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# COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the Transport of Dangerous Goods

### REPORT OF THE SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS ON ITS THIRTY-FOURTH SESSION

(Geneva, 1-9 December 2008)

#### **CONTENTS**

		Paragraphs	Page
I.	ATTENDANCE	1-6	4
II.	ADOPTION OF THE AGENDA (agenda item 1)	7	5
III.	EXPLOSIVES AND RELATED MATTERS (agenda item 2)	8-26	5
	A. Additional test for 1.4S classification	8-12	5
	B. Desensitized explosives	13-14	5
	C. Miscellaneous proposals	15-24	6
	D. Environmental hazards	25-26	7
IV.	PERFORMANCE OF PACKAGINGS, INCLUDING IBCs		
	(agenda item 3)	27-30	8
	A. Permeation through the walls of plastic packagings	27	8
	B. Packing instructions P621 and IBC620	28-29	8
	C. Date of manufacture of inner receptacles of composite IBCs	30	8
V.	LISTING, CLASSIFICATION AND PACKING (agenda item 4)	31-68	8
	A. Batteries	31-41	8
	B. Fuel cells	42-44	10
	C. Miscellaneous	45-68	11
VI.	LIMITED QUANTITIES (MULTIMODAL HARMONIZATION)		
	(agenda item 5)	69-70	14

#### **CONTENTS** (continued)

		Paragraphs	Page
VII.	ELECTRONIC DATA INTERCHANGE (EDI) FOR DOCUMENTATION PURPOSES (agenda item 6)	71	14
VIII.	MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF		
	DANGEROUS GOODS (agenda item 7)	72-90	14
	A. Gases	72-74	14
	B. Tanks	75-76	15
	C. Genetically modified organisms and micro-organisms (GMOs	77.90	1.5
	and GMMOs)	77-80	15
TT 7	D. Miscellaneous	81-90	16
IX.	HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE		
	TRANSPORT OF RADIOACTIVE MATERIAL (agenda item 8)	91-100	18
X.	GLOBAL HARMONIZATION OF TRANSPORT OF	<i>J</i> 1 100	10
71.	DANGEROUS GOODS REGULATIONS WITH THE UN MODEL		
	REGULATIONS (agenda item 9)	101-106	19
	A. Outcome of the 13 <sup>th</sup> session of the IMO Dangerous Goods,		
	Solid Cargoes and Containers (DSC) Sub-Committee	101-102	19
	B. Multimodal Harmonization	103-106	20
XI.	GUIDING PRINCIPLES FOR THE MODEL REGULATIONS		
	(agenda item 10)	107	20
XII.	ISSUES RELATING TO THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF		
	CHEMICALS (agenda item 11)	108-117	21
	A. Corrosivity	108-112	21
	B. Physical hazards	113-114	21
	C. Substances which, in contact with water, emit toxic gases	115	22
	D. Miscellaneous	116-117	22
XIII	PROGRAMME OF WORK FOR THE NEXT BIENNIUM (agenda		
	item 12)	118-120	23
XIV.	DRAFT RESOLUTION 2009/ OF THE ECONOMIC AND		
	SOCIAL COUNCIL (agenda item 13)	121	23
XV.	ELECTION OF OFFICERS FOR THE BIENNIUM 2009-2010		
	(agenda item 14)	122	24
XVI.	ANY OTHER BUSINESS (agenda item 15)	123-126	24
XVII.	ADOPTION OF THE REPORT (agenda item 16)	127	24

#### **CONTENTS** (continued)

#### Annexes

		Page
I.	Draft amendments to the Recommendations on the Transport of	
	Dangerous Goods, Model Regulations and Manual of Tests	
	and Criteria	25
II.	Multimodal Harmonization	26

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#### I. ATTENDANCE

- 1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its thirty-fourth session from 1 to 9 December 2008, with Mr. R. Richard (United States of America) as Chairman and Mr. C. Pfauvadel (France) as Vice-Chairman.
- 2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Poland, Portugal, Russian Federation, South Africa, Spain, Sweden, United Kingdom and United States of America.
- 3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries also took part: Kenya, Qatar, Romania, Switzerland and Tunisia.
- 4. The following intergovernmental organizations were also represented: Intergovernmental Organization for International Carriage by Rail (OTIF).
- 5. Representatives of the International Atomic Energy Agency (IAEA); the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) were also present.
- 6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: American Biological Safety Association (ABSA); Association of Hazmat Shippers, Inc. (AHS); Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); European Biosafety Association (EBSA); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Council of the Paint, Printing Ink and Artists' Colour Industry (CEPE); European Industrial Gases Association (EIGA); European Metal Packaging (EMPAC); Federation of European Aerosol Associations (FEA); Global Express Association (GEA); International Air Transport Association (IATA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Association for the Promotion and Management of Portable Rechargeable Batteries (RECHARGE aisbl); International Confederation of Container Reconditioners (ICCR); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemical Associations (ICCA); International Dangerous Goods and Containers Association (IDGCA); International Electrotechnical Commission (IEC); International Federation of Airline Pilots' Associations (IFALPA); International Fireworks Association (IFA); International Organization for Standardization (ISO); International Paint and Printing Ink Council (IPPIC); International Tank Container Organization (ITCO); International Vessel Operators Hazardous Materials Association (VOHMA); Institute of Makers of Explosives (IME); KiloFarad International (kFI); Organisation internationale pour la réduction des catastrophes (OIRC); Portable Rechargeable Battery Association (PRBA); Responsible Container Management Association of Southern Africa (RCMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); US Fuel Cells Council (USFCC).

