyrotechnic units, with ≤ 25% flash composition and ≤ 60% pyrotechnic composition and designed to be projected from a mortar	≤ 200 mm	1.3G
Battery/ combination	Barrage, bombardos, cakes, finale box, flowerbed, hybrid, multiple tubes, shell cakes, banger batteries, flash banger batteries	Assembly including several elements either containing the same type or several types each corresponding to one of the types of fireworks listed in this table, with one or two points of ignition	The most hazardous firework type determines the classification	

Type	Includes: / Synonym:	Definition	Specification	Classification
Roman candle	Exhibition candle, candle, bombettes	Tube containing a series of pyrotechnic units consisting of alternate pyrotechnic composition, propellant charge, and transmitting fuse	≥ 50 mm inner diameter, containing flash composition, or <50 mm with >25% flash composition	1.1G
			≥ 50 mm inner diameter, containing no flash composition	1.2G
			< 50 mm inner diameter and ≤ 25% flash composition	1.3G
			≤ 30 mm inner diameter, each pyrotechnic unit ≤ 25 g and ≤ 5% flash composition	1.4G
Shot tube	Single shot Roman candle, small preloaded mortar	Tube containing a pyrotechnic unit consisting of pyrotechnic composition, propellant charge with or without transmitting fuse	≤ 30 mm inner diameter and pyrotechnic unit > 25 g, or > 5% and ≤ 25% flash composition	1.3G
			≤ 30 mm inner diameter, pyrotechnic unit ≤ 25 g and ≤ 5% flash composition	1.4G
Rocket	Avalanche rocket, signal rocket, whistling rocket, bottle rocket, sky rocket, missile type rocket, table rocket	Tube containing pyrotechnic composition and/or pyrotechnic units, equipped with stick(s) or other means for stabilization of flight, and designed to be propelled into the air	Flash composition effects only	1.1G
			Flash composition > 25% of the pyrotechnic composition	1.1G
			> 20 g pyrotechnic composition and flash composition ≤ 25 %	1.3G
			≤ 20 g pyrotechnic composition, black powder bursting charge and ≤ 0.13 g flash composition per report and ≤ 1 g in total	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Mine	Pot-a-feu, ground mine, bag mine, cylinder mine	<p>Tube containing propellant charge and pyrotechnic units and designed to be placed on the ground or to be fixed in the ground. The principal effect is ejection of all the pyrotechnic units in a single burst producing a widely dispersed visual and/or aural effect in the air or:</p> <p>Cloth or paper bag or cloth or paper cylinder containing propellant charge and pyrotechnic units, designed to be placed in a mortar and to function as a mine</p>	> 25% flash composition, as loose powder and/ or report effects	1.1G
			≥ 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.1G
			< 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.3G
			≤ 150 g pyrotechnic composition, containing ≤ 5% flash composition as loose powder and/ or report effects. Each pyrotechnic unit ≤ 25 g, each report effect < 2g ; each whistle, if any, ≤ 3 g	1.4G
Fountain	Volcanos, gerbs, showers, lances, Bengal fire, flitter sparkle, cylindrical fountains, cone fountains, illuminating torch	Non-metallic case containing pressed or consolidated pyrotechnic composition producing sparks and flame	≥ 1 kg pyrotechnic composition	1.3G
			< 1 kg pyrotechnic composition	1.4G
Sparkler	Handheld sparklers, non-handheld sparklers, wire sparklers	Rigid wire partially coated (along one end) with slow burning pyrotechnic composition with or without an ignition tip	Perchlorate based sparklers: > 5 g per item or > 10 items per pack	1.3G
			Perchlorate based sparklers: ≤ 5 g per item and ≤ 10 items per pack; Nitrate based sparklers: ≤ 30 g per item	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Bengal stick	Dipped stick	Non-metallic stick partially coated (along one end) with slow-burning pyrotechnic composition and designed to be held in the hand	Perchlorate based items: > 5 g per item or > 10 items per pack	1.3 G
			Perchlorate based items: ≤ 5 g per item and ≤ 10 items per pack; nitrate based items: ≤ 30 g per item	1.4G
Low hazard fireworks and novelties	Table bombs, throwdowns, crackling granules, smokes, fog, snakes, glow worm, serpents, snaps, party poppers	Device designed to produce very limited visible and/or audible effect which contains small amounts of pyrotechnic and/ or explosive composition.	Throwdowns and snaps may contain up to 1.6 mg of silver fulminate; snaps and party poppers may contain up to 16 mg of potassium chlorate/ red phosphorous mixture; other articles may contain up to 5 g of pyrotechnic composition, but no flash composition	1.4G
Spinner	Aerial spinner, helicopter, chaser, ground spinner	Non-metallic tube or tubes containing gas- or spark-producing pyrotechnic composition, with or without noise producing composition, with or without aerofoils attached	Pyrotechnic composition per item > 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g	1.3G
			Pyrotechnic composition per item ≤ 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Wheels	Catherine wheels, Saxon	Assembly including drivers containing pyrotechnic composition and provided with a means of attaching it to a support so that it can rotate	≥ 1 kg total pyrotechnic composition, no report effect, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G
			< 1 kg total pyrotechnic composition, no report effect, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.4G
Aerial wheel	Flying Saxon, UFO's, rising crown	Tubes containing propellant charges and sparks-flame- and/ or noise producing pyrotechnic compositions, the tubes being fixed to a supporting ring	> 200 g total pyrotechnic composition or > 60 g pyrotechnic composition per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G
			≤ 200 g total pyrotechnic composition and ≤ 60 g pyrotechnic composition per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.4G
Selection pack	Display selection box, display selection pack, garden selection box, indoor selection box; assortment	A pack of more than one type each corresponding to one of the types of fireworks listed in this table	The most hazardous firework type determines the classification	

Type	Includes: / Synonym:	Definition	Specification	Classification
Firecracker	Celebration cracker, celebration roll, string cracker	Assembly of tubes (paper or cardboard) linked by a pyrotechnic fuse, each tube intended to produce an aural effect	Each tube \leq 140 mg of flash composition or \leq 1 g black powder	1.4G
Banger	Salute, flash banger, lady cracker	Non-metallic tube containing report composition intended to produce an aural effect	$>$ 2 g flash composition per item	1.1G
			\leq 2 g flash composition per item and \leq 10 g per inner packaging	1.3G
			\leq 1 g flash composition per item and \leq 10 g per inner packaging or \leq 10 g black powder per item	1.4G

Consequential amendment:

In 2.2.1.1.3, replace "2.2.1.1.7" with "2.2.1.1.8".

2.2.2.1.5 Under the heading "Oxidizing gases", replace "see ISO 10156:1996" with "see ISO 10156:1996 and ISO 10156-2:2005".

