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(Vienna, 25 to 29 November 2019)

Subject: Consolidated texts adopted by the Joint Meeting in 2018 and 2019 and by the RID Committee of Experts' standing working group in November 2018

Information from the Secretariat

This document sets out the draft amendments to RID adopted by the Joint Meeting at its sessions in 2018 and 2019 and by the RID Committee of Experts' standing working group at its session in November 2018.

These draft amendments have been taken from the following documents:

- ECE/TRANS/WP.15/AC.1/150 (OTIF/RID/RC/2018-A), Annex IV,
- ECE/TRANS/WP.15/AC.1/152 (OTIF/RID/RC/2018-B), Annex II,
- ECE/TRANS/WP.15/AC.1/154 (OTIF/RID/RC/2019-A), Annex II,
- ECE/TRANS/WP.15/AC.1/156 (OTIF/RID/RC/2019-B), Annex II,
- ECE/TRANS/WP.15/AC.1/2019/22/Add.1 (OTIF/RID/RC/2019/22/Add.1),
- OTIF/RID/CE/GTP/2018-B, Annex I.

TITLE PAGE

Replace "With effect from 1 January 2019" by:

"With effect from 1 January 2021".

Replace "This text replaces the requirements of 1 January 2017." by:

"This text replaces the requirements of 1 January 2019."

Replace "The following are RID Contracting States (as at 1 May 2019):" by:

"The following are RID Contracting States (as at 1 July 2020):".

[Under the RID Contracting States, insert:]

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5.5.3 After "**applicable to**", insert:

"the carriage of dry ice (UN 1845) and to".

At the end of the title, in the text in parentheses, after "(UN 1951)", add:

"or nitrogen".

5.5 Add a new **5.5.4** to read as follows:

"5.5.4 Dangerous goods contained in equipment in use or intended for use during carriage, attached to or placed in packages, overpacks, containers or load compartments".

PART 6 At the end, replace "**and tanks**" by:

", tank and bulk containers".

6.3 At the end, add:

"(UN Nos. 2814 and 2900)".

PART 1

Chapter 1.1

1.1.3.6.3 In the Table, for transport category 0, Class 6.2, replace "UN Nos 2814 and 2900" by:

"UN Nos 2814, 2900 and 3549".

1.1.3.7 In paragraph (b), at the end, add:

", except for equipment such as data loggers and cargo tracking devices attached to or placed in packages, overpacks, containers or load compartments which are only subject to the requirements in 5.5.4".

Chapter 1.1

1.1.4.4.3 Amend to read as follows:

"1.1.4.4.3 Carriage of trailers carrying packages

If a trailer becomes separated from its tractor unit, the orange-coloured plate in accordance with 5.3.2 of ADR and the mark in accordance with Chapter 3.4 of ADR affixed at the rear of the trailer shall also be affixed to its front. However, the orange-coloured plate need not be affixed to the front of the trailer if the corresponding placards are affixed to both sides."

Chapter 1.2

1.2.1 Insert the following new definition for "**Dose rate**":

"**Dose rate**" means the ambient dose equivalent or the directional dose equivalent, as appropriate, per unit time, measured at the point of interest."

[The amendment to the definition of "**Filling ratio**" in the German version does not apply to the English text.]

In the definition of "**GHS**", replace "seventh" by:

"eighth" and replace "ST/SG/AC.10/30/Rev.7" by:

"ST/SG/AC.10/30/Rev.8".

Amend the definition of "**Manual of Tests and Criteria**" as follows:

- Replace "sixth" by:
"seventh".
- Delete "Recommendations on the Transport of Dangerous Goods,".
- Replace "ST/SG/AC.10/11/Rev.6 and Amend.1" by:
"ST/SG/AC.10/11/Rev.7".

Insert the following new definition for "**IAEA Regulations for the Safe Transport of Radioactive Material**":

"**IAEA Regulations for the Safe Transport of Radioactive Material**" means one of the editions of those Regulations, as follows:

- (a) For the 1985 and 1985 (as amended 1990) editions: IAEA Safety Series No. 6;
- (b) For the 1996 edition: IAEA Safety Series No. ST-1;
- (c) For the 1996 (revised) edition: IAEA Safety Series No. TS-R-1 (ST-1, Revised);
- (d) For the 1996 (as amended 2003), 2005 and 2009 editions: IAEA Safety Standards Series No. TS-R-1;
- (e) For the 2012 edition: IAEA Safety Standards Series No. SSR-6;
- (f) For the 2018 edition: IAEA Safety Standards Series No. SSR-6 (Rev.1)."

Replace the definition for "**Operator of a tank-container, portable tank or tank-wagon**" by the following two definitions:

"**Tank-container or portable tank operator**" means any *enterprise* in whose name the *tank-container* or *portable tank* is operated;"

"**Tank-wagon operator**"⁵ means any *enterprise* in whose name the *tank-wagon* is registered or approved for transport;"

Amend the beginning of footnote 5 to read as follows:

"The term "operator" is equivalent ...".

Delete the definition of "**Radiation level**".

[The amendments to the definition of "**Rigid inner receptacle**" (for composite IBCs) in the German version do not apply to the English text.]

Amend the definition of "**Self-accelerating decomposition temperature (SADT)**" to read as follows:

"**Self-accelerating decomposition temperature (SADT)**" means the lowest temperature at which self-accelerating decomposition may occur in a substance in the *packaging*, *IBC* or *tank* as offered for carriage. The *SADT* shall be determined in accordance with the test procedures given in Part II, Section 28 of the *Manual of Tests and Criteria*."

In the definition of "**Self-accelerating polymerization temperature (SAPT)**", in the first sentence, between "which" and "polymerization", insert:

"self-accelerating".

In the definition of "**Tank-wagon**", replace "shells" by:

"tanks".

In the definition of "**Transport index**", in the first sentence, after "SCO-I", add:

"or SCO-III".

In the definition of "**UN Model Regulations**", replace "twentieth" by:

"twenty-first" and replace "(ST/SG/AC.10/1/Rev.20)" by:

"(ST/SG/AC.10/1/Rev.21)".

Chapter 1.4

1.4.1.1 [The amendment in the German version does not apply to the English text.]

1.4.3.3 Delete the Note in paragraph (a).

In paragraph (e), delete:

"maximum" (twice).

Delete the Note in paragraph (f).

At the end, amend the Note to read as follows:

"NOTE: The filler shall establish procedures to ensure that he fulfils all his obligations. Guidelines in the form of checklists for tank-wagons for liquids and gases are available on the OTIF website (www.otif.org) to help the filler of tank-wagons for liquids and gases fulfil his safety obligations, particularly with respect to the leaktightness of tank-wagons."

1.4.3.7.1 Delete the Notes in paragraphs (b) and (d).

At the end, amend the Note to read as follows:

"NOTE: The unloader shall establish procedures to ensure that he fulfils all his obligations. Guidelines in the form of checklists for tank-wagons for liquids and gases are available on the OTIF website (www.otif.org) to help the unloader of tank-wagons for liquids and gases fulfil his safety obligations, particularly with respect to the leaktightness of tank-wagons."

Chapter 1.6

1.6.1.22 Amend to read as follows:

"1.6.1.22 (Deleted)".

1.6.2 Add the following new transitional provision:

"1.6.2.16 The requirements of Note 3 of 6.2.3.5.1 applicable until 31 December 2020 may continue to be applied until 31 December 2022."

1.6.4 Add the following new transitional provision:

"1.6.4.55 Fibre-reinforced plastics tank-containers constructed before 1 July 2021 in accordance with the requirements in force up to 31 December 2020 but which do not, however, meet the requirements for the marking of the tank code of 6.9.6.1 applicable as from 1 January 2021 may continue to be marked in accordance with the requirements applicable up to 31 December 2020 until the next periodic inspection after 1 July 2021."

1.6.6.1 Amend to read as follows:

"1.6.6.1 Packages not requiring competent authority approval of design under the 1985, 1985 (as amended 1990), 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 and 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material

Packages not requiring competent authority approval of design (excepted packages, Type IP-1, Type IP-2, Type IP-3 and Type A packages) shall meet the requirements of RID in full, except that:

(a) Packages that meet the requirements of the 1985 or 1985 (as amended 1990) editions of the IAEA Regulations for the Safe Transport of Radioactive Material:

(i) May continue to be carried provided that they were prepared for carriage prior to 31 December 2003 and are subject to the requirements of 1.6.6.2.3, if applicable; or

(ii) May continue to be used, provided that all the following conditions are met:

- They were not designed to contain uranium hexafluoride;
- The applicable requirements of 1.7.3 are applied;
- The activity limits and classification in 2.2.7 are applied;
- The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied; and
- The packaging was not manufactured or modified after 31 December 2003;

(b) Packages that meet the requirements of the 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 or 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material:

- (i) May continue to be carried provided that they were prepared for carriage prior to 31 December 2025 and are subject to the requirements of 1.6.6.2.3, if applicable; or
- (ii) May continue to be used, provided that all the following conditions are met:
 - The applicable requirements of 1.7.3 are applied;
 - The activity limits and classification in 2.2.7 are applied;
 - The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied; and
 - The packaging was not manufactured or modified after 31 December 2025."

1.6.6.2 Amend to read:

"1.6.6.2 Packages approved under the 1985, 1985 (as amended 1990), 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 and 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material

1.6.6.2.1 Packages requiring competent authority approval of the design shall meet the requirements of RID in full except that:

- (a) Packagings that were manufactured to a package design approved by the competent authority under the provisions of the 1985 or 1985 (as amended 1990) editions of the IAEA Regulations for the Safe Transport of Radioactive Material may continue to be used provided that all of the following conditions are met:
 - (i) The package design is subject to multilateral approval;
 - (ii) The applicable requirements of 1.7.3 are applied;
 - (iii) The activity limits and classification in 2.2.7 are applied; and
 - (iv) The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied;
 - (v) (Reserved);

(b) Packagings that were manufactured to a package design approved by the competent authority under the provisions of the 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 or 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material may continue to be used provided that all of the following conditions are met:

- (i) The package design is subject to multilateral approval after 31 December 2025;
- (ii) The applicable requirements of 1.7.3 are applied;
- (iii) The activity limits and material restrictions of 2.2.7 are applied;
- (iv) The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied.

1.6.6.2.2 No new manufacture of packagings to a package design meeting the provisions of the 1985 and 1985 (as amended 1990) editions of the IAEA Regulations for the Safe Transport of Radioactive Material shall be permitted to commence.

1.6.6.2.3 No new manufacture of packagings of a package design meeting the provisions of the 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 or 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material shall be permitted to commence after 31 December 2028."

1.6.6.3 Amend the title to read:

"Packages excepted from the requirements for fissile materials under the 2011 and 2013 editions of RID (2009 edition of the IAEA Regulations for the Safe Transport of Radioactive Material)".

1.6.6.4 Amend to read as follows:

"1.6.6.4 Special form radioactive material approved under the 1985, 1985 (as amended 1990), 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 and 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material

Special form radioactive material manufactured to a design that had received unilateral approval by the competent authority under the 1985, 1985 (as amended 1990), 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 and 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material may continue to be used when in compliance with the mandatory management system in accordance with the applicable requirements of 1.7.3. There shall be no new manufacture of special form radioactive material to a design that had received unilateral approval by the competent authority under the 1985 or 1985 (as amended 1990) editions of the IAEA Regulations for the Safe Transport of Radioactive Material. No new manufacture of special form radioactive material to a design that had received unilateral approval by the competent authority under the 1996, 1996 (revised), 1996 (as amended 2003), 2005, 2009 and 2012 editions of the IAEA Regulations for the Safe Transport of Radioactive Material shall be permitted to commence after 31 December 2025."

Chapter 1.7

1.7.1 Amend Note 1 as follows:

- In the first sentence, replace "In the event of accidents or incidents" by:
"In the event of a nuclear or radiological emergency".

- In the first sentence, replace ", emergency provisions, as established" by:
", provisions as established".

- Amend the second sentence to read as follows:

"This includes arrangements for preparedness and response established in accordance with the national and/or international requirements and in a consistent and coordinated manner with the national and/or international emergency arrangements."

Amend Note 2 to read as follows:

"2: The arrangements for preparedness and response shall be based on the graded approach and take into consideration the identified hazards and their potential consequences, including the formation of other dangerous substances that may result from the reaction between the contents of a consignment and the environment in the event of a nuclear or radiological emergency. Guidance for the establishment of such arrangements is contained in "Preparedness and Response for a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015); "Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GSG-2, IAEA, Vienna (2011); "Arrangements for Preparedness for a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GS-G-2.1, IAEA, Vienna (2007), and "Arrangements for the Termination of a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GSG-11, IAEA, Vienna (2018)."

1.7.1.1 In the first sentence, replace "to persons" by:

"to people".

Amend the second and third sentences to read:

"These standards are based on the IAEA "Regulations for the Safe Transport of Radioactive material, 2018 Edition", IAEA Safety Standards Series No. SSR-6 (Rev.1), IAEA, Vienna (2018). Explanatory material can be found in "Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)", Safety Standard Series No. SSG-26 (Rev.1), IAEA, Vienna (2019)."