#### **II. ADOPTION OF THE AGENDA** (agenda item 1)

Documents: ST/SG/AC.10/C.3/67 (Provisional agenda)

ST/SG/AC.10/C.3/67/Add.1 (List of documents)

<u>Informal documents</u>: INF.1, INF.2 (Lists of documents) and INF.12 (Provisional timetable)

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents (INF.1-INF.75).

#### III. EXPLOSIVES AND RELATED MATTERS (agenda item 2)

#### A. Additional test for 1.4S classification

Documents: ST/SG/AC.10/C.3/2008/89 (Canada)

<u>Informal documents</u>: INF.4 (Canada)

INF.26 (Secretariat) INF.36 (United States)

INF.39 (IME)

INF.54 (Lunchtime working group)

- 8. The Sub-Committee adopted Canada's proposal and the related amendments contained in informal documents INF.4 and INF.36 (see annex I).
- 9. The Sub-Committee decided that special provision 347 should apply only to those UN Nos. already cited in the consolidated list of amendments ST/SG/AC.10/C.3/2008/97. It is not necessary for it to apply to N.O.S. entries as a N.O.S. classification requires the approval of the competent authority (special provision 178).
- 10. The Sub-Committee agreed that the secretariat's comments in informal document INF.26 were relevant and asked a small group of explosives experts to examine them. The group's conclusions (INF.54) and proposed amendments were adopted (see annex I).
- 11. The Sub-Committee did not accept the request from IME to postpone the adoption of the additional test for 1.4S classification to the next biennium.
- 12. The Sub-Committee asked the small group of explosives experts to discuss the implementation issues raised by IME. The conclusion was that there was no need to provide for transitional measures and that any arising implementation issue could be dealt with by the competent authority.

#### B. Desensitized explosives

Document: ST/SG/AC.10/C.3/2008/39 (Netherlands)

13. This item was considered by a working group as part of the work on the globally harmonized system of classification and labelling of chemicals (GHS), for which the

ST/SG/AC.10/C.3/68 page 6

Sub-Committee is focal point for physical hazards (see also ST/SG/AC.10/C.3/66, paragraph 15).

14. The working group's report will be reproduced as document ST/SG/AC.10/C.3/2009/1 for discussion at the next session.

#### C. Miscellaneous proposals

#### 1. Special packing provisions for goods of Class 1

Documents: ST/SG/AC.10/C.3/2008/26 (Australia)

ST/SG/AC.10/C.3/2008/106 (United Kingdom)

<u>Informal document</u>: INF.56 (Secretariat)

- 15. The Sub-Committee adopted the proposal of the United Kingdom that metal packagings meeting the test requirements for packing group I may be used for the packing of explosives, for the following reasons:
  - (a) This is permitted for non-metal packagings;
  - (b) Drop tests are not representative of the degree of confinement of a package;
  - (c) Explosives are classified according to the results of the tests to which they are subjected as packaged.
- 16. Paragraph 4.1.5.5 was amended accordingly (see annex I).
- 17. As the same reasoning is applicable to organic peroxides and self-reactive substances, paragraph 4.1.7.1.1 was also amended accordingly (see annex I).
- 18. In the light of the Secretariat's observations, amendments were also made to paragraph 4.1.7.2.1 (see annex I).

#### 2. Classification of fireworks

Document: ST/SG/AC.10/C.3/2008/62

19. The expert from Spain was informed that the case of a shot tube containing more than 25 g of pyrotechnic composition and more than 25 % flash composition was not covered by the default fireworks classification table but that fireworks containing more than 25 % flash composition should be classified under division 1.1.

#### 3. HSL Flash Composition Test

Document: ST/SG/AC.10/C.3/2008/105 (United Kingdom)

Informal documents: INF.34 and INF.34/Add.1 (United Kingdom)

20. The proposals by the United Kingdom for the inclusion of a new flash composition test in the Manual of Tests and Criteria and for an amendment to Note 2 to 2.1.3.5.5 were adopted (see annex I).

#### 4. Test Series 7

<u>Informal document</u>: INF.23 (United Kingdom)

21. The Sub-Committee noted the announcement by the expert from the United Kingdom that a meeting of the Test Series 7 informal working group would be held in Bath on 17 and 18 March 2009 and that interested members of the Sub-Committee and the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS Sub-Committee) were invited to attend.

#### 5. Editorial amendment to section 2.1.3.5.5

Informal document: INF.29 (United Kingdom)

22. The Sub-Committee adopted the proposal to replace the term "pyrotechnic composition" with "pyrotechnic substance" in 2.1.3.5.5 and in the default classification table (see annex I).

#### 6. UN 0508, 1-hydroxybenzotriazole

<u>Informal document</u>: INF.48 (Germany)

23. The expert from Germany agreed to defer discussion of her proposal to add a new special provision until the next biennium.