2.2.3.1.1 Replace "61 °C" with "60 °C" (three times).

Consequential amendments:

The same change applies to 1.6.7.2.1.2 (UN 3175), Table C (Description of column (20), Additional requirement 24 and UN Nos. 1999, 3175 and 3256 and Identification Nos. 9001 and 9003), 2.2.3.1.1 (5 times), 2.2.3.1.2 (3 times), 2.2.3.1.3, 2.2.3.3 (twice), 2.2.61.3 (Note k), 2.2.9.1.13, 2.2.9.1.14, 2.2.9.1.14 (Identification No. 9003), 2.3.3.1.7, 2.3.3.1.8, Figure 2.3.6, Table A and Index (UN Nos. 1202, 3175, 3256 and Identification Nos. 9001 and 9003), 5.3.2.3.2 (13 times), 7.2.3.42.4, 9.3.2.42.4, 9.3.3.42.4.

2.2.41.1.9 Amend (b) to read as follows:

"(b) they are oxidizing substances according to the classification procedure for Class 5.1 (see 2.2.51.1) except that mixtures of oxidizing substances which contain 5.0% or more of combustible organic substances shall be subjected to the classification procedure defined in Note 2;"

Add a new NOTE 2 to read as follows and renumber the following Notes accordingly:

"NOTE 2: *Mixtures of oxidizing substances meeting the criteria of Class 5.1 which contain 5.0% or more of combustible organic substances, which do not meet the criteria mentioned in (a), (c), (d) or (e) above, shall be subjected to the self-reactive substance classification procedure.*

A mixture showing the properties of a self-reactive substance, type B to F, shall be classified as a self-reactive substance of Class 4.1.

A mixture showing the properties of a self-reactive substance, type G, according to the principle given in 20.4.3 (g) of Part II of the Manual of Tests and Criteria shall be considered for classification as a substance of Class 5.1 (see 2.2.51.1)."

2.2.41.4 Add the following new entry to the table:

SELF-REACTIVE SUBSTANCE	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Remarks
ACETONE-PYROGALLOL COPOLYMER 2-DIAZO-1-NAPHTHOL-5-SULPHONATE	100	OP8			3228	

2.2.61.1.7 Amend the table to read as follows:

Packing group	Oral toxicity LD ₅₀ (mg/kg)	Dermal toxicity LD ₅₀ (mg/kg)	Inhalation toxicity by dusts and mists LC ₅₀ (mg/l)
I	≤ 5.0	≤ 50	≤ 0.2
II	> 5.0 and ≤ 50	> 50 and ≤ 200	> 0.2 and ≤ 2.0
III ^a	> 50 and ≤ 300	> 200 and ≤ 1000	> 2.0 and ≤ 4.0

2.2.62.1.3 Amend the definition of *cultures* to read as follows:

"*Cultures* are the result of a process by which pathogens are intentionally propagated. This definition does not include human or animal patient specimens as defined in this paragraph;"

Add a new definition to read as follows:

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

2.2.62.1.4 Insert ", UN 3291" after "UN 2900".

2.2.62.1.4.1 In the first sentence, replace "disease to humans or animals" with "disease in otherwise healthy humans or animals".

In the Table with the indicative examples:

Under UN 2814:

- Replace "Hantaviruses causing hantavirus pulmonary syndrome" with "Hantavirus causing haemorrhagic fever with renal syndrome".

Consequential amendments:

Replace "hemorrhagic" with "haemorrhagic" in the table (twice).

- Add "(cultures only)" after "Rabies virus", "Rift Valley fever virus" and "Venezuelan equine encephalitis virus".

Under UN 2900:

- Delete "African horse sickness virus" and "Bluetongue virus";
- Insert "Velogenic" before "Newcastle disease virus";
- Add "(cultures only)" after each microorganism in the list.

In the table "Indicative examples of infectious substances", insert an asterisk * after the following entries:

- *Escherichia coli* (verotoxigenic) (cultures only);
- *Mycobacterium tuberculosis* (cultures only);
- *Shigella dysenteriae* type I (cultures only).

Insert a new Note after the table to read as follows:

"* Nevertheless, when the cultures are intended for diagnostic or clinical purposes, they may be classified as infectious substances of Category B."

- 2.2.62.1.4.2 Delete "except that cultures, as defined in 2.2.62.1.3, shall be assigned to UN 2814 or UN 2900 as appropriate".

In the Note amend the proper shipping name to read: "*BIOLOGICAL SUBSTANCE, CATEGORY B*".

- 2.2.62.1.5 Renumber current 2.2.62.1.5 as 2.2.62.1.5.1 and add a new 2.2.62.1.5 to read as follows:

"2.2.62.1.5 *Exemptions*".

Insert the following new sub-paragraphs:

- "2.2.62.1.5.2 Substances containing microorganisms which are non-pathogenic to humans or animals are not subject to ADN unless they meet the criteria for inclusion in another class.
- 2.2.62.1.5.3 Substances in a form that any present pathogens have been neutralized or inactivated such that they no longer pose a health risk are not subject to ADN unless they meet the criteria for inclusion in another class.
- 2.2.62.1.5.4 Substances where the concentration of pathogens is at a level naturally encountered (including foodstuff and water samples) and which are not considered to pose a significant risk of infection are not subject to ADN unless they meet the criteria for inclusion in another class."
- 2.2.62.1.5.5 Text of current 2.2.62.1.6. Amend the beginning of the paragraph to read as follows: "Dried blood spots, collected by applying a drop of blood onto absorbent material, or faecal occult blood screening tests and blood or blood components...".
- 2.2.62.1.5.6: Add a new paragraph to read as follows:
- "2.2.62.1.5.6 Human or animal specimens for which there is minimal likelihood that pathogens are present are not subject to ADN if the specimen is carried 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 is deemed to comply with the above requirements if it meets the following conditions:

- (a) The packaging consists 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 is to be placed between the primary receptacle(s) and the secondary packaging so that, during carriage, 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 are either individually wrapped or separated to prevent contact between them.

***NOTE:** 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 carried 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 for 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.*

2.2.62.1.6 and

2.2.62.1.7 Replace current text with "(Reserved)".

2.2.62.1.11.1 Delete "or containing Category B infectious substances in cultures" in the first sentence and ", other than in cultures, " in the last sentence.

Add the following Note at the end:

***NOTE:** Medical or clinical wastes assigned to number 18 01 03 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is subject to special requirement in order to prevent infection) or 18 02 02 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is subject to special requirements in order to prevent infection) according to the*

list of wastes annexed to the Commission Decision 2000/532/EC⁵ as amended, shall be classified according to the provisions set out in this paragraph, based on the medical or veterinary diagnosis concerning the patient or the animal."

2.2.62.1.11.2 Existing NOTE becomes NOTE 1. Add a new NOTE 2 to read as follows:

"NOTE 2: Notwithstanding the classification criteria set out above, medical or clinical wastes assigned to number 18 01 04 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) or 18 02 03 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) according to the list of wastes annexed to the Commission Decision 2000/532/EC⁵ as amended, are not subject to the provisions of ADN."

2.2.62.1.12 Add the following new title:

"2.2.62.1.12 Infected animals"

2.2.62.1.12.1 Current 2.2.62.1.8 becomes new 2.2.62.1.12.1. In new 2.2.62.1.12.1 add the following new first sentence: "Unless an infectious substance cannot be consigned by any other means, live animals shall not be used to consign such a substance."