1.7.1.2 In the first sentence, replace "persons" by:

"people".

In the first sentence, replace "from the effects of radiation in the carriage" by:

"from harmful effects of ionizing radiation during the carriage".

In (b), replace "radiation levels" by:

"dose rate".

In the last sentence, replace "Finally" by:

"Thirdly".

Add the following new sentence at the end:

"Finally, further protection is provided by making arrangements for planning and preparing emergency response to protect people, property and the environment."

1.7.1.5.1 In (a), after "5.2.1.10," add:

"5.4.1.2.5.1 (f) (i) and (ii), 5.4.1.2.5.1 (i),".

In (a), after "CW 33 (3.1),", add:

"(4.3)".

1.7.1.5.2 Delete the second sentence.

1.7.2.4 In the last sentence, replace "individual monitoring or work place monitoring" by:

"workplace monitoring or individual monitoring".

1.7.3.1 Delete the paragraph number.

1.7.4.2 In the second sentence, replace "through alternative means" by:

"through means alternative to the other provisions of RID,".

In the second sentence, replace "for single or a planned series of multiple consignments" by:

"for a single consignment or a planned series of multiple consignments".

In the third sentence, at the end, after "applicable requirements", add:

"of RID".

1.7.6.1 In the introductory sentence, replace "radiation level" by:

"dose rate".

In (a), replace "consignor, consignee, carrier," by:

"consignor, carrier, consignee".

In (b), at the beginning, replace "carrier, consignor or consignee" by:

"consignor, carrier, or consignee".

In (b) (iii), replace "similar circumstances" by:

"the causes and circumstances similar to those".

In (b) (iv), replace "on corrective or preventive actions" by:

"the corrective or preventive actions".

Chapter 1.8

1.8.5.1 After "carrier", add:

", unloader".

1.8.5.3 In paragraph (b) after "In occurrences involving radioactive material, the criteria for loss of product are:", replace "(Schedule II of IAEA Safety Series No. 115 – "International Basic Safety Standards for Protection against Ionizing Radiation and for the safety of Radiation Sources")" by:

("Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards", IAEA Safety Standards Series No. GSR Part 3, IAEA, Vienna (2014))".

1.8.6.4.1 Replace "EN ISO/IEC 17025:2005" by:

"EN ISO/IEC 17025:2017 (except clause 8.1.3)".

1.8.7.8 In the "References" column of the Table, amend "EN 12972:2007" to read:

"EN 12972:2018".

Chapter 1.10

1.10.3.1.2 Amend Table 1.10.3.1.2 as follows:

– For Class 1, Division 1.4, in column "Substance or article", replace "and 0500" by:

", 0500, 0512 and 0513".

– Add the following new row after "Class 1, Division 1.5":

"

Class	Division	Substance or article	Quantity		
			Tank (l) ^c	Bulk (kg) ^d	Packages (kg)
1	1.6	Explosives	a	a	0

"

– For Class 6.2, amend the text in column "Substance or article" to read:

"Infectious substances of Category A (UN Nos. 2814 and 2900, except for animal material) and medical waste of Category A (UN No. 3549)".

1.10.5 Replace "The Physical Protection of Nuclear Material and Nuclear Facilities" by:

"Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities".

In footnote 22, replace "INFCIRC/225/Rev.4 (Corrected), IAEA, Vienna (1999)" by:

"INFCIRC/225/Rev.5, IAEA, Vienna (2011)".

PART 2**Chapter 2.1**

2.1.3.4 Add the following new paragraph:

"2.1.3.4.3 Used articles, e.g. transformers and condensers, containing a solution or mixture mentioned in 2.1.3.4.2 shall always be classified under the same entry of Class 9, provided:

(a) they do not contain any additional dangerous components, other than polyhalogenated dibenzodioxins and dibenzofurans of Class 6.1 or components of packing group III of Class 3, 4.1, 4.2, 4.3, 5.1, 6.1 or 8, and

(b) they do not have the hazard characteristics as indicated in 2.1.3.5.3 (a) to (g) and (i)."

2.1.3.8 In the second sentence, after "Other substances meeting the criteria of no other class", add:

"or of no other substance of Class 9".

2.1.5 Amend the Note under the heading to read as follows:

"NOTE: Articles which do not have a proper shipping name and which contain only dangerous goods within the permitted limited quantity amounts specified in Column (7a) of Table A of Chapter 3.2, UN No. 3363 and special provisions 301 and 672 of Chapter 3.3 may be applied."

2.1.5.4 At the end, add the following new sentence:

"However, this section applies to articles containing explosives which are excluded from Class 1 in accordance with 2.2.1.1.8.2."

2.1.5.5 [The amendment in the German version does not apply to the English text.]

Chapter 2.2

2.2.1.1.7.2 In the first sentence, replace "and 0336" by:

"or 0336".

In the first sentence, after "0336" insert:

", and assignment of articles to UN No. 0431 for those used for theatrical effects meeting the definition for article type and the 1.4 G specification in the default fireworks classification table in 2.2.1.1.7.5".

2.2.1.1.8.2 In (b), in the Note, delete:

", such as described in ISO 12097-3" and add the following new second sentence:

"One such method is described in ISO 14451-2 using a heating rate of 80 K/min."

2.2.1.4 In the definition of "**ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)**: UN No. 0486", replace "Articles that contain only extremely insensitive substances" by:

"Articles that predominantly contain extremely insensitive substances".

After the definition of "**DETONATORS, ELECTRIC** for blasting: UN Nos. 0030, 0255, 0456", add the following new definition:

"**DETONATORS, ELECTRONIC** programmable for blasting: UN Nos. 0511, 0512, 0513

Detonators with enhanced safety and security features, utilizing electronic components to transmit a firing signal with validated commands and secure communications. Detonators of this type cannot be initiated by other means."

2.2.2.1.5 For "Flammable gases", in the sentence after (b), replace "ISO 10156:2010" by:

"ISO 10156:2017".

For "Oxidizing gases", in the second sentence, replace "ISO 10156:2010" by:

"ISO 10156:2017".

2.2.2.3 In the Table for classification code 2F amend the name and description of UN No. 1010 to read as follows:

"1010 BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 40% butadienes".

The Note remains unchanged.

In the Table for classification code 6F, insert the following entry after UN No. 3150:

"3358 REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas".

2.2.41.1.4 Replace "Part III, sub-section 33.2.1" by:

"Part III, sub-section 33.2" (twice).

2.2.41.1.5 Replace "Part III, sub-section 33.2.1" by:

"Part III, sub-section 33.2".

2.2.41.1.6 Replace "Part III, sub-section 33.2.1" by:

"Part III, sub-section 33.2".

2.2.41.1.8 Replace "Part III, sub-section 33.2.1" by:

"Part III, sub-section 33.2".

2.2.41.1.10 Replace "aromatic sulphohydrazides" by:

"aromatic sulphonylhydrazides".

2.2.41.4 [The amendment in the German version does not apply to the English text.]

- 2.2.42.1.4** Replace "Part III, Section 33.3" by:
"Part III, sub-section 33.4" (twice).
- 2.2.42.1.5** Replace "Part III, Section 33.3" by:
"Part III, sub-section 33.4".
- 2.2.42.1.7** Replace "Part III, Section 33.3" by:
"Part III, sub-section 33.4".
- 2.2.42.1.8** Replace "Part III, Section 33.3" by:
"Part III, sub-section 33.4".
- 2.2.43.1.4** Replace "Part III, Section 33.4" by:
"Part III, sub-section 33.5".
- 2.2.43.1.5** Replace "Part III, Section 33.4" by:
"Part III, sub-section 33.5".
- 2.2.43.1.7** Replace "Part III, Section 33.4" by:
"Part III, sub-section 33.5".
- 2.2.43.1.8** Replace "Part III, Section 33.4" by:
"Part III, sub-section 33.5".
- 2.2.52.1.7** [The amendment in the French and German versions does not apply to the English text.]
- 2.2.52.4** In the Table, for "DI-(4-tert-BUTYLCYCLOHEXYL) PEROXYDICARBONATE", for concentration " ≤ 42 as a paste", in column "Number (generic entry)", replace "3116" by:
"3118".
- 2.2.61.1.1** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.3** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.6** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.7** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.9.3** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.9.4** [The amendment in the German version does not apply to the English text.]
- 2.2.61.1.9.5** [The amendment in the German version does not apply to the English text.]

2.2.62.1.1 In the second sentence, delete:

", rickettsia".

2.2.62.1.3 Amend the definition of "*Medical or clinical wastes*" to read as follows:

"Medical or clinical wastes" are wastes derived from the veterinary treatment of animals, the medical treatment of humans or from bio-research."

2.2.62.1.4 Replace "or 3373" by:

", 3373 or 3549".

2.2.62.1.4.1 In Note 1, replace "proper shipping name" by:

"name" (twice).

In Note 3, delete:

", mycoplasmas, rickettsia".

[The second and third amendments to Note 3 in the German version do not apply to the English text.]

2.2.62.1.4.2 In the Note, replace "proper shipping name" by:

"name".

2.2.62.1.5.9 In (a), in the parenthesis, replace "UN No. 3291" by:

"UN Nos. 3291 and 3549".

2.2.62.1.11.1 Amend to read as follows:

"2.2.62.1.11.1 Medical or clinical waste containing:

(a) Category A infectious substances shall be assigned to UN No. 2814, UN No. 2900 or UN No. 3549, as appropriate. Solid medical waste containing Category A infectious substances generated from the medical treatment of humans or veterinary treatment of animals may be assigned to UN No. 3549. The UN No. 3549 entry shall not be used for waste from bio-research or liquid waste;

(b) Category B infectious substances shall be assigned to UN No. 3291.

NOTE 1: The name for UN No. 3549 is "MEDICAL WASTE, CATEGORY A, AFFECTING HUMANS, solid" or "MEDICAL WASTE, CATEGORY A, AFFECTING ANIMALS only, solid".

Renumber existing Note as Note 2.

2.2.62.1.11.4 Amend to read as follows:

"2.2.62.1.11.4 (Deleted)".

2.2.62.3 In the list of collective entries, for I3, add the following new entries:

"3549 MEDICAL WASTE, CATEGORY A, AFFECTING HUMANS, solid or
3549 MEDICAL WASTE, CATEGORY A, AFFECTING ANIMALS only, solid".

2.2.7.2.1.1 In the Table, for UN No. 2913, in the second column, replace "SCO-I or SCO-II" by:
"SCO-I, SCO-II or SCO-III".

In the Table, for UN No. 3325, in the second column, delete the comma before "(LSA-III)".

2.2.7.2.2.1 In the Table, add the following rows in proper order:

Radionuclide (atomic number)	A ₁ (TBq)	A ₂ (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Ba-135m	2×10^1	6×10^{-1}	1×10^2	1×10^6
Ge-69	1×10^0	1×10^0	1×10^1	1×10^6
Ir-193m	4×10^1	4×10^0	1×10^4	1×10^7
Ni-57	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Sr-83	1×10^0	1×10^0	1×10^1	1×10^6
Tb-149	8×10^{-1}	8×10^{-1}	1×10^1	1×10^6
Tb-161	3×10^1	7×10^{-1}	1×10^3	1×10^6

[The amendment to table note (a) in the German version does not apply to the English text.]

Amend table note (b) as follows:

- [The first amendment to table note (b) in the German version does not apply to the English text.]
- At the end of the introductory sentence, add:
"(the activity to be taken into account is that of the parent nuclide only)".
- After "Th-nat" and "U-nat", insert a reference to footnote *.

The footnote reads:

"* In the case of Th-natural, the parent nuclide is Th-232, in the case of U-natural the parent nuclide is U-238."

In table note (c), replace "radiation level" by:

"dose rate".

2.2.7.2.2.2 In (a), replace "the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No.115, IAEA, Vienna (1996)" by:

"Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards", IAEA Safety Standards Series No. GSR Part 3, IAEA, Vienna (2014)".

In (b), at the end, replace "the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No.115, IAEA, Vienna (1996)" by:

"GSR Part 3".

2.2.7.2.2.3 Replace "daughter nuclide" by:

"progeny nuclide" (twice).

At the end, replace "daughter nuclides" by:

"progeny nuclides".

2.2.7.2.3.1.2 In (c), delete:

"that meet the requirements of 2.2.7.2.3.1.3,".

In (c), delete sub-paragraph (ii) and renumber sub-paragraph (iii) as (ii).

2.2.7.2.3.1.3 Amend to read as follows:

"2.2.7.2.3.1.3 (Deleted)".

2.2.7.2.3.2 In the introductory sentence before (a), replace "two" by:

"three".