#### 7. Amendment to the Manual of Tests and Criteria - Koenen test

Informal document: INF.49 (Germany)

24. The proposal to amend section 18.6.1.2.2 of the Manual of Tests and Criteria was adopted (see annex I).

#### D. GHS-related issues

Screening test for substances which may have explosive properties and consequential changes

Document: ST/SG/AC.10/C.3/2008/78 (ICCA)

Informal document: INF.59 (ICCA)

25. The proposal to amend the Manual of Tests and Criteria by establishing the conditions under which it is not necessary to conduct certain Series 1 or Series 2 tests was adopted (see annex I).

26. The representative of ICCA was requested to prepare an informal document to bring those amendments and consequential changes to the GHS to the attention of the GHS Sub-Committee (INF.59).

#### IV. PERFORMANCE OF PACKAGINGS, INCLUDING IBCs (agenda item 3)

#### A. Permeation through the walls of plastics packagings

<u>Document</u>: ST/SG/AC.10/C.3/2008/71 (United Kingdom)

<u>Informal document</u>: INF.17 (ICCA)

27. The Sub-Committee considered that on the whole it was up to the consignor to ensure the use of packagings suitable for the transport of a particular material. However, several experts were of the view that the packaging manufacturer bore some responsibility for the provision of suitable packagings. The expert from the United Kingdom thought that the addition of paragraph 6.1.4.0, which had been agreed at the previous session, conferred on the manufacturer an indeterminate degree of responsibility that would be a source of confusion in the event of a dispute. However, his proposal to delete paragraph 6.1.4.0 was not adopted.

#### B. Packing instructions P621 and IBC620

Document: ST/SG/AC.10/C.3/2008/85 (France)

- 28. The Sub-Committee noted that the application of 4.1.1.15 to clinical waste seemed to be the result of an error in the recent revision of the proposals relating to division 6.2, since the 5-year limit on the period that the packagings can be used had not previously been specified and was still not specified for other division 6.2 goods.
- 29. The French proposal to restore the *status quo ante* was adopted.

#### C. Date of manufacture of inner receptacles of composite IBCs

Document: ST/SG/AC.10/C.3/2008/100 (ICPP)

<u>Informal documents</u>: INF.52 (Germany)

INF.57 and INF.57/Rev.1 (ICPP)

30. After discussion, the Sub-Committee adopted the alternative proposal for showing the date of manufacture of inner receptacles as shown in informal document INF.57/Rev.1 (see annex I).

#### V. LISTING, CLASSIFICATION AND PACKING (agenda item 4)

#### A. Batteries

1. Transport of nickel-metal hydride cells and accumulators

<u>Document</u>: ST/SG/AC.10/C.3/2008/70 (VOHMA)

Informal document: INF.11 (PRBA, RECHARGE, BAJ)

31. The proposal by VOHMA to establish a specific UN number for nickel-metal hydride cells and accumulators, in class 9, was not adopted.

Informal documents: INF.10 (PRBA, RECHARGE, BAJ) INF.64 (VOHMA, United Kingdom)

- 32. Several experts were in not in favour of the proposed revision of Special Provision 304 because it implied introducing provisions for non-regulated goods. In addition they felt that introducing this special provision for batteries not mentioned in the dangerous goods list via the alphabetical index was not appropriate since special provisions normally apply to entries of the dangerous goods list only.
- 33. Several experts were also reluctant to introduce a N.O.S entry for batteries in class 8 on the basis of a last minute informal document (INF.64) since this could have unforeseen consequences for the industry and would require careful consideration.
- 34. The proposal in INF.64 was finally withdrawn although some experts felt that this solution should be further investigated to solve the problem.
- 35. The proposal in INF.10, put to the note, was rejected.

#### 2. Testing of large lithium batteries and lithium battery assemblies

Document: ST/SG/AC.10/C.3/2008/86 (PRBA)

Informal document: INF.51 (PRBA)

- 36. Several experts emphasized the importance of improving the current provisions relating to the testing of large lithium batteries, in particular to allow for the increased use of such batteries in electric or hybrid vehicles, taking into consideration global concerns about greenhouse gases.
- 37. The proposals contained in the two documents submitted by PRBA were adopted (see annex I).
- 38. Some experts noted, however, that while it was necessary to take urgent measures to facilitate the use of large batteries, the subject should be kept on the programme of work for the next biennium, so as to ensure that such measures ensured sufficient safety, and to improve them, if necessary.

#### 3. Report of the informal working group on lithium batteries

Informal document: INF.35 (United States of America)

ST/SG/AC.10/C.3/68

page 10

- 39. The Sub-Committee took note of the conclusions of the informal working group held from 11 to 13 November 2008 in Washington, D.C., and of its proposals for future work related to the testing of and criteria for lithium batteries, which it adopted as follows:
  - (a) Re-evaluation of criteria for the thermal test (T.2);
  - (b) Examination of the test method for the impact test (T.6) and consideration of alternative test methods;
  - (c) Review of definitions and terminology in section 38.3 of the Manual of Tests and Criteria, in the light of other recognized standards;
  - (d) Resistance requirements of the external short-circuit tests (T.5);
  - (e) Vibration and shock tests (T.3 and T.4) as applied to different sizes of batteries; and
  - (f) Overcharge tests for battery assemblies, and clarification of definitions for cells, batteries, modules and assemblies.
- 40. A new session of the informal working group will be hosted by the expert from France in Paris from 21-22 April 2009 (see also paragraph 119 of this report).
  - 4. Exception from marking requirements for lithium button cell batteries