Consequential amendments:

In 2.2.62.1.8 replace current text with "(Reserved)".

In 2.2.62.2 replace "2.2.62.1.8" with "2.2.62.1.12.1".

2.2.62.1.12.2 Add a new 2.2.62.1.12.2 to read as follows:

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

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

2.2.7.1.2 (e) Replace "the values specified in 2.2.7.7.2" with "the values specified in 2.2.7.7.2.1 (b), or calculated in accordance with 2.2.7.7.2.2 to 2.2.7.7.2.6".

2.2.7.2 In the definition of "*Multilateral approval*", amend the first sentence to read as follows:

Multilateral approval means approval by the relevant competent authority of the country of origin of the design or shipment, as applicable and also, where the consignment is to

⁵ Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (Official Journal of the European Communities No. L 226 of 6.9.2000, page 3).

be carried through or into any other country, approval by the competent authority of that country."

In the definition of "*Specific activity of a radionuclide*", delete: "or volume".

In the definition of "*Natural Uranium*" (under "Uranium-natural, depleted, enriched") replace "chemically separated uranium" with "uranium (which may be chemically separated)".

2.2.7.3.2 (a)(ii) Amend to read:

"natural uranium, depleted uranium, natural thorium or their compounds or mixtures, providing they are unirradiated and in solid or liquid form;"

2.2.7.4.6 (a) Amend to read:

"(a) The tests prescribed in 2.2.7.4.5 (a) and (b) provided the mass of the special form radioactive material:

(i) is less than 200 g and they are alternatively subjected to the Class 4 impact test prescribed in ISO 2919:1990~~9~~ "Radiation protection - Sealed radioactive sources - General requirements and classification"; or

(ii) is less than 500 g and they are alternatively subjected to the Class 5 impact test prescribed in ISO 2919:1990~~9~~ "Radiation protection - Sealed Radioactive Sources - General requirements and Classification"; and".

2.2.7.4.6 (b) Replace "ISO 2919:1990" with "ISO 2919:1999".

2.2.7.7.1.7 Under the title, Aamend the beginning of the first sentence to read:

"Unless excepted by 6.4.11.2 of ADR, packages containing..."

2.2.7.7.1.8 Under the title, Aamend to read as follows:

"Packages containing uranium hexafluoride shall not contain:

- (a) a mass of uranium hexafluoride different from that authorized for the package design;
- (b) a mass of uranium hexafluoride greater than a value that would lead to an ullage smaller than 5 % at the maximum temperature of the package as specified for the plant systems where the package shall be used; or
- (c) uranium hexafluoride other than in solid form or at an internal pressure above atmospheric pressure when presented for carriage."

2.2.7.7.2.1 In the table, amend the value in the last column for Te-121m to read " 1×10^6 " instead of " 1×10^5 ".

Amend (a) and (b) after the table as follows:

- "(a) A_1 and/or A_2 values for these parent radionuclides include contributions from daughter radionuclides with half-lives less than 10 days, as listed in the following:

Mg-28	Al-28
Ar-42	K-42
Ca-47	Sc-47
Ti-44	Sc-44
Fe-52	Mn-52m
Fe-60	Co-60m
Zn-69m	Zn-69
Ge-68	Ga-68
Rb-83	Kr-83m
Sr-82	Rb-82
Sr-90	Y-90
Sr-91	Y-91m
Sr-92	Y-92
Y-87	Sr-87m
Zr-95	Nb-95m
Zr-97	Nb-97m, Nb-97
Mo-99	Tc-99m
Tc-95m	Tc-95
Tc-96m	Tc-96
Ru-103	Rh-103m
Ru-106	Rh-106
Pd-103	Rh-103m
Ag-108m	Ag-108
Ag-110m	Ag-110
Cd-115	In-115m
In-114m	In-114
Sn-113	In-113m
Sn-121m	Sn-121
Sn-126	Sb-126m
Te-118	Sb-118
Te-127m	Te-127
Te-129m	Te-129
Te-131m	Te-131
Te-132	I-132
I-135	Xe-135m
Xe-122	I-122
Cs-137	Ba-137m
Ba-131	Cs-131
Ba-140	La-140
Ce-144	Pr-144m, Pr-144
Pm-148m	Pm-148
Gd-146	Eu-146
Dy-166	Ho-166
Hf-172	Lu-172
W-178	Ta-178
W-188	Re-188
Re-189	Os-189m
Os-194	Ir-194

Ir-189	Os-189m
Pt-188	Ir-188
Hg-194	Au-194
Hg-195m	Hg-195
Pb-210	Bi-210
Pb-212	Bi-212, Tl-208, Po-212
Bi-210m	Tl-206
Bi-212	Tl-208, Po-212
At-211	Po-211
Rn-222	Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Po-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Ra-225	Ac-225, Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ra-226	Rn-222, Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-228	Ac-228
Ac-225	Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ac-227	Fr-223
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Th-234	Pa-234m, Pa-234
Pa-230	Ac-226, Th-226, Fr-222, Ra-222, Rn-218, Po-214
U-230	Th-226, Ra-222, Rn-218, Po-214
U-235	Th-231
Pu-241	U-237
Pu-244	U-240, Np-240m
Am-242m	Am-242, Np-238
Am-243	Np-239
Cm-247	Pu-243
Bk-249	Am-245
Cf-253	Cm-249"

- (b) Insert "Ag-108m Ag-108" after: "Ru-106 Rh-106".

Delete the entries for: "Ce-134, La-134"; "Rn-220, Po-216"; "Th-226, Ra-222, Rn-218, Po-214"; and "U-240, Np-240m".

2.2.7.7.2.2 In the first sentence, delete "competent authority approval, or for international carriage," and amend the beginning of the second sentence to read as follows: "It is permissible to use an A_2 value calculated using a dose coefficient for the appropriate lung absorption type as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal...".

In the table:

- Amend the second entry in the first column to read: "Alpha emitting nuclides but no neutron emitters are known to be present";
- Amend the third entry in the first column to read: "Neutron emitting nuclides are known to be present or no relevant data are available".

2.2.7.8.4 (d) and (e) Add at the end: "except under the provisions of 2.2.7.8.5".

- 2.2.7.8.5 Add a new 2.2.7.8.5 to read:
- "2.2.7.8.5 In case of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, assignment to the category as required in 2.2.7.8.4 shall be in accordance with the certificate of the country of origin of design."
- 2.2.7.9.7 Insert "Chapter 1.10" in the list of provisions which do not apply.
- 2.2.8.1.6 Amend the beginning of the first sentence of the second paragraph to read as follows: "Liquids, and solids which may become liquid during carriage, which are judged not to cause..." (*remainder of the sentence unchanged*).

PART 3

Chapter 3.2

3.2.1

Table A

In the explanatory note for column (5), delete the second indent and replace “;” with “.”.

Delete the entries for the following UN Nos.: 1014, 1015, 1366, 1370, 1979, 1980, 2005, 2445, 2600, 2662, 3051, 3052, 3053, 3076, 3433, 3461.