Add the following new paragraph (c):

"(c) SCO-III: A large solid object which, because of its size, cannot be carried in a type of package described in RID and for which:

- (i) All openings are sealed to prevent release of radioactive material during conditions defined in 4.1.9.2.4 (e);
- (ii) The inside of the object is as dry as practicable;
- (iii) The non-fixed contamination on the external surfaces does not exceed the limits specified in 4.1.9.1.2; and
- (iv) The non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² does not exceed 8×10^5 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm² for all other alpha emitters."

2.2.7.2.3.3.5 In (b), after "a free drop of 1.4 kg", replace "through 1 m" by:

"from a height of 1 m".

In (c), after "a free vertical drop of 1.4 kg", replace "through 1 m" by:

"from a height of 1 m".

2.2.7.2.3.3.7 In (b), replace "with specimen" by:

"and the specimen".

In (e), replace "with the specimen" by:

"and the specimen".

2.2.7.2.3.3.8 In (a) (ii), replace "shall be heated" by:

"shall then be heated".

2.2.7.2.3.4.1 In (a), replace "radiation level" by:

"dose rate".

2.2.7.2.3.5 [The amendment to the first sub-paragraph in the German version does not apply to the English text.]

In (e), replace "limits provided in" by:

"the requirements of".

2.2.7.2.3.6 At the beginning, replace "A fissile material" by:

"Fissile material".

2.2.7.2.4.1.2 Replace "radiation level" by:

"dose rate".

2.2.7.2.4.1.3 In (a), replace "radiation level" by:

"dose rate".

At the end of (c), delete:

"and".

At the end of (d), replace the full stop by a semicolon.

Add additional paragraphs (e) and (f) as follows:

"(e) (Reserved);

(f) If the package contains fissile material, one of the provisions of 2.2.7.2.3.5 (a) to (f) applies."

2.2.7.2.4.1.4 At the end of (a), delete:

"and".

At the end of existing (b) (ii), replace "." by:

"; and".

Add additional paragraph (c):

"(c) If the package contains fissile material, one of the provisions of 2.2.7.2.3.5 (a) to (f) applies."

2.2.7.2.4.1.7 At the end of (c) (ii), delete "and".

At the end of (d), replace "." by:

"; and".

Add additional paragraph (e):

"(e) If the packaging has contained fissile material, one of the provisions of 2.2.7.2.3.5 (a) to (f) or one of the provisions for exclusion in 2.2.7.1.3 applies."

2.2.8.1.1 [The amendment in the French version does not apply to the English text.]

2.2.8.1.5.2 [The amendment to the second sentence in the German version does not apply to the English text.]

In the second sentence, replace "the assignment" by:

"classification".

In the second sentence, replace "OECD Test Guideline 404⁶ or 435⁷" by:

"OECD Test Guidelines^{6,7,8,9}".

Delete the existing footnote 9 and renumber the current footnote 8 to 9.

In footnote 9 (current footnote 8), between "Test" and "(TER)", insert:

"Method".

Insert a new footnote 8 as follows:

⁸ OECD Guideline for the testing of chemicals No. 431 "In vitro skin corrosion: reconstructed human epidermis (RHE) test method" 2016."

In the third sentence replace "OECD Test Guideline 430⁸ or 431⁹" by:

"OECD Test Guidelines^{6,7,8,9}".

At the end of the paragraph, add the following new sentence:

"If the *in vitro* test results indicate that the substance or mixture is corrosive and not assigned to packing group I, but the test method does not allow discrimination between packing groups II and III, it shall be considered to be packing group II."

2.2.8.1.6.2 [The amendment in the German version does not apply to the English text.]

2.2.8.1.6.3.3 At the end, add the following new sentence:

"For this calculation method, generic concentration limits apply where 1% is used in the first step for the assessment of the packing group I substances, and where 5% is used for the other steps respectively."

2.2.8.1.6.3.4 Delete the last sentence.

- 2.2.9.1.10.6** Replace ", not otherwise classified under RID" by:
"that do not meet the classification criteria of any other class or another substance within Class 9".
- 2.2.9.1.11** [The amendment in the German version does not apply to the English text.]
- 2.2.9.1.14** In footnote 17, remove:
"used as coolant".
- 2.2.9.3** For M11, "Other substances and articles presenting a danger during carriage...", before "3363 DANGEROUS GOODS IN MACHINERY", insert:
"3363 DANGEROUS GOODS IN ARTICLES or".

Chapter 2.3

- 2.3.2** In the heading, amend "Class 4.1" to read:
"Class 1 and Class 4.1".
- 2.3.2.1** Amend to read as follows:
- "2.3.2.1** In order to determine the criteria of the nitrocellulose, the Bergmann-Junk test or the methyl violet paper test in the Manual of Tests and Criteria Appendix 10 shall be performed (see Chapter 3.3, special provisions 393 and 394). If there is doubt that the ignition temperature of the nitrocellulose is considerably higher than 132 °C in the case of the Bergmann-Junk test or higher than 134.5 °C in the case of the methyl violet paper test, the ignition temperature test described in 2.3.2.5 should be carried out before these tests are performed. If the ignition temperature of nitrocellulose mixtures is higher than 180 °C or the ignition temperature of plasticized nitrocellulose is higher than 170 °C, the Bergmann-Junk test or the methyl violet paper test can be carried out safely."
- 2.3.2.2 to 2.3.2.5** Delete.
- 2.3.2.6** becomes **2.3.2.2**.
In the text, amend "2.3.2.9 and 2.3.2.10" to read:
"2.3.2.5".
- 2.3.2.7** becomes **2.3.2.3**.
In the text, replace "Before being dried as prescribed in 2.3.2.6 above, substances conforming to 2.3.2.2 shall" by:
"Before being dried as prescribed in 2.3.2.2 above, plasticized nitrocellulose shall".
- 2.3.2.8** becomes **2.3.2.4**.
In the text, replace "Weakly nitrated nitrocellulose conforming to 2.3.2.1 shall first undergo preliminary drying as prescribed in 2.3.2.7 above;" by:
"Weakly nitrated nitrocellulose shall first undergo preliminary drying as prescribed in 2.3.2.3 above".

2.3.2.9 Delete.

2.3.2.10 becomes **2.3.2.5**.

PART 3

Chapter 3.1

3.1.2.8.1 Add the following new paragraph **3.1.2.8.1.4**:

"3.1.2.8.1.4 For UN Nos. 3077 and 3082 only, the technical name may be a name shown in capital letters in column 2 of Table A of Chapter 3.2, provided that this name does not include "N.O.S." and that special provision 274 is not assigned. The name which most appropriately describes the substance or mixture shall be used, e.g.:

UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(PAINT)

UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PER-
FUMERY PRODUCTS)."

Chapter 3.2

Table A

Add the following new entries in proper order:

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identification No.
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0511	DETONATORS, ELECTRONIC programmable for blasting	1	1.1B		1 (+13)		0	E0	P131		MP23					1	W2		CW1		1.1B
0512	DETONATORS, ELECTRONIC programmable for blasting	1	1.4B		1.4		0	E0	P131		MP23					2	W2		CW1		1.4B
0513	DETONATORS, ELECTRONIC programmable for blasting	1	1.4S		1.4	347	0	E0	P131		MP23					4	W2		CW1	CE1	1.4S
3549	MEDICAL WASTE, CATEGORY A, AFFECTING HUMANS, solid or MEDICAL WASTE, CATEGORY A, AFFECTING ANIMALS only, solid	6.2	I3		6.2	395	0	E0	P622 LP622		MP2					0	W9		CW13 CW18 CW26 CW28	CE14	606

Amend the following entries:

UN No.	Col-umn	Amendment
0005	(8)	After "P130", add: "LP101".
0007	(8)	After "P130", add: "LP101".
0012	(8)	After "P130", add: "LP101".
0014	(8)	After "P130", add: "LP101".
0033	(8)	After "P130", add: "LP101".
0037	(8)	After "P130", add: "LP101".
0136	(8)	After "P130", add: "LP101".
0167	(8)	After "P130", add: "LP101".
0180	(8)	After "P130", add: "LP101".
0238	(8)	After "P130", add: "LP101".
0240	(8)	After "P130", add: "LP101".
0242	(8)	After "P130", add: "LP101".
0279	(8)	After "P130", add: "LP101".
0291	(8)	After "P130", add: "LP101".
0294	(8)	After "P130", add: "LP101".
0295	(8)	After "P130", add: "LP101".
0324	(8)	After "P130", add: "LP101".
0326	(8)	After "P130", add: "LP101".
0327	(8)	After "P130", add: "LP101".
0330	(8)	After "P130", add: "LP101".
0338	(8)	After "P130", add: "LP101".
0339	(8)	After "P130", add: "LP101".
0340	(6)	Insert: "393".
0341	(6)	Insert: "393".
0342	(6)	Insert: "393".
0343	(6)	Insert: "393".

UN No.	Column	Amendment
0348	(8)	After "P130", add: "LP101".
0369	(8)	After "P130", add: "LP101".
0371	(8)	After "P130", add: "LP101".
0413	(8)	After "P130", add: "LP101".
0414	(8)	After "P130", add: "LP101".
0417	(8)	After "P130", add: "LP101".
0426	(8)	After "P130", add: "LP101".
0427	(8)	After "P130", add: "LP101".
0453	(8)	After "P130", add: "LP101".
0457	(8)	After "P130", add: "LP101".
0458	(8)	After "P130", add: "LP101".
0459	(8)	After "P130", add: "LP101".
0460	(8)	After "P130", add: "LP101".
1002	(6)	Replace "660" by: "392".
1006	(6)	Replace "660" by: "392".
1010	(2)	Amend the name and description to read as follows: "BUTADIENES, STABILIZED or BUTADIENES AND HYDRO-CARBON MIXTURE, STABILIZED, containing more than 40% butadienes".
1013	(6)	Replace "660" by: "392".
1046	(6)	Replace "660" by: "392".
1056	(6)	Replace "660" by: "392".
1058	(6)	Replace "660" by: "392".
1065	(6)	Replace "660" by: "392".
1066	(6)	Replace "660" by: "392".
1080	(6)	Replace "660" by: "392".
1323	(2)	[The amendment in the German version does not apply to the English text.]
1952	(6)	Replace "660" by: "392".
1956	(6)	Replace "660" by: "392".

UN No.	Column	Amendment
2036	(6)	Replace "660" by: "392".
2037 (all entries)	(6)	After "303", insert: "327".
	(8)	After "P003", insert: "LP200".
	(9a)	After "PP17", against "P003", insert: "PP96". Against "LP200", insert: "LP2".
2211	(6)	Add: "675".
2383	(6)	Delete: "386".
2522	(2)	At the end, add: ", STABILIZED".
	(6)	Insert: "386".
2555	(6)	Before "541", insert: "394".
2556	(6)	Before "541", insert: "394".
2557	(6)	Before "541", insert: "394".
2683	(20)	Replace "86" by: "836".
2794	(8)	Delete: "P801a".
2795	(8)	Delete: "P801a".
2800	(8)	Replace "P801a" by: "P801".
2913	(2)	Replace "(SCO-I or SCO-II)" by: "(SCO-I, SCO-II or SCO-III)".
3028	(8)	Delete: "P801a".
3070	(6)	Replace "660" by: "392".
3091	(6)	After "387", insert: "390".
3163	(6)	Replace "660" by: "392".
3164	(9a)	Insert: "PP32".
3291 (both entries)	(4)	Delete: "II".
3297	(6)	Replace "660" by: "392".
3298	(6)	Replace "660" by: "392".
3299	(6)	Replace "660" by: "392".

UN No.	Column	Amendment
3314	(6)	Add: "675".
3325	(2)	Before "(LSA-III)", delete the comma.
3363	(2)	At the beginning, insert: "DANGEROUS GOODS IN ARTICLES or".
3380	(6)	Add: "394".
3481	(6)	After "387", insert: "390".
3500	(9a)	Insert: "PP97".
3537	(6)	Delete: "667".
3538	(6)	Delete: "667".
3539	(6)	Delete: "667".
3540	(6)	Delete: "667".
3541	(6)	Delete: "667".
3542	(6)	Delete: "667".
3543	(6)	Delete: "667".
3544	(6)	Delete: "667".
3545	(6)	Delete: "667".
3546	(6)	Delete: "667".
3547	(6)	Delete: "667".
3548	(6)	Delete: "667".

Table B

Amend the following entries:

Name and description	UN No.	Amendment
BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l	1010	Amend the name and description in column "Name and description" to read as follows: "BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 40% butadienes".
FERROCERIUM	1323	[The amendment in the German version does not apply to the English text.]

Name and description	UN No.	Amendment
2-DIMETHYLAMINOETHYL-METHACRYLATE	2522	At the end of the name in column "Name and description", add: ", STABILIZED".
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE	3325	In column "Name and description", delete the comma before "(LSA-III)".
RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non fissile or fissile-excepted	2913	In column "Name and description", replace "(SCO-I or SCO-II)" by: "(SCO-I, SCO-II or SCO-III)".
TRINITROCHLOROBENZENE WETTED with not less than 10% water, by mass	3365	In column "Name and description", insert a comma before "WETTED".
TRINITROPHENOL WETTED with not less than 10% water, by mass	3364	In column "Name and description", insert a comma before "WETTED".