<u>Document</u>: ST/SG/AC.10/C.4/2008/94 (PRBA and RECHARGE)

Informal document: INF.63 (PRBA, RECHARGE)

41. The proposal of amendment to special provision 188 in informal document INF.63 was adopted (see annex I).

#### B. Fuel cells

1. UN 3166, engine internal combustion or vehicle, flammable gas powered, or vehicle, flammable liquid powered

Document: ST/SG/AC.10/C.3/2008/72 (USFCC)

- 42. The proposals to amend the proper shipping name and special provision 312 were adopted with minor editorial changes. A definition of "fuel cell" was also added to 1.2.1 (see annex I).
  - 2. Hydrogen in a metal hydride storage system

Documents: ST/SG/AC.10/C.3/2008/73 (USFCC)

ST/SG/AC.10/C.3/2008/74 (USFCC)

<u>Informal documents</u>: INF.9 and INF.9/Rev.1 (ISO)

INF.53 (USFCC) INF.67 (USFCC)

- 43. The Sub-Committee noted that ISO had published ISO 16111:2008, Transportable gas storage devices Hydrogen absorbed in reversible metal hydride.
- 44. After discussions in plenary session, the USFCC proposals were reviewed by a drafting group and the Sub-Committee adopted new or amended definitions, special provisions, and packing requirements for UN 3468, hydrogen in a metal hydride storage system as laid down in INF.67 (see annex I).

#### C. Miscellaneous

#### 1. Special Provision (SP) 274

<u>Documents</u>: ST/SG/AC.10/C.3/2008/25 (CEFIC)

ST/SG/AC.10/C.3/2008/63 (CEFIC)

<u>Informal documents</u>: INF.3 (submitted at the thirty-third session) (CEFIC)

INF.46 (IATA)

INF.55 (United States of America)

- 45. The Sub-Committee noted that the CEFIC proposal was intended primarily to solve documentation problems caused by the lack of harmonization among the various regulations, which was the result of divergences from the Model Regulations in the assigning of SP 274.
- 46. After a lengthy debate and exchange of views, the proposals were put to a vote and the Sub-Committee decided:
  - (a) To assign SP 274 to 14 generic or n.o.s. entries along with a new provision specifying the prohibition of carriage for specific substances (see annex I);
  - (b) To assign SP 274 to 54 division 6.1 entries, to four entries relating to metal catalysts and to three entries relating to substances transported at elevated temperatures (see annex I);
  - (c) Not to assign SP 274 to six entries relating to pharmaceutical products (medicines) (UN Nos. 1851, 3248 and 3249) (see annex I).

#### 2. Filling volume of glass inner packagings in P602

<u>Document</u>: ST/SG/AC.10/C.3/2008/64 (ICCA)

- 47. The Sub-Committee adopted the proposed amendment to packing instructions P601 and P602 with some changes (see annex I).
- 48. Several members pointed out that the problem raised by ICCA as it affects industry practices is not confined to packing instructions P601 and P602. It would be important to revisit the issue in a more global context in the course of the next biennium.

#### 3. Organic peroxides: amendment of listed entries in 2.5.3.2.4

Document: ST/SG/AC.10/C.3/2008/66 (ICCA)

49. The proposed amendments were adopted (see annex I).

#### 4. Special Provision for UN 1404 - Calcium hydride

Document: ST/SG/AC.10/C.3/2008/67 (United Kingdom)

- 50. Several members commented that certain principles had been developed to allow a systematic approach to the transport of dangerous goods packaged in exempted quantities and that they were not in favour of introducing exceptions to those principles.
- 51. As the proposal did not find support, the expert from the United Kingdom withdrew it.

#### 5. Thiourea dioxide (UN 3341): Subsidiary risk 6.1

Document: ST/SG/AC.10/C.3/2008/80 (Germany)

- 52. Several experts considered that OECD test guideline 403, using a nebulized aqueous solution, was not appropriate for assessing the risk involved in transport of a solid substance.
- 53. The expert from Germany said she would submit fresh test data during the next biennium to demonstrate the toxicity of the substance.

#### 6. Amendment to Packing Instruction IBC 520

Document: ST/SG/AC.10/C.3/2008/84 (DGAC)

54. The proposed amendments were adopted (see annex I).

#### 7. Materials which are toxic by inhalation

Document: ST/SG/AC.10/C.3/2008/87 (Netherlands and United States of America)

Informal document: INF.16 (ICCA)

- 55. The proposal to add a new special provision identifying substances that are toxic by inhalation and to introduce stricter portable tank instructions (with a transition period up to 2016) was adopted (see annex I).
- 56. The request by ICCA to exempt UN 1838 (titanium tetrachloride) from this decision was not accepted.

Document: ST/SG/AC.10/C.3/2008/88 (Netherlands)

57. The proposal to reclassify certain isocyanates in division 6.1, packing group I, based on the read across method, and to apply stricter criteria for tank transport to them also was adopted (see annex I).