Consequential amendments:

Delete the entries accordingly in 2.2.42.3.

~~Delete the entries for the following UN Nos.: 1014, 1015, 1979, 1980, 1981 and 2600.~~

For UN Nos. 1170, 1987 and 1993 insert "330" in column (6).

~~For UN Nos. 2758, 2760, 2762, 2764, 2772, 2776, 2778, 2780, 2782, 2784, 2787, 3021, 3024 and 3346, add "61" in column (6).~~

For UN Nos. 2912, 2915, 3321 and 3322, add "325" in column (6).

For UN Nos. 3175 et 3256, replace "61 °C" with "60 °C" in column (2).

For UN Nos. 3324, 3325 and 3327, add "326" in column (6).

For UN Nos. 3364, 3365, 3366, 3367, 3368 and 3370, replace "wetted" with "WETTED" in column (2).

UN No 1013 Insert "653" in column (6).

UN 1143 Amend the name in column (2) to read as follows: "CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED" and add "324" in column (6).

UN 1202 In column (2) of the second entry, replace "EN 590:1993" with "EN 590:2004" (twice) and replace "61 °C" with "60 °C" for the first and second entries.

UN 1463 Insert respectively "+6.1" before "+8" in column (5).

UN 1740 Amend the name in column (2) to read: "HYDROGEN DIFLUORIDES, SOLID, N.O.S."
Consequential amendment:
In 2.2.8.3 under C2, amend the name of "1740" accordingly.

UN 1779 Amend the name in column (2), to read as follows: "FORMIC ACID with more than 85% acid by mass".
Insert "+3" after "8" in column (5).
Replace "C3" with "CF1" in column (3b).
Insert "EX, A" in column (9).

UN 1848 Amend the name in column (2) to read as follows: "PROPIONIC ACID with not less than 10% and less than 90% acid by mass".

UN 1950 Add "327" in column (6).

UN 1956 Insert "292" in column (6).

UN 2662 Delete this entry.

UN 2823 Amend the name in column (2) to read: "CROTONIC ACID, SOLID".

UN 2880 For packing group II: insert "322" in column (6);
For packing group III: replace "316" with "223", "313" and "314";

UN 3245 Amend the proper shipping name in column (2) to read as follows:
"GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS".
Consequential amendment:
In 2.2.9.3 under M8, amend the name of "3245" accordingly.

UN 3373 Amend the proper shipping name in column (2) to read:
"BIOLOGICAL SUBSTANCE, CATEGORY B" and add "6.2" in column (5).
Consequential amendments:
In 2.2.62.3 under I4, amend the name of "3373" accordingly. In 2.2.62.1.3 and 2.2.62.3, amend the title of I4 to read as follows: "Biological substances".

~~UN 3435 Delete this entry.~~

Modify also Table A as follows:

UN No.	Column	Modification
0015, 0016 and 0303	(6)	Delete "204"
1169 (PG II/III), 1170 (PG II/III), 1197 (PG II/III), 1219 (PG II/III), 1293 (PG II/III), 1987 (PG II/III), 1993 (PG II/III), 3077 (PG III), 3082 (PG III), 3272 (PG II/III)	(6)	Insert "601"
1391	(2) (6)	Add, at the end, "having a flash-point above 60 °C " Delete "282"
1649	(2) (6)	Add, at the end, "having a flash-point above 60 °C " Delete "162"
2030	(2) (6)	Add, at the end, "having a flash-point above 60 °C " Delete "298"
2814, 2900, 3245 and 3291	(6)	Delete "634"
1133, 1139, 1169, 1197, 1210, 1263, 1266, 1267, 1268, 1286, 1287, 1308, 1863, 1866, 1989, 1993, 2059 and 3295	(2)	Delete "(vapour pressure at 50° C more than 175 kPa)" for each entry that is assigned "640A" in column (6)
	(6)	<u>Delete "640A" for each entry that is assigned "640A" in column (6)</u>
1133, 1139, 1169, 1197, 1210, 1263, 1266, 1267, 1268, 1286, 1287, 1308, 1863, 1866, 1989, 1993, 2059 and 3295	Delete the entries for which "640B" is assigned in column (6)	
1133, 1139, 1169, 1197, 1210, 1224, 1263, 1266, 1267, 1268, 1286, 1287, 1306, 1308, 1863, 1866, 1987, 1989, 1993, 1999, 3295 and 3336	(2)	Delete "but not more than 175 kPa" for each entry that is assigned "640C" in column (6)
1133, 1139, 1169, 1197, 1210, 1263, 1266, 1286, 1287, 1306, 1866, 1993 and 1999	(2)	For each entry that is assigned "640F" in column (6) replace "vapour pressure at 50° C more than 175 kPa" with "boiling point not more than 35° C"
	(2)	For each entry that is assigned "640G" in column (6) replace "but not more than 175 kPa" with "boiling point of more than 35° C"
<u>1267, 1268 and 3295</u>	<u>Delete the entries for which "640P" is assigned in column (6)</u>	

UN No.	Column	Modification
<u>1267, 1268 and 3295</u>	<u>(6)</u>	<u>For each entry that is assigned "640A" in column (6), add "649"</u>

Replace the code "LQ19" with "LQ7" wherever it is listed in column (7), except in the case of UN 2809.

(applies to UN Nos. 1556, 1583, 1591, 1593, 1597, 1599, 1602, 1656, 1658, 1686, 1710, 1718, 1719, 1731, 1755, 1757, 1760, 1761, 1783, 1787, 1788, 1789, 1791, 1793, 1805, 1814, 1819, 1824, 1835, 1840, 1848, 1851, 1887, 1888, 1897, 1902, 1903, 1908, 1935, 1938, 2021, 2024, 2030, 2205, 2206, 2209, 2225, 2235, 2269, 2272, 2273, 2274, 2279, 2289, 2290, 2294, 2299, 2300, 2311, 2320, 2321, 2326, 2327, 2328, 2431, 2432, 2433, 2470, 2491, 2496, 2501, 2504, 2511, 2515, 2518, 2525, 2533, 2564, 2565, 2580, 2581, 2582, 2586, 2609, 2656, 2661, 2664, 2667, 2669, 2672, 2677, 2679, 2681, 2688, 2689, 2693, 2730, 2732, 2735, 2739, 2747, 2753, 2785, 2788, 2790, 2801, 2810, 2815, 2817, 2818, 2819, 2820, 2821, 2829, 2831, 2837, 2849, 2872, 2873, 2874, 2902, 2903, 2904, 2922, 2937, 2941, 2942, 2946, 2991, 2992, 2993, 2994, 2995, 2996, 2997, 2998, 3005, 3006, 3009, 3010, 3011, 3012, 3013, 3014, 3015, 3016, 3017, 3018, 3019, 3020, 3025, 3026, 3055, 3066, 3140, 3141, 3142, 3144, 3145, 3172, 3264, 3265, 3266, 3267, 3276, 3278, 3280, 3281, 3282, 3287, 3293, 3320, 3347, 3348, 3351, 3352, 3410, 3411, 3413, 3414, 3415, 3418, 3421, 3422, 3424, 3426, 3429, 3434, 3435 and 3440)