Insert the following new entries in alphabetical order:

Name and description	UN No.	Note	NHM Code
DANGEROUS GOODS IN ARTICLES	3363		??????
DETONATORS, ELECTRONIC programmable for blasting	0511		??????
DETONATORS, ELECTRONIC programmable for blasting	0512		??????
DETONATORS, ELECTRONIC programmable for blasting	0513		??????
MEDICAL WASTE, CATEGORY A, AFFECTING HUMANS, solid	3549		??????
MEDICAL WASTE, CATEGORY A, AFFECTING ANIMALS only, solid	3549		??????

Chapter 3.3

SP 169 [The amendment in the German version does not apply to the English text.]

SP 188 [The amendment to paragraph (d) in the German version does not apply to the English text.]

In paragraphs (g) and (h), replace "when batteries" by:

"when cells or batteries".

SP 237 Replace "Part III, sub-section 33.2.1" by:

"Part III, sub-section 33.2".

SP 241 Replace "Part III, sub-section 33.2.1.4" by:

"Part III, sub-section 33.2.4".

SP 249 [The amendment in the German version does not apply to the English text.]

SP 301

Amend the first sentence as follows:

- Replace "applies to machinery or apparatus" by:
"applies to articles such as machinery, apparatus or devices".
- Replace "machinery or apparatus" by:
"articles".

In the second sentence, replace "machinery or apparatus" by:
"articles".

In the third sentence, replace "Machinery and apparatus" by:
"Articles".

In the fourth sentence, replace "machinery or apparatus" by:
"articles".

In the fifth sentence, replace "machinery or apparatus contains" by:
"articles contain".

Delete the Note at the end.

SP 309

In the last paragraph, replace "satisfactorily pass Tests 8 (a), (b) and (c)" by:

"satisfy the criteria for classification as an ammonium nitrate emulsion, suspension or gel, intermediate for blasting explosives (ANE)".

SP 327

In the first sentence, replace "Waste aerosols consigned" by:

"Waste aerosols and waste gas cartridges consigned".

In the first sentence, replace "carried under this entry for" by:

"carried under UN Nos. 1950 or 2037, as appropriate, for".

After the third sentence insert the following new sentence:

"Waste gas cartridges, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P 003 and special packing provisions PP 17 and PP 96, or packing instruction LP 200 and special packing provision L 2."

In the fifth sentence (current fourth sentence), replace "aerosols shall be carried in salvage packagings" by:

"aerosols and gas cartridges shall be carried in salvage pressure receptacles or salvage packagings".

In the Note replace "Waste aerosols shall not" by:

"Waste aerosols and waste gas cartridges shall not".

At the end, add the following new paragraph:

"Waste gas cartridges that were filled with non-flammable, non-toxic gases of Class 2, group A or O and have been pierced are not subject to RID."

SP 356 After "in wagons, vehicles, vessels" add:

", machinery, engines".

SP 360 Replace "classified under" by:

"assigned to".

At the end, add the following sentence:

"Lithium batteries installed in cargo transport units, designed only to provide power external to the transport unit shall be assigned to entry UN 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT lithium ion batteries or lithium metal batteries."

SP 370 Amend the first sentence to read as follows:

"This entry only applies to ammonium nitrate that meets one of the following criteria:"

At the end of the first indent, replace "and" by:

"or".

At the end, after the indents, add the following new paragraph:

"This entry shall not be used for ammonium nitrate for which a proper shipping name already exists in Table A of Chapter 3.2 including ammonium nitrate mixed with fuel oil (ANFO) or any of the commercial grades of ammonium nitrate."

Number the first indent as (a) and the second indent as (b).

SP 376 Amend the Note to read as follows:

"NOTE: In assessing a cell or battery as damaged or defective, an assessment or evaluation shall be performed based on safety criteria from the cell, battery or product manufacturer or by a technical expert with knowledge of the cell's or battery's safety features. An assessment or evaluation may include, but is not limited to, the following criteria:

- (a) Acute hazard, such as gas, fire, or electrolyte leaking;
- (b) The use or misuse of the cell or battery;
- (c) Signs of physical damage, such as deformation to cell or battery casing, or colours on the casing;
- (d) External and internal short circuit protection, such as voltage or isolation measures;
- (e) The condition of the cell or battery safety features; or

- (f) Damage to any internal safety components, such as the battery management system."

[The amendment to the last sentence in the German version does not apply to the English text.]

SP 379 In (d) (i), replace "ISO 11114-1:2012" by:

"ISO 11114-1:2012 + A1:2017".

SP 388 At the end of the seventh paragraph, add the following sentence:

"Lithium ion batteries or lithium metal batteries installed in a cargo transport unit and designed only to provide power external to the cargo transport unit shall be assigned to the entry UN 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT lithium ion batteries or lithium metal batteries."

SP 392 [The amendment in the German version does not apply to the English text.]

SP 556 Amend to read as follows:

"556 (Deleted)".

SP 594 [The amendments in the German version do not apply to the English text.]

SP 653 In the first indent, replace "for construction and testing" by:

"for construction, testing and filling".

SP 660 Amend to read as follows:

"660 (Deleted)".

SP 667 In paragraphs (a), (b) and (b) (ii), replace "engine, machinery or article" by:

"engine or machinery".

In paragraph (b) (i), replace "engines, machinery or article" by:

"engines or machinery".

In paragraph (c), replace "engines, machinery or articles" by:

"engines or machinery".

SP 671 At the end, add the following new paragraph:

"Kits containing only dangerous goods to which no packing group is assigned shall be allocated to transport category 2 for completion of transport documents and the exemption related to quantities carried per wagon or large container (see 1.1.3.6)."

SP 390 Add the following new special provisions:

"390 When a package contains a combination of lithium batteries contained in equipment and lithium batteries packed with equipment, the following requirements apply for the purposes of package marking and documentation:

- (a) the package shall be marked "UN 3091" or "UN 3481", as appropriate. If a package contains both lithium ion batteries and lithium metal batteries packed with and contained in equipment, the package shall be marked as required for both battery types. However, button cell batteries installed in equipment (including circuit boards) need not be considered;
- (b) the transport document shall indicate "UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT" or "UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT", as appropriate. If a package contains both lithium metal batteries and lithium ion batteries packed with and contained in equipment, then the transport document shall indicate both "UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT" and "UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT".

"393 The nitrocellulose shall meet the criteria of the Bergmann-Junk test or methyl violet paper test in the Manual of Tests and Criteria Appendix 10. Tests of type 3 (c) need not be applied.

394 The nitrocellulose shall meet the criteria of the Bergmann-Junk test or methyl violet paper test in the Manual of Tests and Criteria Appendix 10.

395 This entry shall only be used for solid medical waste of Category A carried for disposal."

"675 For packages containing these dangerous goods, mixed loading with substances and articles of Class 1, with the exception of 1.4S, shall be prohibited."

Chapter 3.5

3.5.2 [The amendments in the German version do not apply to the English text.]

PART 4

Chapter 4.1

4.1.1 In the Note, replace "(Class 6.2)" by:

"(Class 6.2, UN Nos. 2814 and 2900)".

In the Note, amend the text in parentheses at the end of the sentence to read:

"(P 201, P 207 and LP 02 for Class 2 and P 620, P 621, P 622, IBC 620, LP 621 and LP 622 for Class 6.2)".

4.1.1.1 [The amendment in the German version does not apply to the English text.]

4.1.1.3 becomes **4.1.1.3.1**.

Delete the last sentence.

Add a new heading to read:

"4.1.1.3 Design type".

Add a new **4.1.1.3.2** to read as follows:

- "4.1.1.3.2** Packagings, including IBCs and large packagings, may conform to one or more than one successfully tested design type and may bear more than one mark."
- 4.1.1.5.1** [The amendment in the German version does not apply to the English text.]
- 4.1.1.21.6** In Table 4.1.1.21.6, for UN No. 1790, in column (2b), replace "hydrofluoric acid" by:
"hydrogen fluoride".
- 4.1.4.1**
- P 001** For "Single packagings/Composite packagings", in the last entry, replace "solid plastics or expanded plastics" by:
"expanded plastics or solid plastics".
- P 002** For "Single packagings/Composite packagings", in the last entry, replace "solid plastics or expanded plastics packaging (6PH2 or 6PH1^(e))" by:
"expanded plastics or solid plastics packaging (6PH1 or 6PH2^(e))".
- P 003** [The first amendment in the German version does not apply to the English text.]
For special packing provision **PP 16**, replace "P801a" by:
"P801 (2)".
For packing instruction **PP 32**, after "3358", add:
"and robust articles consigned under UN No. 3164".
Add the following new special packing provision:
"PP 96 For UN No. 2037 waste gas cartridges carried in accordance with special provision 327, the packagings shall be adequately ventilated to prevent the creation of dangerous atmospheres and the build-up of pressure."
- P 006** [The amendment in the German version does not apply to the English text.]
- P 200** In (5) (a), after "special packing provision "o"", insert:
"of paragraph (10)".
In (5) (b), in the second sub-paragraph, after "special packing provision "o"", insert:
"of paragraph (10)".
In (5) (b) (i), after "special packing provision "r"", insert:
"of paragraph (10)".
In (11), amend the Table as follows:

- In the second row ("EN ISO 24431:2016"), in the column "Title of document", replace "EN ISO" by:
"ISO".
- In the second row, in the column "Title of document", add the following Note:
"NOTE: The EN version of this ISO standard fulfils the requirements and may also be used."
- Delete the fifth row ("ISO 24431:2006").

In (13) 2.4, replace "EN ISO 11114-1:2012 and EN 11114-2:2013" by:

"EN ISO 11114-1:2012 + A1:2017 and EN ISO 11114-2:2013".

In Table 2, replace the values of column "LC₅₀ in ml/m³" as follows:

- For UN No. 1859, replace "450" by:
"922".
- For UN No. 2188, replace "20" by:
"178".
- For UN No. 2202, replace "2" by:
"51".
- For UN No. 2534, replace "600" by:
"2810".
- For UN No. 2676, replace "20" by:
"178".

P 206 In the title of the last row of the packing instruction, replace "Special packing provision" by:

"Special packing provisions".

Add the following new special packing provision:

"PP 97 For fire extinguishing agents assigned to UN No. 3500 the maximum test period for periodic inspection shall be 10 years. They may be carried in tubes of a maximum water capacity of 450 litres conforming to the applicable requirements of Chapter 6.2."

P 207 In special packing provision **PP 87**, replace "flammable atmosphere" by:

"dangerous atmospheres".

P 301 [The first amendment to paragraph (1) in the German version does not apply to the English text.]

In the last sentence of (1), replace "unit" by:

"primary containment".

[The amendment to the penultimate sentence of paragraph (2) in the German version does not apply to the English text.]

In the last sentence of (2), replace "unit" by:

"primary containment".

P 400

In (2), in the first sentence, delete:

"threaded".

In (2), after the first sentence, insert the following new sentence:

"Inner packagings shall have threaded closures or closures physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage."

In (3), in the first sentence, delete:

"threaded".

In (3), after the first sentence, insert the following new sentence:

"Inner packagings shall have threaded closures or closures physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage."

P 404

Amend (1), under "Inner packagings", as follows:

– In the first paragraph, delete:

"and have threaded closures".

– In the second paragraph, delete:

"threaded".

– Before the last sentence ("Outer packagings shall have a maximum net mass of 125 kg."), add the following new third paragraph:

"Inner packagings shall have threaded closures or closures physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage."

In (2), between ", 1B1" and ", 1N1", insert:

", 1B2".

P 410

Amend table note d to read as follows:

"^(d) For packing group II substances, these packagings may only be used when transported in a closed wagon or closed container."

For "Single packagings/Composite packagings", in the last entry, replace "solid or expanded plastics" by:

"expanded or solid plastics".

P 501 For "Single packagings/Composite packagings", in the last entry, replace "solid or expanded plastics" by:

"expanded or solid plastics".

P 502 For "Single packagings/Composite packagings", in the last entry, replace "solid or expanded plastics" by:

"expanded or solid plastics".

P 504 For "Single packagings/Composite packagings", in the last entry, replace "solid or expanded plastics" by:

"expanded or solid plastics".

P 601 [The amendments in the German version do not apply to the English text.]

P 602 [The amendments in the German version do not apply to the English text.]