Document: ST/SG/AC.10/C.3/2008/107 (United States of America)

58. The proposal to assign "E0" to the UN numbers affected by the above-mentioned decisions on documents ST/SG/AC.10/C.3/2008/87 and 88 was deemed logical and was adopted (see annex I). The corresponding amendment to the Guiding Principles was also adopted.

#### 8. Special Provision for UN 3200 - Pyrophoric solid, inorganic N.O.S.

<u>Document</u>: ST/SG/AC.10/C.3/2008/92 (United Kingdom)

- 59. Several members commented that the transport of the articles mentioned in the proposal is authorized and they saw no reason to relax the current safety requirements.
- 60. Other members said they would have liked to see more detail on the behaviour of these articles in tests.
- 61. It was also suggested that a special UN number should be created giving precise and appropriate transport specifications.
- 62. The expert from the United Kingdom withdrew his proposal but asked the Sub-Committee to consider the need to address practical situations of this kind involving very small quantities of dangerous goods.

#### 9. Classification of petroleum sour crude oil

<u>Document</u>: ST/SG/AC.10/C.3/2008/96 (DGAC)

Informal documents: INF.8 (Canada)

INF. 27 (DGAC)

INF.62 (United States of America)

- 63. The Sub-Committee did not adopt the proposal by DGAC which would have reversed the decision taken at the previous session introducing new entries for petroleum sour crude oil, and instead would have introduced a special provision applying to the current UN number 1267, crude oil.
- 64. It was, however, recognized that the provisions adopted at the previous session could be simplified. It was decided to maintain only the UN number intended for 3494 in class 3 with subsidiary risk 6.1, and to remove the UN number intended for 3495 (division 6.1 with subsidiary risk 3), so as to simplify the classification. The main point was to ensure that both hazards were identified. Special provision 343 too was amended. A special provision referring to UN number 3494 was also added in respect of UN number 1267 (see annex I).
- 65. The expert from Canada would submit a new proposal at the next session, which should facilitate classification and assignment to packing groups, in accordance with the characteristics of the petroleum.

### 10. Application of special provision 225 to UN number 1072 (oxygen, compressed)

Document: ST/SG/AC.10/C.3/2008/102 (IATA)

- 66. Proposal 2, which assigned to UN number 1072 a special provision similar to provision 225, was adopted, with a few modifications (see annex I).
- 67. A proposal to limit the overall quantity of deflagrating (propellant) explosives to 1 g instead of 3.2 g was not adopted.

#### 11. Provisions applicable to UN 1845, carbon dioxide, solid

<u>Document</u>: ST/SG/AC.10/C.3/2008/104 (IATA)

68. The amendment in proposal 1 to delete the reference to packing group III in column 5 of the Dangerous Goods List was adopted (see annex I).

#### VI. LIMITED QUANTITIES (MULTIMODAL HARMONIZATION) (agenda item 5)

Document: ST/SG/AC.10/C.3/66, paras 76-77

Informal documents: INF.13 (ICAO)

INF.61 (Drafting group)

- 69. The Sub-Committee took note of the comments made by the ICAO Dangerous Goods Panel on the work on dangerous goods packed in limited quantities and related proposals intended to reflect in the UN Model Regulations the specific requirements for air transport and to allow their use in a chain of transport including air transport.
- 70. After discussion in plenary session, the proposals were reviewed by a drafting group (INF.61) and adopted as revised (see annex I).

### VII. ELECTRONIC DATA INTERCHANGE (EDI) FOR DOCUMENTATION PURPOSES (agenda item 6)

Document: ST/SG/AC.10/C.3/2008/69 (IATA)

<u>Informal document</u>: INF.66 (IATA)

71. The Sub-Committee adopted the proposals by IATA with some amendments (see annex I).

### VIII MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS (agenda item 7)

#### A. Gases

#### 1. Reference to standards

Document: ST/SG/AC.10/C.3/2008/93 (ISO)

72. The proposal to add a reference to ISO 4706:2008 in 6.2.2.1.1 was adopted (see annex I).

#### 2. Marking of refillable UN pressure receptacles (bundles of cylinders)

<u>Document</u>: ST/SG/AC.10/C.3/2008/95 (EIGA)

Informal documents: INF.18 (CGA)

INF.60 (EIGA)

- 73. The Sub-Committee noted that EIGA and CGA would continue discussing the issues raised in the EIGA document, as a draft ISO standard concerning bundles of cylinders was under preparation.
- 74. As a consequence, the only proposal put to the vote was that of paragraph 5 in informal document INF.60, concerning the first paragraph of 6.2.2.7, which was adopted (see annex I).

#### B. Tanks

#### 1. Marking of tanks

Document: ST/SG/AC.10/C.3/2008/81 (Germany)

Informal documents: INF.5 (ITCO)

INF.72 (Germany)

- 75. The proposal to mark the portable tank instruction on the portable tank itself or on a metal plate permanently attached to it was adopted, subject to the inclusion of a transitional measure in section 4.2.6 of the Model Regulations for tanks manufactured before 1 January 2014 (see annex I).
  - 2. Impact testing of UN portable tanks and MEGCs, section 41.2 of the Manual of Tests and Criteria

<u>Document</u>: ST/SG/AC.10/C.3/2008/82 (ITCO)

Informal document: INF.15 (ITCO)

76. The proposal of amendment to section 41.2 was adopted for portable tanks (see annex I). The existing text remain applicable for MEGCs, but further work will be needed to improve it.