Add the following new entries:

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.2G		1 +8		LQ0		[PP]		[LO01]	[HA01, HA03, HA04, HA05, HA06]	[3]	
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.3G		1 +8		LQ0		[PP]		[LO01]	[HA01, HA03, HA04, HA05, HA06]	[3]	
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.4G		1.4 +8		LQ0		[PP]		[LO01]	[HA01, HA03, HA04, HA05, HA06]	[1]	
1391	ALKALI METAL DISPERSION OR ALKALINE EARTH METAL DISPERSION having a flash-point of not more than 60 °C	4.3	WF1	I	4.3 +3	182 183 274 506	LQ0		[PP, EX, A]	[VE01]		[HA08]	[0]	
1649	MOTOR FUEL ANTI-KNOCK MIXTURE having a flash-point of not more than 60 °C	6.1	TF1	I	6.1 +3		LQ0		[PP, EP, EX, TOX, A]	[VE01] _[VE02]			[2]	
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass having a flash-point of not more than 60 °C	8	CFT	I	8 +6.1 +3	530 [802]	LQ0		[PP, EP, EX, TOX, A]	[VE01] [VE02]			[2]	
2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS, in refrigerated liquid nitrogen	6.2	I1		6.2 +2.2	318 [802]	LQ0		[PP]				[0]	

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			(12)	(13)
2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS (animal carcasses only)	6.2	11		6.2	318 [802]	LQ0		[PP]					[0]	
2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only, in refrigerated liquid nitrogen	6.2	12		6.2 +2.2	318 [802]	LQ0		[PP]					[0]	
2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only (animal carcasses and wastes only)	6.2	12		6.2	318 [802]	LQ0		[PP]					[0]	
3245	GENETICALLY MODIFIED MICRO-ORGANISMS <u>or</u> <u>GENETICALLY MODIFIED ORGANISMS</u> , in refrigerated liquid nitrogen	9	M8		9 +2.2	219 637 [802]	LQ0		[PP]					[0]	
3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S., in refrigerated liquid nitrogen	6.2	I3	II	6.2 +2.2	565 [802]	LQ0		[PP]					0	
3412	FORMIC ACID with not less than 10% but not more than 85% acid by mass	8	C3	II	8		LQ22	[T]	[PP, EP]					[0]	
	FORMIC ACID with not less than 5% but less than 10% acid by mass	8	C3	III	8		LQ19	[T]	[PP, EP]					[0]	
3463	PROPIONIC ACID with not less than 90% acid by mass	8	CF1	II	8 +3		LQ22	[T]	[PP, EP, <u>EX, A</u>]					[0]	

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			(12)	(13)
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound)	3	FC	I	3 +8	163	LQ3		[PP, EX, A]	[VE01]				[1]	
		3	FC	II	3 +8	163	LQ4		[PP, EX, A]	[VE01]				[1]	
		3	FC	III	3 +8	163 223	LQ7		[PP, EX, A]	[VE01]				[0]	
3470	PAINT, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL CORROSIVE, FLAMMABLE (including paint thinning or reducing compound)	8	CF1	II	8 +3	163	LQ22		[PP, EP]	[VE01]				[0]	
3471	HYDROGEN DIFLUORIDE SOLUTION, N.O.S.	8	CT1	II	8 +6.1		LQ22		[PP, EP]					[0]	
		8	CT1	III	8 +6.1	223	LQ497		[PP, EP]					[0]	
3472	CROTONIC ACID, LIQUID	8	C3	III	8		LQ497		[PP, EP]					[0]	
3473	FUEL CELL CARTRIDGES containing flammable liquids	3	F1		3	328	LQ13								

Consequential amendment:

Insert the new entries accordingly in 2.2.3.3, ~~2.2.62.3~~ and 2.2.8.3.

Tables B and C of ADN

Amend Tables B and C in accordance with the amendments to Table A in Chapter 3.2.

Chapter 3.3

3.3.1 **SP162** ~~Delete.~~ Amend to read as follows: "(Deleted)".

SP181 Insert "(see 5.2.2.2.2)" after "model No.1".

SP204 ~~Replace current text with: "(Reserved)".~~ Amend to read as follows: "(Deleted)".

SP216 In the last sentence, insert "and articles" before "containing" and amend the end to read: "... free liquid in the packet or article."

SP247 Amend the end of the first paragraph to read:

"...may be carried in wooden barrels with a capacity of more than 250 litres and not more than 500 litres meeting the general requirements of 4.1.1 of ADR, as appropriate, on the following conditions:..."

Replace the word "casks" with "wooden barrels" (5 times).

SP251 In the first sentence, add "for example" before "for medical," add "or repair" before "purposes".

SP282 ~~Delete.~~ Amend to read as follows: "(Deleted)".

SP289 Amend as follows:

Replace "vehicles" and "vehicle" with "conveyances" and "conveyance", respectively.

SP292 Amend to read as follows:

"Mixtures containing not more than 23.5% oxygen by volume may be carried under this entry when no other oxidizing gases are present. A label conforming to model 5.1 is not required for any concentrations within this limit."

SP298 ~~Delete.~~ Amend to read as follows: "(Deleted)".

SP303 Amend to read as follows:

"Receptacles shall be assigned to the classification code of the gas or mixture of gases contained therein determined in accordance with the provisions of section 2.2.2."

SP309 Amend to read as follows:

"This entry applies to non sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use.

The mixture for emulsions typically has the following composition: 60-85% ammonium nitrate, 5-30% water, 2-8% fuel, 0.5-4% emulsifier agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.

The mixture for suspensions and gels typically has the following composition: 60-85% ammonium nitrate, 0-5% sodium or potassium perchlorate, 0-17% hexamine nitrate or monomethylamine nitrate, 5-30% water, 2-15% fuel, 0.5-4% thickening agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.

Substances shall satisfactorily pass Test Series 8 of the Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority."

SP316 Delete "or hydrated".

SP319 Delete the first sentence.

SP320 ~~Delete.~~ Amend to read as follows: "(Deleted)".

SP601 Amend special provision **601** to read as follows:

“601 Pharmaceutical products (medicines) ready for use, which are substances manufactured and packaged for retail sale or distribution for personal or household consumption are not subject to the requirements of ADN.”

SP617 In special provision 617, delete “and shall be specified in the transport document”.

SP634 ~~Replace current text with: "(Reserved)".~~ Amend to read as follows: "(Deleted)".

SP645 Add the following new sentence at the end:

"When assignment to a ~~hazard~~ division is made in accordance with the procedure in 2.2.1.1.7.2, the competent authority may require the default classification to be verified on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria, Part I, Section 16."

Add the following new special provisions:

"322 When carried in non-friable tablet form, these goods are assigned to packing group III.

323 (*Reserved*)

324 This substance needs to be stabilized when in concentrations of not more than 99%.

325 In the case of non-fissile or fissile excepted uranium hexafluoride, the material shall be classified under UN No 2978.