Insert the following new packing instruction:

"

P 622	PACKING INSTRUCTION		P 622
This instruction applies to waste of UN No. 3549 carried for disposal.			
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:			
Inner packagings	Intermediate packagings	Outer packagings	
metal plastics	metal plastics	Boxes steel (4A) aluminium (4B) other metal (4N) plywood (4D) fibreboard (4G) plastics, solid (4H2) Drums steel (1A2) aluminium (1B2) other metal (1N2) plywood (1D) fibre (1G) plastics (1H2) Jerricans steel (3A2) aluminium (3B2) plastics (3H2)	
The outer packaging shall conform to the packing group I performance level for solids.			
Additional requirements:			

1. Fragile articles shall be contained in either a rigid inner packaging or a rigid intermediate packaging.
2. Inner packagings containing sharp objects such as broken glass and needles shall be rigid and resistant to puncture.
3. The inner packaging, the intermediate packaging, and the outer packaging shall be capable of retaining liquids. Outer packagings that are not capable of retaining liquids by design shall be fitted with a liner or suitable measure of retaining liquids.
4. The inner packaging and/or the intermediate packaging may be flexible. When flexible packagings are used, they shall be capable of passing the impact resistance test of at least 165 g according to ISO 7765-1:1988 "Plastics film and sheeting – Determination of impact resistance by the free-falling dart method – Part 1: Staircase methods" and the tear resistance test of at least 480 g in both parallel and perpendicular planes with respect to the length of the bag in accordance with ISO 6383-2:1983 "Plastics – Film and sheeting – Determination of tear resistance – Part 2: Elmendorf method". The maximum net mass of each flexible inner packaging shall be 30 kg.
5. Each flexible intermediate packaging shall contain only one inner packaging.
6. Inner packagings containing a small amount of free liquid may be included in intermediate packaging provided that there is sufficient absorbent or solidifying material in the inner or intermediate packaging to absorb or solidify all the liquid content present. Suitable absorbent material which withstands the temperatures and vibrations liable to occur under normal conditions of carriage shall be used.
7. Intermediate packagings shall be secured in outer packagings with suitable cushioning and/or absorbent material.

P 800 [The amendment in the German and French versions does not apply to the English text.]

P 801 Amend to read as follows:

P 801	PACKING INSTRUCTION	P 801
This instruction applies to UN Nos. 2794, 2795 and 3028 and used batteries of UN No. 2800		
The following packagings are authorized, provided that the provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6, and 4.1.3 are met:		
(1) Rigid outer packagings, wooden slatted crates or pallets. Additionally, the following conditions shall be met:		
(a) Batteries stacks shall be in tiers separated by a layer of electrically non-conductive material;		
(b) Battery terminals shall not support the weight of other superimposed elements;		
(c) Batteries shall be packaged or secured to prevent inadvertent movement;		
(d) Batteries shall not leak under normal conditions of carriage or appropriate measures shall be taken to prevent the release of electrolyte from the package (e.g. individually packaging batteries or other equally effective methods); and		
(e) Batteries shall be protected against short circuits.		
(2) Stainless steel or plastics bins may also be used to carry used batteries. Additionally, the following conditions shall be met:		
(a) The bins shall be resistant to the electrolyte that was contained in the batteries;		
(b) The bins shall not be filled to a height greater than the height of their sides;		

- (c) The outside of the bins shall be free of residues of electrolyte contained in the batteries;
- (d) Under normal conditions of carriage, no electrolyte shall leak from the bins;
- (e) Measures shall be taken to ensure that filled bins cannot lose their content;
- (f) Measures shall be taken to prevent short circuits (e.g. batteries are discharged, individual protection of the battery terminals, etc.); and
- (g) The bins shall be either:
 - (i) covered; or
 - (ii) carried in closed or sheeted wagons or in closed or sheeted containers.

"
P 801a Amend to read as follows:

"P 801a (Deleted)".

P 804 [The amendments in the German version do not apply to the English text.]

P 903 [The amendment to the last sub-paragraph of (4) in the German version does not apply to the English text.]

Under paragraph (4), add the following Note:

"NOTE: For carriage in a transport chain including air carriage, these devices, when active, shall meet defined standards for electromagnetic radiation to ensure that the operation of the devices does not interfere with aircraft systems."

Add the following new paragraph (5):

"(5) For packagings containing both cells or batteries packed with equipment and contained in equipment:

- (a) For cells and batteries, packagings that completely enclose the cells or batteries, then placed with equipment in a packaging conforming to the requirements in paragraph (1) of this packing instruction; or
- (b) Packagings conforming to the requirements in paragraph (1) of this packing instruction, then placed with the equipment in a strong outer packaging constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use. The outer packaging shall be constructed in such a manner as to prevent accidental operation during carriage and need not meet the requirements of 4.1.1.3.

The equipment shall be secured against movement within the outer packaging.

Devices such as radio frequency identification (RFID) tags, watches and temperature loggers, which are not capable of generating a dangerous evolution of heat, may be carried when intentionally active in strong outer packagings.

NOTE: For carriage in a transport chain including air carriage, these devices, when active, shall meet defined standards for electromagnetic radiation to ensure that the operation of the devices does not interfere with aircraft systems."

P 905 [The amendment in the German and French versions does not apply to the English text.]

P 907 Amend the introductory sentence to read:

"This instruction applies to articles, such as machinery, apparatus or devices of UN No. 3363."

In the second sentence, replace "machinery or apparatus" by:

"article".

In the third sentence, replace "machinery or apparatus" by:

"an article".

In the fifth sentence, replace "machinery or apparatus" by:

"article" (twice).

In the seventh sentence, replace "machinery or apparatus" by:

"article".

P 909 [The amendments in the German version do not apply to the English text.]

P 911 [The amendment in the German version does not apply to the English text.]

4.1.4.3

LP 200 In the introductory sentence, replace "UN No. 1950" by:

"UN Nos. 1950 and 2037".

In the second sentence, replace "are authorized for aerosols" by:

"are authorized for aerosols and gas cartridges".

In special packing provision **L 2**, in the first sentence, delete:

"of the aerosols".

In special packing provision **L 2**, amend the last sentence to read:

"For waste aerosols and waste gas cartridges carried in accordance with special provision 327, the large packagings shall be adequately ventilated to prevent the creation of dangerous atmospheres and the build-up of pressure."

Insert the following new packing instruction:

"

LP 622	PACKING INSTRUCTION		LP 622
This instruction applies to waste of UN No. 3549 carried for disposal.			
The following large packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:			
Inner packagings	Intermediate packagings	Outer packagings	
metal plastics	metal plastics	steel (50A) aluminium (50B)	

		metal other than steel or aluminium (50N) plywood (50D) rigid fibreboard (50G) rigid plastics (50H)
The outer packaging shall conform to the packing group I performance level for solids.		
<p>Additional requirements:</p> <ol style="list-style-type: none"> 1. Fragile articles shall be contained in either a rigid inner packaging or a rigid intermediate packaging. 2. Inner packagings containing sharp objects such as broken glass and needles shall be rigid and resistant to puncture. 3. The inner packaging, the intermediate packaging and the outer packaging shall be capable of retaining liquids. Outer packagings that are not capable of retaining liquids by design shall be fitted with a liner or suitable measure of retaining liquids. 4. The inner packaging and/or the intermediate packaging may be flexible. When flexible packagings are used, they shall be capable of passing the impact resistance test of at least 165 g according to ISO 7765-1:1988 "Plastics film and sheeting – Determination of impact resistance by the free-falling dart method – Part 1: Staircase methods" and the tear resistance test of at least 480 g in both parallel and perpendicular planes with respect to the length of the bag in accordance with ISO 6383-2:1983 "Plastics – Film and sheeting – Determination of tear resistance – Part 2: Elmendorf method". The maximum net mass of each flexible inner packaging shall be 30 kg. 5. Each flexible intermediate packaging shall contain only one inner packaging. 6. Inner packagings containing a small amount of free liquid may be included in intermediate packaging provided that there is sufficient absorbent or solidifying material in the inner or intermediate packaging to absorb or solidify all the liquid content present. Suitable absorbent material which withstands the temperatures and vibrations liable to occur under normal conditions of carriage shall be used. 7. Intermediate packagings shall be secured in outer packagings with suitable cushioning and/or absorbent material. 		

LP 906 [The amendment in the German version does not apply to the English text.]

4.1.6.15 Amend the Table as follows:

- For "4.1.6.2", in the second column, replace "ISO 11114-2:2013" by:
"EN ISO 11114-2:2013".
- For "4.1.6.4", in the second column, replace "ISO 11621:1997" by:
"ISO 11621:1997 or EN ISO 11621:2005".

Delete the Note in the third column.

- For "4.1.6.8 Valves with inherent protection", in the first row, delete the Note in the third column.

- For "4.1.6.8 Valves with inherent protection", in the third row, second column, replace "EN ISO 17879:2017" by:
"Annex A of EN ISO 17879:2017".
- For "4.1.6.8 (b) and (c)", replace "ISO 11117:1998 or ISO 11117:2008 + Cor 1:2009" by:
"ISO 11117:1998 or EN ISO 11117:2008 + Cor 1:2009".

4.1.8.6 At the end of the sentence, add:

", nor to UN No. 3549 MEDICAL WASTE, CATEGORY A, AFFECTING HUMANS or MEDICAL WASTE, CATEGORY A, AFFECTING ANIMALS".

4.1.9.1.4 At the end, add the following new sentence:

"This requirement does not apply to the internal surfaces of containers being used as packagings, either loaded or empty."

4.1.9.1.8 Add the following paragraph (e):

"(e) For packages intended to be used for shipment after storage, it shall be ensured that all packaging components and radioactive contents have been maintained during storage in a manner such that all the requirements specified in the relevant provisions of RID and in the applicable certificates of approval have been fulfilled."

4.1.9.1.11 Replace "radiation level" by:

"dose rate".

4.1.9.1.12 Replace "radiation level" by:

"dose rate".

4.1.9.2.1 Replace "radiation level" by:

"dose rate".

4.1.9.2.4 In the introductory sentence, replace "and SCO-I" by:

", SCO-I and SCO-III".

At the end of (d), replace "." by:

"; and".

Add the following new paragraph (e):

"(e) For SCO-III:

- (i) Carriage shall be under exclusive use.
- (ii) Stacking shall not be permitted.

- (iii) All activities associated with the shipment, including radiation protection, emergency response and any special precautions or special administrative or operational controls that are to be employed during carriage shall be described in a transport plan. The transport plan shall demonstrate that the overall level of safety in carriage is at least equivalent to that which would be provided if the requirements of 6.4.7.14 (only for the test specified in 6.4.15.6, preceded by the tests specified in 6.4.15.2 and 6.4.15.3) had been met.
- (iv) The requirements of 6.4.5.1 and 6.4.5.2 for a Type IP-2 package shall be satisfied, except that the maximum damage referred to in 6.4.15.4 may be determined based on provisions in the transport plan, and the requirements of 6.4.15.5 are not applicable.
- (v) The object and any shielding are secured to the conveyance in accordance with 6.4.2.1.
- (vi) The shipment shall be subject to multilateral approval."

Chapter 4.2

4.2.1.13.8 [The amendment in the German version does not apply to the English text.]

4.2.3.7 Add the following new paragraph **4.2.3.7.3**:

"4.2.3.7.3 The date at which the actual holding time ends shall be entered in the transport document (see 5.4.1.2.2 (d))."

4.2.5.3 Amend special provision TP 19 to read as follows:

"TP19 At the time of construction, the minimum shell thickness determined according to 6.7.3.4 shall be increased by 3 mm as a corrosion allowance. Shell thickness shall be verified ultrasonically at intervals midway between periodic hydraulic tests and shall never be lower than the minimum shell thickness determined according to 6.7.3.4."

Chapter 4.3

4.3.4.1.3 In the Table, for "Class 8", "UN No. 1790", in column "Name and description", replace "hydrofluoric acid" by:

"hydrogen fluoride".

PART 5

Chapter 5.1

5.1.2.2 [The amendment in the German version does not apply to the English text.]

5.1.5.1.2 Transfer the "and" from the end of paragraph (b) to the end of paragraph (c).

Add additional paragraphs (d) and (e):

"(d) (Reserved)

(e) the shipment of SCO-III."

5.1.5.1.3 [The amendments in the German version do not apply to the English text.]

- 5.1.5.1.4** In paragraph (b), at the end, replace "in the hands" by:
"in the possession".
- 5.1.5.3.1** In the introductory sentence, replace "or SCO-I" by:
", SCO-I or SCO-III".
- In (a), replace "radiation level" by:
"dose rate" (twice).
- In (a), in the first sentence, replace "and SCO-I" by:
", SCO-I or SCO-III".
- In (a), in the second sentence, delete:
"and the resulting number is the transport index".
- In (b), replace "and SCO-I" by:
", SCO-I and SCO-III".
- At the end of (c), add:
"and the resulting number is the TI value."
- In the title of Table 5.1.5.3.1, replace "and SCO-I" by:
", SCO-I and SCO-III".
- 5.1.5.3.2** Amend to read as follows:
- "5.1.5.3.2** The TI for each rigid overpack, container or wagon shall be determined as the sum of the TIs of all the packages contained therein. For a shipment from a single consignor, the consignor may determine the TI by direct measurement of dose rate.
- The TI for a non-rigid overpack shall be determined only as the sum of the TIs of all the packages within the overpack."
- 5.1.5.3.4** In (a), replace "radiation level" by:
"dose rate" (twice).
- In (b), replace "transport index" by:
"TI".
- In (c), replace "radiation level" by:
"dose rate".
- In Table 5.1.5.3.4, replace "radiation level" by:
"dose rate".