#### C. Genetically modified organisms and micro-organisms (GMOs and GMMOs)

Document: ST/SG/AC.10/C.3/2008/76 (EBSA)

Informal documents: INF.7 (Canada)

INF.65, INF.65/Rev.1 and -/Rev.2 (Informal group)

77. Some experts expressed the view that it was not appropriate to keep provisions in the UN Model Regulations for GMOs and GMMOs because they considered that there is no

ST/SG/AC.10/C.3/68

page 16

evidence that there is any immediate physical hazard during transport and that their use and movement was otherwise regulated under different legislative frameworks.

- 78. Others felt on the contrary that their release during transport could cause long term damage to the environment and that their transport, especially in countries where their use was not allowed or was restricted, should also be regulated to prevent accidental release.
- 79. The principle was put to the vote and the Sub-Committee decided that the Model Regulations should contain provisions for regulating the transport of GMOs and GMMOs.
- 80. After discussion, the current provisions were amended in accordance with informal document INF.65/Rev.2 (see annex I).

#### D. Miscellaneous

#### 1. Revision of 7.1.3.2.3

<u>Document</u>: ST/SG/AC.10/C.3/2008/75 (Australia)

81. The proposal was adopted with some modifications (see annex I).

#### 2. Interpretation of 5.2.1.6.1

<u>Document</u>: ST/SG/AC.10/C.3/2008/77 (Switzerland)

82. The Sub-Committee confirmed that the limits given in 5.2.1.6.1 apply to the actual quantity of substance contained in a single packaging or in each inner packaging of a combination packaging, and not to the capacity or maximum mass of a packaging. The Sub-Committee agreed to revise the text for clarifying its interpretation (see annex I).

#### 3. Transport of coolant/conditioning units

Document: ST/SG/AC.10/C.3/2008/90 (United Kingdom)

Informal document: INF.24 (United Kingdom)

83. Since many comments were made on several aspects of the proposal for a new section 5.5.3, the expert from the United Kingdom withdrew it and asked that the comments be sent to him in writing before end of January 2009 so that he could prepare a new document for the next session.

#### 4. Salvage pressure receptacles

<u>Document</u>: ST/SG/AC.10/C.3/2008/91 (Germany)

Informal document: INF.21 (EIGA)

84. Although several experts expressed interest in developing specific provisions for salvage pressure receptacles, the proposed texts, when put to the vote as drafted, were not adopted. The expert of Germany was invited to prepare new proposals which would take account of the comments made.

### 5. Corrections to the Model Regulations and the Manual of Tests and Criteria

<u>Informal documents</u>: INF.22, INF.25, INF.30 and INF.31 (Secretariat)

85. The Sub-Committee approved the corrections suggested by the secretariat (see ST/SG/AC.10/1/Rev.15/Corr.5 and ST/SG/AC.10/11/Rev.4/Corr.1).

#### 6. Classification of mixtures and solutions

Informal documents: INF.33 and –/Add.1 (United States of America) INF.75 (Working group)

- 86. The Sub-Committee took note of the report of the correspondence group on the classification of mixtures and solutions led by the expert from the United States pursuant to the decisions taken at the last session (see ST/SG/AC.10/C.3/66, paras 61-64 and annex III) and agreed that the proposals contained therein should be reviewed by a working group during this session.
- 87. When discussing the report of the working group (INF.75), the expert from Belgium said that, although he recognized that the amendments proposed improved the current provisions concerning the classification of mixtures and solutions, he was reluctant to adopt amendments to the Model Regulations that could have far-reaching consequences on the basis of an informal document, since he had not had the opportunity to consult the parties concerned in his country.
- 88. The representative of ICCA said that he shared the position of the Belgian expert, as he did not participate in the working group deliberations and he could not consult members of his organization in this respect.
- 89. The amendments proposed by the working group were put to the vote and adopted at a large majority (see annex I).

#### 7. Orientation arrows/closures upward

Informal document: INF.37 (United States of America)

90. The proposal to amend 5.2.1.7.2 (f) was adopted with some modifications (see annex I).

# IX. HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE TRANSPORT OF RADIOACTIVE MATERIAL (agenda item 8)

#### 1. Harmonization with the 2009 version of the IAEA Regulations

Document: ST/SG/AC.10/C.3/2008/98 (Secretariat)

<u>Informal documents</u>: INF.43 (International Atomic Energy Agency)

INF.47 (Secretariat)

91. The Sub-Committee adopted the proposals by the secretariat, taking into account the comments by IAEA, with the exception of those relating to 2.7.2.4.1.3 (b) (i), 2.7.2.4.6.1 and 2.7.2.4.6.4, as the proposed wording did not conform to the wording used in Part 2 of the Model Regulations.

#### 2. Miscellaneous proposals

Document: ST/SG/AC.10/C.3/2008/99 (Secretariat)

- 92. The Sub-Committee noted that the proposals by the secretariat reflected the outcome of an IAEA Technical Meeting that had not yet been considered by the IAEA Transport Safety Standards Committee (TRANSSC).
- 93. Accordingly, it was decided to adopt only those proposals concerning 4.1.9.1.5 that rectified an omission in the Model Regulations and not to take action at present on the proposal to assign a specific UN number to uranium hexafluoride transported in a package meeting the requirements for excepted packages.