- 326** In the case of fissile uranium hexafluoride, the material shall be classified under UN No 2977.
- 327** Waste aerosols consigned in accordance with 5.4.1.1.3 may be carried under this entry for the purposes of reprocessing or disposal. They need not be protected against inadvertent discharge provided that measures to prevent dangerous build up of pressure and dangerous atmospheres are addressed. Waste aerosols, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P003 of ADR and special provision PP87 of ADR, or packing instruction LP02 of ADR and special packing provision L2 of ADR. Leaking or severely deformed aerosols shall be carried in salvage packagings provided appropriate measures are taken to ensure there is no dangerous build up of pressure.
- NOTE: For maritime carriage, waste aerosols shall not be carried in closed containers.*
- 328** This entry applies to fuel cell cartridges containing flammable liquids including methanol or methanol/water solutions. Fuel cell cartridge means a container that stores fuel for discharge into fuel cell powered equipment through a valve(s) that controls the discharge of fuel into such equipment and is free of electric charge generating components. The cartridge shall be designed and constructed to prevent the fuel from leaking during normal conditions of carriage.
This entry applies to fuel cell cartridge design types shown without their packaging to pass an internal pressure test at a pressure of 100 kPa (gauge).
- 329** *(Reserved)*
- 330** Alcohols containing petroleum products (e.g. gasoline) up to 5% shall be carried under the entry UN 1987 ALCOHOLS, N.O.S.
- 653** The carriage of this gas in cylinders with a maximum capacity of 0.5 litres, is not subject to the other provisions of ADN if the following conditions are met:
- The provisions for construction and testing of cylinders are observed;
 - The cylinders are contained in outer packagings which at least meet the requirements of Part 4 for combination packagings. The general provisions of packing of 4.1.1.1, 4.1.1.2 and 4.1.1.5 to 4.1.1.7 of ADR shall be observed;
 - The cylinders are not packed together with other dangerous goods;
 - The total gross mass of a package does not exceed 30 kg; and
 - Each package is clearly and durably marked with "UN 1013". This marking is displayed within a diamond-shaped area surrounded by a line that measures at least 100 mm by 100 mm."

Chapter 3.4

- 3.4.6 In the first column of table 3.4.6 replace "LQ4" and "LQ5" with "LQ4^c" and "LQ5^c" respectively.

In the table, for LQ19, replace respectively "3 l" and "1 l" with "5 kg".

Chapter 5.1

5.1.2.1 (a) Re-arrange the text to read as follows:

"An overpack shall be:

- (i) marked with the word "OVERPACK"; and
- (ii) marked with the UN number preceded by the letters "UN", and labelled as required for packages in 5.2.2, for each item of dangerous goods contained in the overpack,

unless the markings and the labels representative of all dangerous goods contained in the overpack are visible. If the same marking or the same label is required for different packages, it only needs to be applied once."

Insert the following new sentence at the end:

"The marking of the word "OVERPACK", which shall be readily visible and legible, shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise."

5.1.2.2 Delete the second sentence ("The "overpack" marking is an indication of compliance with this requirement.").

5.1.2.4 Add a new paragraph to read as follows:

"5.1.2.4 Each package bearing package orientation markings as prescribed in 5.2.1.9 and which is overpacked or placed in a large packaging shall be oriented in accordance with such markings."

5.1.5.1.2 (c) Amend to read:

"For each package requiring competent authority approval, it shall be ensured that all the requirements specified in the approval certificates have been satisfied;"

5.1.5.2.2 (c) Amend to read:

"The shipment of packages containing fissile materials if the sum of the criticality safety indexes of the packages in a single wagon/vehicle or container or in a single conveyance exceeds 50; and"

5.1.5.2.4 (d) In (v), insert "symbol" after "SI prefix".

Chapter 5.2

5.2.1.4 and 5.2.2.1.7 Add "and large packagings" after "capacity".

5.2.1.7.4 (c) Amend the end of the sentence to read as follows:

"...origin of design and either the name of the manufacturer or other identification of the packaging specified by the competent authority of the country of origin of design."

5.2.1.7.8 Add the following new paragraph:

"5.2.1.7.8 In case of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned, marking shall be in accordance with the certificate of the country of origin of the design."

5.2.1.8 Add a new 5.2.1.8 to read as follows:

"5.2.1.8 (Reserved)".

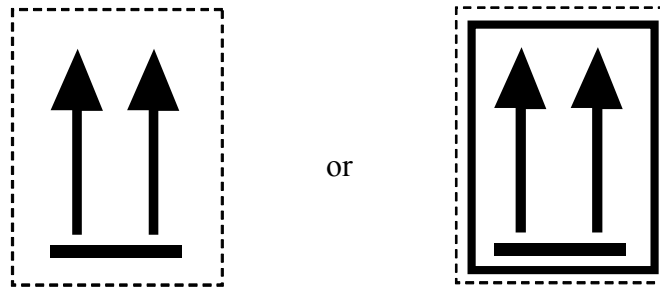
5.2.1.9 Add ~~the following new paragraphs~~ a new section to read as follows:

"5.2.1.9 Orientation arrows

5.2.1.9.1 Except as provided in 5.2.1.9.2:

- combination packagings having inner packagings containing liquids;
- single packagings fitted with vents; and
- cryogenic receptacles intended for the carriage of refrigerated liquefied gases,

shall be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1985. The orientation arrows shall appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.



Two black or red arrows on white or suitable contrasting background.
The rectangular border is optional.

- 5.2.1.9.2 Orientation arrows are not required on packages containing:
- (a) pressure receptacles except for closed cryogenic receptacles;
 - (b) dangerous goods in inner packagings of not more than 120 ml which are prepared with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
 - (c) Class 6.2 infectious substances in primary receptacles of not more than 50 ml;
 - (d) Class 7 radioactive material in Type IP-2, IP-3, A, B(U), B(M) or C packages; or
 - (e) articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.).
- 5.2.1.9.3 Arrows for purposes other than indicating proper package orientation shall not be displayed on a package marked in accordance with this sub-section."
- 5.2.2.1.11.2 (b) Insert "symbol" after "SI prefix".
- 5.2.2.1.11.5 Add the following new paragraph:
- "5.2.2.1.11.5 In case of international carriage of packages requiring competent ~~authorities~~ authority design or shipment approval, for which different approval types apply in the different countries concerned, labelling shall be in accordance with the certificate of the country of origin of design."
- 5.2.2.1.12 Delete.

Consequential amendments:

3.2.1 *In the explanatory note for column (5), delete the second indent.*

5.1.2.1 (b) *Amend to read as follows:*

"Orientation arrows illustrated in 5.2.1.9 shall be displayed on two opposite sides of the following overpacks:

~~(i)~~ overpacks containing packages which shall be marked in accordance with 5.2.1.9.1, unless the marking remains visible, and

~~(ii)~~ overpacks containing liquids in packages which need not be marked in accordance with 5.2.1.9.2, unless the closures remain visible."