Chapter 5.2

5.2.1.1 Amend the end of the second sentence to read as follows:

"... for cylinders of 60 litres water capacity or less when they shall be at least 6 mm in height and except for packages of 5 litres capacity or less or of 5 kg maximum net mass when they shall be of an appropriate size".

5.2.1.7.6 Add the following sentence at the end:

"Any mark on the package made in accordance with the requirements of 5.2.1.7.4 (a) and (b) and 5.2.1.7.5 (c) relating to the package type that does not relate to the UN number and proper shipping name assigned to the consignment shall be removed or covered."

5.2.1.9.2 In Figure 5.2.1.9.2, replace "120 mm" by:

"100 mm" and "110 mm" by:

"100 mm".

Amend the last sub-paragraph as follows:

– In the first sentence, replace "a rectangle" by:

"a rectangle or a square".

– In the second sentence, replace "120 mm wide × 110 mm high" by:

"100 mm wide × 100 mm high".

– In the fifth sentence, delete:

"/line thickness".

– In the fifth sentence, replace "105 mm wide × 74 mm high" by:

"100 mm wide × 70 mm high".

5.2.2.1.11.2 In (d), replace "(no transport index entry is required for category I-WHITE)" by:

"(except for category I-WHITE)".

Chapter 5.3

5.3.2.3.2 After the entry for "X83", insert the following new entry:

"836 Corrosive or slightly corrosive substance, flammable (flash-point between 23 °C and 60 °C, inclusive) and toxic".

Chapter 5.4

5.4.1.1.1 [The amendment to paragraph (f) in the French version does not apply to the English text.]

- 5.4.1.2.2** In (d), replace "tank-wagons and tank-containers" by:
"tank-wagons, tank-containers or portable tanks".
- 5.4.1.2.5.1** Amend paragraphs (d) and (e) to read:
"(d) The category of the package, overpack or container, as assigned per 5.1.5.3.4, i.e. I-WHITE, II-YELLOW, III-YELLOW;
(e) The TI as determined per 5.1.5.3.1 and 5.1.5.3.2 (except for category I-WHITE);".
In (j), replace "SCO-I and SCO-II" by:
"SCO-I, SCO-II and SCO-III".
- 5.4.2** In the second paragraph, at the end of the first sentence, delete:
"one to the other".
In footnote 10, replace "(Amendment 38-16)" by:
"(Amendment 39-18)".

Chapter 5.5

- 5.5.3** In the title, after "applicable to", add:
"the carriage of dry ice (UN 1845) and to".
At the end of the title, in the text in parentheses, after "(UN 1951)", add:
"or nitrogen".
After the heading, add the following new Note:
"NOTE: In the context of this section the term "conditioning" may be used in a broader scope and includes protection."
- 5.5.3.2.1** After "containers", add:
"in which dry ice (UN 1845) is carried or".
- 5.5.3.2.4** After "containers", add:
"in which dry ice (UN 1845) is carried or".
- 5.5.3.3** After "Packages containing", add:
"dry ice (UN 1845) or".
- 5.5.3.3.3** In the first sentence, after "Packages containing", add:
"dry ice (UN 1845) or".
- 5.5.3.4** After "Packages containing", add:
"dry ice (UN 1845) or".

- 5.5.3.4.1** At the beginning of the first sentence, replace "Packages" by:
"Packages containing dry ice (UN 1845) as a consignment shall be marked "CARBON DIOXIDE, SOLID" or "DRY ICE"; packages".
- 5.5.3.6.1** After "containers containing", add:
"dry ice (UN 1845) or".
In (a), after "harmful concentrations of", add:
"dry ice (UN 1845) or".
In (b), replace "The cooled" by:
"The dry ice (UN 1845) or cooled".
- 5.5.3.6.2** Amend Figure 5.5.3.6.2 as follows:
- Amend the name of the warning mark to read:
"Asphyxiation warning mark for wagons and containers".
 - Delete the reference to note ** and the corresponding note.
 - In note *, at the beginning, replace "of the coolant/conditioner" by:
"or the name of the asphyxiant gas used as the coolant/conditioner".
 - At the end of note *, add:
"Additional information such as "AS COOLANT" or "AS CONDITIONER" may be added."
- 5.5.3.7.1** After "having contained", add:
"dry ice (UN 1845) or".
In (b), after "Chapter 3.2 followed", add:
", where appropriate".
In (b), after ""AS CONDITIONER"", delete:
"as appropriate".
- 5.5** Add a new section **5.5.4** to read as follows:
- 5.5.4** **Dangerous goods contained in equipment in use or intended for use during carriage, attached to or placed in packages, overpacks, containers or load compartments**
- 5.5.4.1** Dangerous goods (e.g. lithium batteries, fuel cell cartridges) contained in equipment such as data loggers and cargo tracking devices, attached to or placed in packages, overpacks, containers or load compartments are not subject to any provisions of RID other than the following:

- (a) the equipment shall be in use or intended for use during carriage;
- (b) the contained dangerous goods (e.g. lithium batteries, fuel cell cartridges) shall meet the applicable construction and test requirements specified in RID; and
- (c) the equipment shall be capable of withstanding the shocks and loadings normally encountered during carriage.

5.5.4.2 When such equipment containing dangerous goods is carried as a consignment, the relevant entry of Table A of Chapter 3.2 shall be used and all applicable provisions of RID shall apply."

PART 6

In the heading, at the end, replace "and tanks" by:

", tank and bulk containers".

Chapter 6.1

6.1.1.1 In (b), replace "packing instruction P 621" by:

"packing instructions P 621 and P 622".

6.1.3.1 Amend the third sentence to read as follows:

"Letters, numerals and symbols shall be at least 12 mm high, except for packagings of 30 litres capacity or less or of 30 kg maximum net mass, when they shall be at least 6 mm in height and except for packagings of 5 litres capacity or less or of 5 kg maximum net mass when they shall be of an appropriate size."

In paragraph (d), in the text of the note explaining the asterisk, after the clock, replace the second sentence by the following two sentences:

"In such a case and when the clock is placed adjacent to the type approval mark, the indication of the year in the mark may be waived. However, when the clock is not placed adjacent to the type approval mark, the two digits of the year in the mark and in the clock shall be identical."

6.1.3 Add the following new **6.1.3.14**:

"6.1.3.14 Where a packaging conforms to one or more than one tested packaging design type, including one or more than one tested IBC or large packaging design type, the packaging may bear more than one type approval mark to indicate the relevant performance test requirements that have been met. Where more than one mark appears on a packaging, the marks shall appear in close proximity to one another and each mark shall appear in its entirety."

Renumber current **6.1.3.14** as **6.1.3.15**.

6.1.4.2 Add the following new **6.1.4.2.6**:

"6.1.4.2.6 If materials used for body, heads, closures and fittings are not in themselves compatible with the contents to be carried, suitable internal protective coatings or treatments shall be applied. These coatings or treatments shall retain their protective properties under normal conditions of carriage."

Renumber the existing **6.1.4.2.6** and **6.1.4.2.7** as **6.1.4.2.7** and **6.1.4.2.8**.

6.1.4.3 Add the following new **6.1.4.3.6**:

"6.1.4.3.6 If materials used for body, heads, closures and fittings are not in themselves compatible with the contents to be carried, suitable internal protective coatings or treatments shall be applied. These coatings or treatments shall retain their protective properties under normal conditions of carriage."

Renumber the existing **6.1.4.3.6** and **6.1.4.3.7** as **6.1.4.3.7** and **6.1.4.3.8**.

6.1.4.18.2 [The amendment in the French and German versions does not apply to the English text.]

Chapter 6.2

6.2.2.1.1 Amend the Table as follows:

- In rows for "ISO 11119-3:2002" and "ISO 11119-3:2013" add the following new Note in the second column:

"NOTE: This standard shall not be used for linerless cylinders manufactured from two parts joined together."

- After "ISO 11119-3:2013", add the following new row:

Reference	Title	Applicable for manufacture
ISO 11119-4:2016	Gas cylinders – Refillable composite gas cylinders – Design, construction and testing – Part 4: Fully wrapped fibre reinforced composite gas cylinders up to 150 / with load-sharing welded metallic liner	Until further notice

6.2.2.1.2 In the Table, in the row containing "ISO 11119-3:2013", add the following new Note in the second column:

"NOTE: This standard shall not be used for linerless tubes manufactured from two parts joined together."

6.2.2.1.3 In the first Table ("For the cylinder shell"), add the following two new rows at the end:

Reference	Title	Applicable for manufacture
ISO 4706:2008	Gas cylinders – Refillable welded steel cylinders – Test pressure 60 bar and below	Until further notice
ISO 7866:2012 + Cor 1:2014	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing NOTE: Aluminium alloy 6351A or equivalent shall not be used.	Until further notice

Amend the headline of the second Table to read as follows:

"For the acetylene cylinder including the porous material:".

6.2.2.2 In the Table, replace "ISO 11114-1:2012" by:

"ISO 11114-1:2012 + A1:2017".

6.2.2.3 Amend the first Table as follows:

- For "ISO 10297:2014", in the column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2022".

- After the row for "ISO 10297:2014", insert the following new row:

Reference	Title	Applicable for manufacture
ISO 10297:2014 + A1:2017	Gas cylinders – Cylinder valves – Specification and type testing	Until further notice

- For "ISO 14246:2014", in the column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2024".

- After the row for "ISO 14246:2014", insert the following new row:

Reference	Title	Applicable for manufacture
ISO 14246:2014 + A1:2017	Gas cylinders – Cylinder valves – Manufacturing tests and examinations	Until further notice

- At the end, add the following new row:

Reference	Title	Applicable for manufacture
ISO 17879:2017	Gas cylinders – Self-closing cylinder valves – Specification and type testing NOTE: This standard shall not be applied to self-closing valves in acetylene cylinders.	Until further notice

6.2.2.4 Amend the first Table as follows:

- Delete the row for "ISO 10462:2005".

- Add the end, after the row for "ISO 22434:2006", add the following new row:

Reference	Title	Applicable for manufacture
ISO 20475:2018	Gas cylinders – Cylinder bundles – Periodic inspection and testing	Until further notice

6.2.2.5.4.8 [The amendment in the German version does not apply to the English text.]

6.2.2.7.2 In (c), amend the Note to read:

"NOTE: For the purpose of this mark the country of approval means the country of the competent authority that authorized the initial inspection and test of the individual receptacle at the time of manufacture."

6.2.2.7.4 In (p), replace "ISO 11114-1:2012" by:

"ISO 11114-1:2012 + A1:2017".

6.2.2.9.2 In (c), amend the Note to read:

"NOTE: For the purpose of this mark the country of approval means the country of the competent authority that authorized the initial inspection and test of the individual system at the time of manufacture."

In (j), replace "ISO 11114-1:2012" by:

"ISO 11114-1:2012 + A1:2017".

6.2.2.11 After the Table, add the following sentence:

"For refillable pressure receptacles, the conformity assessment of valves and other demountable accessories having a direct safety function may be carried out separately from that of the pressure receptacles."

6.2.3.5.1 Amend Note 3 to read as follows:

"3: The check of 6.2.1.6.1 (b) and the hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by ultrasonic examination carried out in accordance with EN ISO 18119:[2018] for cylinders and tubes of seamless steel or seamless aluminium alloy. Notwithstanding clause B.1 of this standard, all cylinders and tubes whose wall thickness is less than the minimum design wall thickness shall be rejected."

6.2.4.1 (a) Amend the Table, under "**for design and construction**" as follows:

- For "Annex I, Parts 1 to 3 to 84/525/EEC", "Annex I, Parts 1 to 3 to 84/526/EEC" and "Annex I, Parts 1 to 3 84/527/EEC", in column (2), insert the following Note:

"NOTE: Notwithstanding the repeal of the directives 84/525/EEC, 84/526/EEC and 84/527/EEC as published in the Official Journal of the European Communities No. L 300 of 19 November 1984 the annexes of these directives remain applicable as standards for design, construction and initial inspection and test for gas cylinders. These annexes may be found at: <https://eur-lex.europa.eu/oj/direct-access.html>."

- For "EN 12807:2008", in column (4), replace "Until further notice" by:

"Between 1 January 2009 and 31 December 2022".

- After the row for "EN 12807:2008", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN 12807:[2019]	LPG equipment and accessories – Transportable refillable brazed steel cylinders for liquefied petroleum gas (LPG) – Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	

- For "EN ISO 9809-1:2010", in column (4), replace "Until further notice" by:
"Between 1 January 2013 and 31 December 2022".

- After the row for "EN ISO 9809-1:2010", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 9809-1:2019	Gas cylinders – Design, construction and testing of refillable seamless steel gas cylinders and tubes – Part 1: Quenched and tempered steel cylinders and tubes with tensile strength less than 1100 MPa	6.2.3.1 and 6.2.3.4	Until further notice	

- For "EN ISO 9809-2:2010", in column (4), replace "Until further notice" by:
"Between 1 January 2013 and 31 December 2022".