#### 3. IAEA Review process

Informal document: INF.42 (IAEA)

- 94. The Sub-Committee noted that the IAEA would publish a new edition of its Regulations in 2009, and that the next one would not be published until 2013 at the earliest. Nevertheless the review process of the IAEA Regulations would continue and the IAEA intended to develop a mechanism to ensure communication and cooperation so that the UN Model Regulations and the IAEA Regulations may remain harmonized.
- 95. The Sub-Committee noted that the IAEA had published a guide on security in transport of radioactive material. As it had just been published, it had not been possible to prepare proposals for amendments to Chapter 1.4 of the UN Model Regulations at this session, but this could be considered in the next biennium.

#### 4. Provisions applicable to excepted packages

Document: ST/SG/AC.10/C.3/2008/101 (IATA)

<u>Informal documents</u>: INF.3 (IATA)

INF.40 (IAEA)

96. The Sub-Committee agreed to group the provisions concerning excepted packages in a new section 5.1.5.4 and to amend 1.5.1.5 (a) and 5.2.1.5 accordingly (see annex I).

97. The Sub-Committee agreed to delete the references between square brackets to 7.1.8.5.3 to 7.1.8.6.1 and 7.1.8.5.1 in 1.5.1.5.1 (a) since the IAEA had not required the application of these paragraphs to the transport of excepted packages in the 2009 version of the IAEA Regulations This issue is still under review by the IAEA for future editions of its Regulations.

<u>Document</u>: ST/SG/AC.10/C.3/2008/103 (IATA)

<u>Informal document</u>: INF.41 (IAEA)

98. The Sub-Committee adopted the proposals by IATA according to which excepted packages containing radioactive material possessing subsidiary risks should be classified in Class 7 when the conditions of Chapter 3.5 are met, with some modifications (see annex I).

### 5. Table of correspondence between the paragraphs numbers in the IAEA Regulations and those in the UN Model Regulations

<u>Informal document</u>: INF.6 (Secretariat)

99. The Sub-Committee noted that the secretariat had prepared a new table of correspondence for inclusion in the 16<sup>th</sup> revised edition of the UN Recommendations on the Transport of Dangerous Goods and invited the secretariat and the IAEA to check its accuracy before publication, taking account of changes that could be needed due to decisions taken at this session.

#### 6. PATRAM 2010

100. The Sub-Committee noted that the next (16<sup>th</sup>) International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2010) will take place in London from 4 to 8 October 2010.

### X. GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS (agenda item 9)

A. Outcome of the 13<sup>th</sup> session of the IMO Dangerous Goods, Solid Cargoes and Containers (DSC) Sub-Committee

Informal document: INF.32 and INF.32/Add.1 (IMO)

- 101. The Sub-Committee took note of the information provided. With respect to the accident concerning a fire and subsequent explosion in a container loaded with methyl ethyl ketone peroxide, the Sub-Committee noted that this accident would have probably not happened if all requirements contained in the IMDG Code had been complied with. A requirement for carrying this specific organic peroxide in temperature-controlled containers could be justified only if it could be demonstrated that the current requirements are not appropriate.
- 102. The representative of ICCA said that a study containing an evaluation of the current requirements for temperature control during transport of organic peroxides had just been published, and the conclusion was that these requirements were adequate. He would provide more detailed information at the next session.

#### B. Multimodal harmonization

Documents: ST/SG/AC.10/C.3/2008/65 (CEFIC, CEPE, ECTA, EFMA, EIGA, EMPAC,

EuPC, FEA, FECC, FIATA, GEA, IRU, ITCO, AISE)

<u>Informal documents</u>: INF.20 (Netherlands)

INF.69 (Informal working group)

INF.73 (Working group)

- 103. The Sub-Committee agreed that additional efforts had to be done to improve the harmonization of transport of dangerous goods regulations at worldwide level, since there were still divergences that impeded international and multimodal transport operations.
- 104. Some experts felt nevertheless that it would be necessary to assess more precisely the problems mentioned by the industry since a lot of efforts had been made in the past few years to harmonize all major international instruments with the UN Model Regulations, and the few remaining divergences might be well justified. The international organizations concerned were invited to provide feedback to the Sub-Committee, by drawing attention to requirements in their international instruments that deviated from the UN Model Regulations and explaining why such deviations had been introduced.
- 105. Similarly, governments should provide the same kind of feedback to the Sub-Committee as regards their own national regulations.
- 106. The recommendations concerning the feedback to be sought, prepared by a working group (INF.73), were adopted for future work (see annex II).

#### XI. GUIDING PRINCIPLES FOR THE MODEL REGULATIONS (agenda item 10)

Assignment of packaging performance requirements for Class 1 and divisions 4.1 and 5.2

<u>Informal document</u>: INF.71 (United Kingdom)

107. The Sub-Committee agreed that the text prepared by the expert from the United Kingdom should be included in Part 4 of the Guiding Principles.