- 5.2.2.2.1.1 *In the first sentence, delete ", except label conforming to model No. 11,". Delete the third sentence ("Label conforming to model No. 11 ...").*
- 5.2.2.2.1.3 *In the first sentence, delete ", except label conforming to model No. 11,".*
- 5.2.2.2.2 *Delete label No. 11 and the text under this label.*

5.2.2.2.1 Add the following note at the end of the existing text:

"NOTE: *Where appropriate, labels in 5.2.2.2.2 are shown with a dotted outer boundary as provided for in 5.2.2.2.1.1. This is not required when the label is applied on a background of contrasting colour."*

5.2.2.2.1.1 Add the following sentence after the second sentence: "Labels shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line."

5.2.2.2.1.2 Insert the following new paragraph at the end.

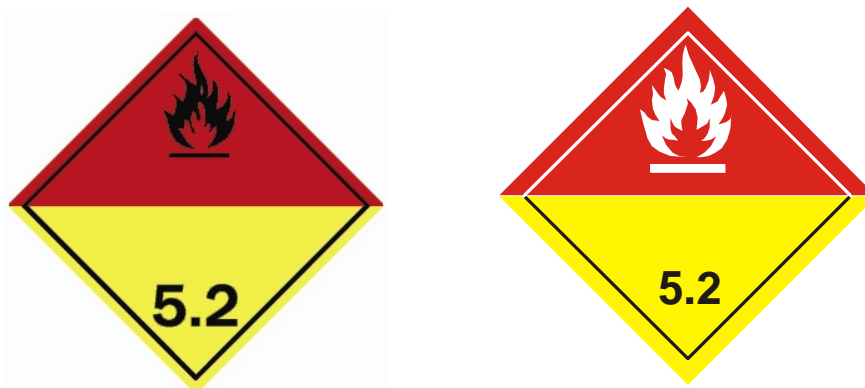
"Empty uncleaned pressure receptacles for gases of Class 2 may be carried with obsolete or damaged labels for the purposes of refilling or inspection as appropriate and the application of a new label in conformity with current regulations or for the disposal of the pressure receptacle."

5.2.2.2.2 In the labels for Classes 5.1 and 5.2:

Replace the text under label No. 5.1 with the following:

"(No. 5.1)
Symbol (flame over circle): black; Background: yellow
Figure "5.1" in bottom corner"

Replace label No. 5.2 and the text under the label with the following:



"(No. 5.2)
Symbol (flame): black or white;
Background: upper half red; lower half yellow;
Figure "5.2" in bottom corner".

Chapter 5.3

5.3.1.1.1 Add the following sentence at the end:

"Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line."

5.3.1.1.2 Add the following subparagraph at the end:

"Placards are not required for the carriage of explosives of Division 1.4, **E**compatibility **G**group S."

5.3.1.5.1 Amend to read as follows:

"5.3.1.5.1 For vehicles carrying packages containing substances or articles of Class 1 (other than of Division 1.4, **E**compatibility **G**group S), placards shall be affixed to both sides and at the rear of the vehicle."

5.3.2 Amend as follows:

5.3.2.1.1 Delete "reflectorized".

5.3.2.1.5 Amend to read as follows:

"If the orange-coloured plates prescribed in 5.3.2.1.2 and 5.3.2.1.4 affixed to the containers, tank-containers, MEGCs or portable tanks are not clearly visible from outside the carrying vehicle or wagon, the same plates shall also be affixed to both sides of the vehicle or wagon."

5.3.2.1.6 Replace "5.3.2.1.2 and 5.3.2.1.4" with "5.3.2.1.2, 5.3.2.1.4 and 5.3.2.1.5".

5.3.2.1.7 Amend to read as follows:

"5.3.2.1.7 The requirements of 5.3.2.1.1 to 5.3.2.1.5 are also applicable to empty fixed or demountable tanks, battery-vehicles, tank-containers, portable tanks, MEGCs, tank-wagons, battery-wagons and wagons with demountable tanks, uncleaned, not degassed or not decontaminated as well as to empty vehicles, wagons and containers for carriage in bulk, uncleaned or not decontaminated."

5.3.2.1.8 Amend the first sentence to read as follows:

"Orange-coloured marking which does not relate to dangerous goods carried, or residues thereof, shall be removed or covered."

5.3.2.2.1 In the first sentence, replace "The reflectorized orange-coloured plates" with "The orange-coloured plates shall be reflectorized and". Insert the following new text after "black border 15 mm wide.": "The material used shall be weather-resistant and ensure durable

marking. The plate shall not become detached from its mount in the event of a 15 minutes' engulfment in fire."

Insert the following new paragraph, at the end, before the NOTE:

"For containers carrying dangerous solid substances in bulk and for tank-containers, MEGCs and portable tanks, the plates prescribed in 5.3.2.1.2, 5.3.2.1.4 and 5.3.2.1.5 may be replaced by a self-adhesive sheet, by paint or by any other equivalent process.

This alternative marking shall conform to the specifications set in this sub-section except for the provisions concerning resistance to fire mentioned in 5.3.2.2.1 and 5.3.2.2.2."

(Remainder of the text unchanged.)

Chapter 5.4

5.4.1.1.1 In the paragraph (b), insert "in brackets" after "technical name".

In the paragraph (c), 2nd indent: Add a Note to read as follows:

"NOTE: For radioactive material with a subsidiary risk, see also special provision 172."

3rd indent: Add, at the end of the first sentence, "or applicable according to a special provision referred to in Column (6)".

In the paragraph (e), add the words "when applicable" after "the packages" and insert at the end: "UN packaging codes may only be used to supplement the description of the kind of package (e.g. one box (4G))."

In the paragraph (f), delete the words "with the exception of empty means of containment, uncleaned,".

In the paragraph after (i) replace "(a), (b), (c) and (d) shall be shown... or in sequence (b), (c), (a), (d)" with "(a), (b), (c) and (d) shall be shown in the order listed above (i.e. (a), (b), (c), (d))".

Replace the second example with:

UN1098, ALLYL ALCOHOL, 6.1 (3), PG I"

5.4.1.1.2 In the paragraph after (h), add :

"The location and order in which the elements of information required appear in the transport document is left optional, except that (a), (b), (c) and (d) shall be shown in the order listed above (i.e. (a), (b), (c), (d)) with no information interspersed, except as provided in ADN.

Examples of such permitted dangerous goods descriptions are:

"UN 1230 METHANOL, 3 (6.1), IP", or
"UN 1230 METHANOL, 3 (6.1), PG II"."

5.4.1.1.3 Replace the second example with:

“WASTE, UN 1230 METHANOL, 3 (6.1), PG II””.

Replace the fourth example with:

“WASTE, UN 1993 FLAMMABLE LIQUID, N.O.S. (toluene and ethyl alcohol), 3, PG II””.

5.4.1.1.6 Amend as follows:

"5.4.1.1.6 *Special provisions for empty means of containment and for empty cargo tanks of tank vessels*

5.4.1.1.6.1 For empty means of containment, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, the words "EMPTY, UNCLEANED" or "RESIDUE, LAST CONTAINED" shall be indicated before or after the proper shipping name required in 5.4.1.1.1 (b). Moreover, 5.4.1.1.1 (f) does not apply.