- After the row for "EN ISO 9809-2:2010", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 9809-2:2019	Gas cylinders – Design, construction and testing of refillable seamless steel gas cylinders and tubes – Part 2: Quenched and tempered steel cylinders and tubes with tensile strength greater than or equal to 1100 MPa	6.2.3.1 and 6.2.3.4	Until further notice	

- For "EN ISO 9809-3:2010", in column (4), replace "Until further notice" by:
"Between 1 January 2013 and 31 December 2022".

- After the row for "EN ISO 9809-3:2010", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 9809-3:2019	Gas cylinders – Design, construction and testing of refillable seamless steel gas cylinders and tubes – Part 3: Normalized steel cylinders and tubes	6.2.3.1 and 6.2.3.4	Until further notice	

- [The amendment to "EN 12245:2002" in the German version does not apply to the English text.]
- [The amendment to "EN 12245:2009 + A1:2011" in the German version does not apply to the English text.]

- (b) Amend the Table, under "**for closures**", as follows:

- For "EN ISO 17871:2015", in column (4), replace "Until further notice" by:
"Between 1 January 2017 and 31 December 2021".

- After the row for "EN ISO 17871:2015", insert following new row:

"

(1)	(2)	(3)	(4)	(5)
EN ISO 17871:2015 + A1:2018	Gas cylinders – Quick-release cylinder valves – Specification and type testing	6.2.3.1, 6.2.3.3 and 6.2.3.4	Until further notice	

"

6.2.4.2

Amend the Table as follows:

- For "EN 1968:2002 +A1:2005 (except annex B)", in column (3), replace "Until further notice" by:

"Until 31 December 2022".

- For "EN 1802:2002 (except annex B)", in column (3), replace "Until further notice" by:

"Until 31 December 2022".

- After the row for "EN 1802:2002 (except annex B)", insert the following new row:

"

(1)	(2)	(3)
EN ISO 18119:[2018]	Gas cylinders – Seamless steel and seamless aluminium-alloy gas cylinders and tubes – Periodic inspection and testing NOTE: Notwithstanding clause B.1 of this standard, all cylinders and tubes whose wall thickness is less than the minimum design wall thickness shall be rejected.	Mandatorily from 1 January 2023

"

- For "EN ISO 10462:2013", in column (3), replace "Until further notice" by:

"Until 31 December 2022".

- After the row for "EN ISO 10462:2013", insert the following new row:

"

(1)	(2)	(3)
EN ISO 10462:2013 + A1:2019	Gas cylinders – Acetylene cylinders – Periodic inspection and maintenance – Amendment 1 (ISO 10462:2013 + A1:2019)	Mandatorily from 1 January 2023

"

- For "EN 1803:2002 (except Annex B)", in column (3), replace "Until further notice" by:

"Until 31 December 2022".

- After the row for "EN 1803:2002 (except Annex B)", insert the following new row:

"

(1)	(2)	(3)
EN ISO 10460:2018	Gas cylinders – Welded aluminium-alloy, carbon and stainless steel gas cylinders – Periodic inspection and testing	Mandatorily from 1 January 2023

"

- For "EN 1440:2016 (except annex C)", in column (3), replace "Until further notice" by:

"Until 31 December 2021".

- After the row for "EN 1440:2016 (except annex C)", insert the following new row:

"

(1)	(2)	(3)
EN 1440:2016 + A1:2018 (except Annex C)	LPG equipment and accessories – Transportable refillable traditional welded and brazed steel Liquefied Petroleum Gas (LPG) cylinders – Periodic inspection	Mandatorily from 1 January 2022

"

- For "EN 16728:2016 (except clause 3.5, Annex F and Annex G)", in column (3), replace "Until further notice" by:

"Until 31 December 2021".

- After the existing row for "EN 16728:2016 (except clause 3.5, Annex F and Annex G)", insert the following new row:

"

(1)	(2)	(3)
EN 16728:2016 + A1:2018	LPG equipment and accessories – Transportable refillable LPG cylinders other than traditional welded and brazed steel cylinders – Periodic inspection	Mandatorily from 1 January 2022

"

6.2.5

After the second paragraph, add the following new paragraph:

"As soon as a standard newly referenced in 6.2.2 or 6.2.4 can be applied, the competent authority shall withdraw its recognition of the relevant technical code. A transitional period ending no later than the date of entry into force of the next edition of RID may be applied."

At the end of the first sentence of the new fourth paragraph, add:

"and shall update the list if it changes".

6.2.6.1.5

Amend the first sentence to read as follows:

"The internal pressure of aerosol dispensers at 50 °C shall exceed neither two-thirds of the test pressure nor 1.2 MPa (12 bar) when using flammable liquefied gases, 1.32 MPa (13.2 bar) when using non-flammable liquefied gases, and 1.5 MPa (15 bar) when using non-flammable compressed or dissolved gases."

Chapter 6.3

At the end of the title, add:

"(UN Nos. 2814 and 2900)".

6.3.1.1

At the end, add:

", UN Nos. 2814 and 2900".

6.3.4.1

Amend the third sentence to read as follows:

"Letters, numerals and symbols shall be at least 12 mm high, except for packagings of 30 litres capacity or less or of 30 kg maximum net mass, when they shall be at least 6 mm in height and except for packagings of 5 litres capacity or less or of 5 kg maximum net mass when they shall be of an appropriate size."

6.3.5.1.6

[The amendment in the German version does not apply to the English text.]

6.3.5.2.2 In the Table, amend the column headings as follows:

- Replace "6.3.5.3.6.1" by:
"6.3.5.3.5.1".
- Replace "6.3.5.3.6.2" by:
"6.3.5.3.5.2".
- Replace "6.3.5.3.6.3" by:
"6.3.5.3.5.3".

Under "Explanation for use of the table", amend the first sub-paragraph as follows:

- Replace "6.3.5.3.6.1" by:
"6.3.5.3.5.1".
- Replace "6.3.5.3.6.2" by:
"6.3.5.3.5.2".
- Replace "6.3.5.3.6.3" by:
"6.3.5.3.5.3".
- At the end, delete:
"five times after conditioning".

6.3.5.3.1 Before the text, add the following new title:

"Drop height and target".

6.3.5.3.2 becomes **6.3.5.3.2.1**.

6.3.5.3 Insert the following new **6.3.5.3.2**:

"6.3.5.3.2 Number of test samples and drop orientation".

6.3.5.3.3 becomes **6.3.5.3.2.2**.

6.3.5.3.4 becomes **6.3.5.3.3**.

6.3.5.3.5 becomes **6.3.5.3.4**.

6.3.5.3.6 becomes **6.3.5.3.5**.

6.3.5.3.6.1 becomes **6.3.5.3.5.1**.

6.3.5.3.6.2 becomes **6.3.5.3.5.2**.

6.3.5.3.6.3 becomes **6.3.5.3.5.3**.

Amend as follows:

- Replace "6.3.5.3.6.1" by:
"6.3.5.3.5.1".
- Replace "6.3.5.3.6.2" by:
"6.3.5.3.5.2".
- In the last sentence, replace "in 6.3.5.3.2" by:
"in 6.3.5.3.2.1 or in 6.3.5.3.2.2, as appropriate,".

Chapter 6.4

6.4.2.4 Delete:

"and finished".

6.4.2 Insert the following new **6.4.2.8** to read as follows:

"6.4.2.8 The design of the package shall take into account ageing mechanisms."

Current **6.4.2.8** to **6.4.2.13** become **6.4.2.9** to **6.4.2.14**.

6.4.2.12 (current 6.4.2.11) Replace "radiation level" by:

"dose rate".

6.4.4 Amend the sentence after the heading to read as follows:

"An excepted package shall be designed to meet the requirements specified in 6.4.2.1 to 6.4.2.13 and, in addition, the requirements of 6.4.7.2 if it contains fissile material allowed by one of the provisions of 2.2.7.2.3.5 (a) to (f)."

6.4.5.2 In (b), replace "radiation level" by:

"dose rate".

6.4.5.4.1 In (c) (ii), replace "radiation level" by:

"dose rate".

6.4.5.4.2 In (c), replace "radiation level" by:

"dose rate".

6.4.5.4.3 In the first sentence, delete:

"liquids and gases".

In (c), replace "radiation level" by:

"dose rate".

- 6.4.5.4.4** In (c) (ii), replace "radiation level" by:
"dose rate".
- 6.4.5.4.5** In (b) (ii), replace "radiation level" by:
"dose rate".
- 6.4.6.2** In the introductory sentence, replace "it would meet" by:
"the package would meet".
- 6.4.7.3** [The amendment in the German version does not apply to the English text.]
- 6.4.7.9** Replace "it shall be capable" by:
"the containment system shall be capable".
- 6.4.7.14** In (b), replace "radiation level" by:
"dose rate".
- 6.4.7.17** Amend to read as follows
- "6.4.7.17** A Type A package designed for gases shall prevent loss or dispersal of the radioactive contents if the package were subjected to the tests specified in 6.4.16, except for a Type A package designed for tritium gas or for noble gases."
- 6.4.8.2** In paragraph (b), replace "Lessen the efficiency" by:
"Lessening of the efficiency".
- 6.4.8.8** In the first indent after (b) (ii), replace "radiation level" by:
"dose rate".

In the last sentence, before "contamination limits", insert:
"non-fixed".
- 6.4.8.12** [The amendment in the German version does not apply to the English text.]
- 6.4.9.1** At the beginning of the second sentence, delete:
"Notwithstanding,".
- 6.4.10.3** In (b) (i), replace "radiation level" by:
"dose rate".
- 6.4.11.2** In (c) (iv), replace "maximum mass" by:
"total mass".

In (d), replace "their total concentration" by:
"the total concentration of these materials".

- 6.4.11.8** [The amendment to the first sentence in the German version does not apply to the English text.]
- [The amendment to the third sentence in the German version does not apply to the English text.]
- In (b) (i) after "between the valve", insert:
- "or the plug".
- In (b) (i), after "the valves", insert:
- "and the plug".
- 6.4.12.1** In (a), at the beginning, delete:
- "LSA-III material, or".
- 6.4.13** Amend the introductory sentence to read as follows:
- "After each test or group of tests or sequence of the applicable tests, as appropriate, specified in 6.4.15 to 6.4.21:".
- 6.4.15.4** In (a), replace "of drop" by:
- "of the drop" and add commas before "measured" and after "of the target".
- 6.4.15.6** In (b), replace "of drop" by:
- "of the drop" and add commas before "measured" and after "of the specimen".
- 6.4.17.2** In (b), in the third sentence, replace "section" by:
- "cross-section".
- [The second amendment to (b) in the German version does not apply to the English text.]
- 6.4.17.3** Replace "are everywhere decreasing" by:
- "are decreasing in all parts of the specimen".
- 6.4.23.2** becomes **6.4.23.2.1**.
- Insert the following new heading:
- "6.4.23.2 Applications for approval of shipment"**.
- 6.4.23.2** Insert a new paragraph **6.4.23.2.2** to read as follows:
- "6.4.23.2.2** An application for approval of SCO-III shipments shall include:
- (a) A statement of the respects in which, and of the reasons why, the consignment is considered SCO-III;

- (b) Justification for choosing SCO-III by demonstrating that:
 - (i) No suitable packaging currently exists;
 - (ii) Designing and/or constructing a packaging or segmenting the object is not practically, technically or economically feasible;
 - (iii) No other viable alternative exists;
- (c) A detailed description of the proposed radioactive contents with reference to their physical and chemical states and the nature of the radiation emitted;
- (d) A detailed statement of the design of the SCO-III, including complete engineering drawings and schedules of materials and methods of manufacture;
- (e) All information necessary to satisfy the competent authority that the requirements of 4.1.9.2.4 (e) and the requirements of 7.5.11, CW 33 (2), if applicable, are satisfied;
- (f) A transport plan;
- (g) A specification of the applicable management system as required in 1.7.3."

6.4.23.4 Insert a new paragraph (f) to read as follows:

"(f) If the package is to be used for shipment after storage, a justification of considerations to ageing mechanisms in the safety analysis and within the proposed operating and maintenance instructions;"

Current paragraphs (f) to (i) become (g) to (j).

At the end of new paragraph (i) (current (h)), delete:

"and".

At the end of new paragraph (j) (current (i)), replace "." by:

"; and".

Add a new paragraph (k) to read as follows:

"(k) For packages which are to be used for shipment after storage, a gap analysis programme describing a systematic procedure for a periodic evaluation of changes of applicable regulations, changes in technical knowledge and changes of the state of the package design during storage."

6.4.23.8 In (c), replace "calculative methods" by:

"calculations".

6.4.23.10 In (c), replace "radiation levels" by:

"dose rates".

In (f), replace "radiation levels" by:

"dose rates".

In (h), replace "International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No. 115, IAEA, Vienna (1996)" by:

"Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA Safety Standards Series No. GSR Part 3, IAEA, Vienna (2014)".

6.4.23.11 Delete paragraph (d).

6.4.23.12 In (a), in the first sentence, replace "6.4.23.11 (a), (b), (c) and (d)" by:

"6.4.23.11 (a), (b) and (c)".

In (a), in the first sentence, delete:

"including, if applicable, the symbol "-96",".

In (a), at the end of the first sentence, replace "identification marks" by:

"identification mark".

6.4.23.15 In paragraph (k) (iii), replace "contents" by:

"package".

6.4.23.17 In (n) (iv), replace "contents" by:

"package".

Insert a new paragraph (p) to read as follows:

"(p) For package designs subject to the transitional provisions in 1.6.6.2.1, a statement specifying those requirements of RID applicable as from 1 January 2021 with which the package does not conform;".

Current paragraphs (p) to (w) become (q) to (x).

Chapter 6.5

6.5.2.1 Add the following new paragraph **6.5.2.1.3**:

"6.5.2.1.3 Where an IBC conforms to one or more than one tested IBC design type, including one or more than one tested packaging or large packaging design type, the IBC may bear more than one mark to indicate the relevant performance test requirements that have been met. Where more than one mark appears on an IBC, the marks shall appear in close proximity to one another and each mark shall appear in its entirety."

6.5.2.2.1 Delete the last row in the Table ("Maximum permitted stacking load") and the corresponding footnote b.

6.5.2.2.2 In the first sentence, delete:

"when the IBC is in use".

6.5.2.2.4 Amend the last sentence of the first sub-paragraph to read as follows:

"They shall be durable, legible and placed in a location so as to be readily accessible for inspection after assembling the inner receptacle in the outer casing. When the marks on the inner receptacle are not readily accessible for inspection due to the design of the outer casing, a duplicate of the required marks on the inner receptacle shall be placed on the outer casing preceded by the wording "Inner receptacle". This duplicate shall be durable, legible and placed in a location so as to be readily accessible for inspection."

In the second sub-paragraph, amend the second sentence to read as follows:

"In such a case, the date may be waived from the remainder of the marks."

6.5.5.1.6 Insert a new introductory sentence as follows:

"Metal IBCs with a capacity of more than 1500 litres shall comply with the following minimum wall thickness requirement:".

Amend the Table under (a) to read as follows:

"

Wall thickness (T) in mm			
Types 11A, 11B, 11N		Types 21A, 21B, 21N, 31A, 31B, 31N	
Unprotected	Protected	Unprotected	Protected
$T = C/2000 + 1.5$	$T = C/2000 + 1.0$	$T = C/1000 + 1.0$	$T = C/2000 + 1.5$

"

6.5.5.4.2 [The amendments in the German version do not apply to the English text.]

Chapter 6.6

6.6.3.3 In the first sentence, delete:

"when the large packaging is in use".

6.6.3 Add the following new paragraph **6.6.3.4**:

"6.6.3.4 Where a large packaging conforms to one or more than one tested large packaging design type, including one or more than one tested packaging or IBC design type, the large packaging may bear more than one mark to indicate the relevant performance test requirements that have been met. Where more than one mark appears on a large packaging, the marks shall appear in close proximity to one another and each mark shall appear in its entirety."

Chapter 6.7

6.7.2.4.8 [The amendment in the French version does not apply to the English text.]

6.7.2.12.2.1 Amend the definition of factor "U" to read:

"U = heat transfer coefficient of the insulation, in $\text{kW}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$, at 38 °C".

6.7.2.19.6 becomes **6.7.2.19.6.1**.

- 6.7.2.19** Insert the following new paragraph **6.7.2.19.6**:
- "6.7.2.19.6** Inspection and filling of portable tanks after the date of expiry of the last periodic inspection and test".
- 6.7.2.19.6** Insert the following new paragraph **6.7.2.19.6.2**:
- "6.7.2.19.6.2** Except as provided for in 6.7.2.19.6.1, portable tanks which have missed the timeframe for their scheduled 5 year or 2.5-year periodic inspection and test may only be filled and offered for carriage if a new 5-year periodic inspection and test is performed according to 6.7.2.19.4."
- 6.7.3.2.12** In (b), replace "thermal conductance" by:
"heat transfer coefficient".
- 6.7.3.4.1** After (b), add the following new sub-paragraph:
"In addition, any relevant portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3 shall be taken into account."
- 6.7.3.4.5** [The amendment in the French version does not apply to the English text.]
- 6.7.3.5.5** [The amendment in the French version does not apply to the English text.]
- 6.7.3.8.1.1** Amend the definition of factor "U" to read:
"U = heat transfer coefficient of the insulation, in $\text{kW}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$, at 38 °C".
- 6.7.3.15.6** becomes **6.7.3.15.6.1**.
- 6.7.3.15** Insert the following new paragraph **6.7.3.15.6**:
- "6.7.3.15.6** Inspection and filling of portable tanks after the date of expiry of the last periodic inspection and test".
- 6.7.3.15.6** Insert the following new paragraph **6.7.3.15.6.2**:
- "6.7.3.15.6.2** Except as provided for in 6.7.3.15.6.1, portable tanks which have missed the timeframe for their scheduled 5 year or 2.5-year periodic inspection and test may only be filled and offered for carriage if a new 5-year periodic inspection and test is performed according to 6.7.3.15.4."
- 6.7.4.4.7** [The amendment in the French version does not apply to the English text.]
- 6.7.4.14.6** becomes **6.7.4.14.6.1**.
- 6.7.4.14** Insert the following new paragraph **6.7.4.14.6**:
- "6.7.4.14.6** Inspection and filling of portable tanks after the date of expiry of the last periodic inspection and test".

6.7.4.14.6 Add a new **6.7.4.14.6.2** to read as follows:

"6.7.4.14.6.2 Except as provided for in 6.7.4.14.6.1, portable tanks which have missed the timeframe for their scheduled 5 year or 2.5-year periodic inspection and test may only be filled and offered for carriage if a new 5-year periodic inspection and test is performed according to 6.7.4.14.4."

6.7.5.2.3 In the first sentence, after "seamless steel", insert:

"or composite construction".

6.7.5.2.4 In (a), replace "ISO 11114-1:2012" by:

"ISO 11114-1:2012 + A1:2017".

Chapter 6.8

6.8.2.1.11 Replace "welded tanks" by:

"welded shells".

6.8.2.1.18 At the end of footnote 5, add the following sentences:

"However, the cross section of shells according to 6.8.2.1.14 (a) may contain recesses or protrusions such as sumps, cut-outs or recessed manhole constructions. They may be constructed of flat or shaped (concave or convex) sheet metal. Dents and other unintended deformations shall not be regarded as recesses or protrusions."

6.8.2.2.2 [The amendment in the French version does not apply to the English text.]

6.8.2.5.1 In the ninth indent, replace "test" by:

"inspection" (five times).

In the tenth indent, replace "tests" by:

"inspection".

6.8.2.6.1 Amend the Table, under "**for design and construction of tanks**", as follows:

- For "EN 14025:2013 + A1:2016 (except Annex B)", in column (4), replace "Until further notice" by:

"Between 1 January 2017 and 31 December 2021".

- After "EN 14025:2013 + A1:2016 (except Annex B)", insert the following new rows:

(1)	(2)	(3)	(4)	(5)
EN 14025:2018	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction NOTE: Materials of shells shall at least be attested by a type 3.1 certificate issued in accordance with standard EN 10204.	6.8.2.1 and 6.8.3.1	Until further notice	
EN 12972:2018	Tanks for transport of dangerous goods – Testing, inspection and marking of metallic tanks	6.8.2.3	Mandatorily from	

			1 January 2022	
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"

6.8.2.6.2 Amend the Table as follows:

- For "EN 12972:2007", in column (4), replace "Until further notice" by:

"Until 30 June 2021".

- After "EN 12972:2007", insert the following new row:

"

(1)	(2)	(3)	(4)	(5)
EN 12972:2018	Tanks for transport of dangerous goods – Testing, inspection and marking of metallic tanks	6.8.2.4 6.8.3.4	Mandatorily from 1 July 2021	

"

6.8.2.7 After the first sub-paragraph, insert the following new sub-paragraph:

"As soon as a standard newly referenced in 6.8.2.6 can be applied, the competent authority shall withdraw its recognition of the relevant technical code. A transitional period ending no later than the date of entry into force of the next edition of RID may be applied."

At the end of the first sentence of the new third sub-paragraph, add:

"and shall update the list if it changes".

6.8.3.4.12 In the third sentence, replace "6.8.3.4.6" by:

"6.8.2.4.2 and 6.8.2.4.3".

6.8.3.5.10 In the seventh indent, replace "test" by:

"inspection" (twice).

In the eighth indent, replace "tests" by:

"inspection".

6.8.3.5.11 In the last indent of the left-hand column, replace "test" by:

"inspection".

6.8.3.7 After the first sub-paragraph, insert the following new sub-paragraph:

"As soon as a standard newly referenced in 6.8.3.6 can be applied, the competent authority shall withdraw its recognition of the relevant technical code. A transitional period ending no later than the date of entry into force of the next edition of RID may be applied."

At the end of the first sentence of the new fourth sub-paragraph, add:

"and shall update the list if it changes".

6.8.4 (b)

TE 12 [The amendment in the German version does not apply to the English text.]

6.8.4 (d)

TT 6 Amend the text in the left-hand column to read:

"The periodic inspection shall be carried out at least every 4 years."

TT 8 In the first sub-paragraph, replace "test" by:

"inspection".

Chapter 6.9

6.9.6.1 At the end of the second indent, replace "." by:

",".

Add a new third indent to read as follows:

"– the second part of the tank code shall indicate the highest value of the calculation pressure for the substance(s) permitted for carriage according to the type approval certificate."

Chapter 6.10

6.10.3.8 In (a), add a new Note to read as follows:

"NOTE: This requirement may, for example, be complied with by the use of a vertical pipe or a low-level outlet with a connection which allows, when necessary, attachment of a hose."

6.10.4 Replace "tests" by:

"inspection".

Chapter 6.11

6.11.4.1 In the Note, replace "the UIC leaflets 591, 592 and 592- 2 to 592-4" by:

"IRS 50591 ("Roller units for horizontal transshipment – Technical conditions governing their use in international traffic")² and IRS 50592 ("Intermodal Transport Units (other than semi-trailers) for vertical transshipment and suitable for carriage on wagons – Minimum requirements")³ published by UIC".

Footnotes 2 and 3 read as follows:

² 1st edition of IRS (International Railway Solution) applicable as from 1 January 2020.

³ 1st edition of IRS (International Railway Solution) applicable as from 1 January 2019."

Current footnote 2 becomes footnote 4.

PART 7**Chapter 7.1**

7.1.3 Replace "UIC leaflets 591 (status at 01.10.2007, 3rd edition), 592 (status at 01.10.2013, 2nd edition), 592-2 (status at 01.10.2004, 6th edition), 592-3 (status at 01.01.1998, 2nd edition) and 592-4 (status at 01.05.2007, 3rd edition)" by:

"IRS 50591 ("Roller units for horizontal transshipment – Technical conditions governing their use in international traffic")¹ and IRS 50592 (Intermodal Transport Units (other than semi-trailers) for vertical transshipment and suitable for carriage on wagons – Minimum requirements)² published by UIC".

At the end, replace "UIC leaflets 591, 592 and 592-2 to 592-4" by:

"IRS 50591 and IRS 50592 of UIC".

Footnotes 1 and 2 read as follows:

¹ 1st edition of IRS (International Railway Solution) applicable as from 1 January 2020.

² 1st edition of IRS (International Railway Solution) applicable as from 1 January 2019."

Current footnotes 1 and 2 become footnotes 3 and 4.

Chapter 7.5**7.5.11**

CW 33 In (2), after the first sentence, add the following new sentence:

"For SCO-III, the limits in Table C below may be exceeded provided that the transport plan contains precautions which are to be employed during carriage to obtain an overall level of safety at least equivalent to that which would be provided if the limits had been applied."

Amend paragraph (3.3) (b) to read as follows:

"(b) The dose rate under routine conditions of carriage shall not exceed 2 mSv/h at any point on the external surface of the wagon or container, and 0.1 mSv/h at 2 m from the external surface of the wagons or container, except for consignments carried under exclusive use for which the dose rate limits around the wagon are set forth in (3.5) (b) and (c)."

In paragraph (3.5), replace "radiation level" by:

"dose rate".

In paragraph (5.1), replace "radiation level" by:

"dose rate".

In paragraph (5.1), in the last sentence, replace "persons" by:

"people".

In paragraph (5.4), replace "radiation level" by:

"dose rate".

In paragraph (5.5), at the beginning, delete:

", tank, intermediate bulk container".

CW 36

Amend the second sentence to read as follows:

"If this is not feasible and packages are carried in other closed wagons or containers, gas exchange between the load compartment and accessible compartments during carriage shall be prevented and the cargo doors of the wagons or containers shall be marked with the following in letters not less than 25 mm high:

"WARNING
NO VENTILATION
OPEN WITH CAUTION"