5.4.1.1.6.2 The special provision of 5.4.1.1.6.1 may be replaced with the provisions of 5.4.1.1.6.2.1, 5.4.1.1.6.2.2 or 5.4.1.1.6.2.3, as appropriate.

5.4.1.1.6.2.1 For empty packagings, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, including empty uncleaned receptacles for gases with a capacity of not more than 1000 litres, the particulars according to 5.4.1.1.1 (a), (b), (c), (d), (e) and (f) are replaced with "EMPTY PACKAGING", "EMPTY RECEPTACLE", "EMPTY IBC" or "EMPTY LARGE PACKAGING", as appropriate, followed by the information of the goods last loaded, as described in 5.4.1.1.1 (c).

See Example as follows:

"EMPTY PACKAGING, 6.1 (3)"

In addition, in such a case, if the dangerous goods last loaded are goods of Class 2, the information prescribed in 5.4.1.1.1 (c) may be replaced by the number of the class "2".

5.4.1.1.6.2.2 For empty means of containment other than packagings, uncleaned, which contain the residue of dangerous goods of classes other than Class 7 and for empty uncleaned receptacles for gases with a capacity of more than 1000 litres, the particulars according to 5.4.1.1.1 (a) to (d) are preceded by "EMPTY TANK-WAGON", "EMPTY TANK-VEHICLE", "EMPTY DEMOUNTABLE TANK", "EMPTY TANK-CONTAINER", "EMPTY PORTABLE TANK", "EMPTY BATTERY-WAGON", "EMPTY BATTERY-VEHICLE", "EMPTY MEGC", "EMPTY WAGON", "EMPTY VEHICLE", "EMPTY CONTAINER" or "EMPTY RECEPTACLE", as appropriate, followed by the words "LAST LOAD:". Moreover, paragraph 5.4.1.1.1 (f) does not apply.

See example as follows:

"EMPTY TANK-~~VEHICLE~~CONTAINER, LAST LOAD: UN 1098 ALLYL ALCOHOL, 6.1 (3), I" or

" **EMPTY TANK-~~VEHICLE~~CONTAINER, LAST LOAD: UN 1098 ALLYL ALCOHOL, 6.1 (3), PG I**".

[5.4.1.1.6.2.3] When empty means of containment, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, are returned to the consignor, the consignment notes/transport documents prepared for the full-capacity carriage of these goods may also be used. In such cases, the indication of the quantity is to be eliminated (by effacing it, striking it out or any other means) and replaced by the words "EMPTY, UNCLEANED RETURN".][*To be confirmed*]

5.4.1.1.6.3 *Unchanged.*

5.4.1.2.5.1 (c) Insert "symbol" after "SI prefix".

5.4.1.2.5.3 Insert the following new paragraph:

"5.4.1.2.5.3 In case of international carriage of packages requiring competent ~~authorities~~ authority design or shipment approval, for which different approval types apply in the different countries concerned, the UN number and proper shipping name required in 5.4.1.1.1 shall be in accordance with the certificate of the country of origin of design."

Renumber existing 5.4.1.2.5.3 as 5.4.1.2.5.4.

PART 7

Chapter 7.1

[7.1.1.16] Add a new paragraph under 7.1.1.16 to read as follows:

"When orientation arrows are required, packages shall be oriented in accordance with such markings.

***NOTE:** Liquid dangerous goods shall be loaded below dry dangerous goods whenever practicable."*]

[7.1.4.14.x.] Add to read as follows:

"7.1.4.14.x.x Where appropriate the [cargo deck area or/hold spaces] shall be fitted with devices to facilitate securing and handling of the dangerous goods. Packages containing dangerous substances and unpackaged dangerous articles shall be secured by suitable means capable of restraining the goods (such as fastening straps, sliding slatboards, adjustable brackets) [in the cargo deck area or in the hold space] in a manner that will prevent any movement during carriage which would change the orientation of the packages or cause them to be damaged. When dangerous goods are carried with other goods (e.g. heavy machinery or crates), all goods shall be securely fixed or packed [in the cargo deck area or in the hold spaces] so as to prevent the release of dangerous goods. Movement of packages may also be prevented by filling any voids by the use of dunnage or by blocking and bracing. Where restraints such as banding or straps are used, these shall not be over-tightened to cause damage or deformation of the package."

“ 7.1.4.14.x.y Packages shall not be stacked unless designed for that purpose. Where different design types of packages that have been designed for stacking are to be loaded together, consideration shall be given to their compatibility for stacking with each other. Where necessary, stacked packages shall be prevented from damaging the package below by the use of load-bearing devices.

7.1.4.14.x.z During loading and unloading, packages containing dangerous goods shall be protected from being damaged.

NOTE: *Particular attention shall be paid to the handling of packages during their preparation for carriage, the type of [vessel] on which they are to be carried and to the method of loading or unloading, so that accidental damage is not caused through dragging or mishandling the packages.”].*

7.1.6.12 [Insert a new VE04 as follows:

"VE04 When aerosols are carried for the purposes of reprocessing or disposal under special provision 327, provisions of VE01 and VE02 are applied."

Consequential amendment:

Table A UN 1950 (all entries) Add " VE04" in column (10).]

7.1.4.14.7.1.1 Amend to read as follows:

"Packages, overpacks, containers and tanks containing radioactive material and unpackaged radioactive material shall be segregated during carriage:

- (a) from workers in regularly occupied working areas;
 - (i) in accordance with Table A below; or
 - (ii) by distances calculated using a dose criterion of 5 mSv in a year and conservative model parameters;

NOTE: *Workers subject to individual monitoring for the purposes of radiation protection shall not be considered for the purposes of segregation.*

- (b) from members of the critical group of the public, in areas where the public has regular access;
 - (i) in accordance with Table A below; or
 - (ii) by distances calculated using a dose criterion of 1 mSv in a year and conservative model parameters;
- (c) from undeveloped photographic film and mailbags;
 - (i) in accordance with Table B below; or

- (ii) by distances calculated using a radiation exposure criterion for undeveloped photographic film due to the transport of radioactive material for 0.1 mSv per consignment of such film; and

***NOTE:** Mailbags shall be assumed to contain undeveloped film and plates and therefore be separated from radioactive material in the same way.*

- (d) from other dangerous goods in accordance with 7.1.4.3."

(Table A unchanged.)

7.1.4.14.7.1.4 Delete. Move Table B to come after Table A (7.1.4.14.7.1.1)

Consequential amendment:

In 1.7.2.2, replace “, CV33(1.1) and (1.4)” with “and CV33 (1.1)”.

- 7.1.4.14.7.3.3 In (a), amend the beginning of the first sentence to read as follows: "Except under the condition of exclusive use, and for consignments of LSA-I material, the total number of packages, ..." and delete the last sentence.

Delete sub-paragraph (b). Rename (c) and (d) accordingly.