### XII. ISSUES RELATING TO THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (agenda item 11)

#### A. Corrosivity

#### 1. Harmonization of criteria

Documents: ST/SG/AC.10/C.3/2008/48 (Netherlands)

ST/SG/AC.10/C.3/2008/83 (Netherlands)

Informal documents: INF.17 (33<sup>rd</sup> session) (Netherlands)

INF.19 (Netherlands)

108. The Sub-Committee supported unanimously the need for harmonization with the GHS.

- 109. Nevertheless, some experts and representatives of non-governmental organizations expressed concern at the proposal by the Netherlands to revise the text concerning corrosivity criteria in the current Model Regulations in order to make it fully consistent with the terminology used in the GHS. On the one hand, they felt that the current text was already consistent with the GHS and they were not convinced that there was a need for change. On the other hand they felt that the proposal by the Netherlands would extend the scope of the transport regulations to substances which are not currently regulated as corrosive for transport. They felt that more time was needed to evaluate the consequence of the proposed changes in the transport sector.
- 110. The expert from Netherlands explained that there was no intent to bring any change to the current scope of the UN Model Regulations. The proposal consisted in referring to the building blocks of the GHS that corresponded to the criteria in the UN Model Regulations.
- 111. It was agreed to defer this issue to the next biennium. Delegations who had expressed concern were invited to provide concrete explanations. Those who considered that the building blocks in the GHS were not suitable for application in the transport sector were also invited to explain their concerns and to submit proposals to the GHS Sub-Committee.

#### 2. Reference to OECD Test Guideline 404

Informal document: INF.50 (Secretariat)

112. The proposal to update the reference to OECD Test Guideline 404 was adopted (see annex I).

#### B. Physical hazards

#### 1. Self-heating substances and mixtures

Document: ST/SG/AC.10/C.3/2008/79 (Germany)

<u>Informal document</u>: INF.68 (Germany)

113. The Sub-Committee adopted an amendment to 2.4.3.1.2 (see annex I).

#### 2. Chemically unstable gases

Informal document: INF.45 (Germany)

114. The Sub-Committee took note of the progress report on the work of the informal working group on chemically unstable gases and agreed that the work should be pursued in the next biennium.

#### C. Substances which, in contact with water, emit toxic gases

Document: ST/SG/AC.10/C.3/2008/68 (France and Germany)

Informal document: INF.44 (Germany)

115. Bearing in mind than the GHS Sub-Committee had decided to defer the work on improvement of test method N.5 of the Manual of Test and Criteria to this Sub-Committee to make it suitable for measurement of very low emission rates of toxic gases, the Sub-Committee agreed to set up an ad hoc intersessional correspondence group to this effect and include this subject in the work programme for the next biennium. This group may also wish to check whether the current test method N.5 is still appropriate for measuring the emission of flammable gases or need be revised.

#### D. MISCELLANEOUS

#### 1. Chapter 2.9 of the Model Regulations

<u>Informal document</u>: INF.28 (Secretariat)

116. The Sub-Committee agreed that the provisions of Chapter 2.9 concerning the classification of environmentally hazardous substances should be updated in order to take account of the amendments to the GHS likely to be adopted by the GHS Sub-Committee at it sixteenth session. The proposed texts were adopted subject to adoption of the corresponding amendments to the GHS by the GHS Sub-Committee, and on the understanding that the secretariat would verify their accuracy with interested experts of the Sub-Committee

#### 2. Aerosols

Informal document: INF.58 (Secretariat)

117. The Sub-Committee noted that Sweden and FEA had proposed amendments to chapters 2.2 and 2.7 of the GHS in document ST/SG/AC.10/C.4/2008/25 and informal document INF.11 (submitted to the 16<sup>th</sup> session of the GHS Sub-Committee) respectively, but did not discuss the issues raised therein.

#### XIII. PROGRAMME OF WORK FOR THE NEXT BIENNIUM (agenda item 12)

Documents: ST/SG/AC.10/C.3/2008/65 (CEFIC, CEPE, ECTA, EFMA, EIGA, EMPAC,

EuPC, FEA, FECC, FIATA, GEA, IRU, ITCO, AISE) ST/SG/AC.10/C.3/66 (Report on the 33<sup>nd</sup> session)

Informal documents: INF.20 (Netherlands)

INF.38 (France) INF.44 (Germany)

- 118. The Sub-Committee agreed to include the following items in its work programme for 2009-2010:
  - (a) Explosives and related matters (including desensitized explosives and test series 7);
  - (b) Listing, classification and packing (including classification of mixtures and solutions);
  - (c) Electric storage systems (including lithium batteries, ultracapacitors);
  - (d) Miscellaneous proposals of amendments to the UN Model Regulations (including transport of coolant/conditioning units);
  - (e) Electronic data interchange;
  - (f) Cooperation with the IAEA;
  - (g) Global harmonization of transport of dangerous goods regulations with the UN Model Regulations;
  - (h) Guiding principles for the Model Regulations (updating);
  - (i) Issues relating to the GHS (including corrosivity criteria; criteria for substances which, in contact with water, emit toxic gases; unstable gases).
- 119. The Sub-Committee noted that the expert from France would host sessions of informal working groups on lithium batteries (Paris, 21-22 April 2009) and on Test N.5 (Paris, 23-24 April 2009).
- 120. The expert from the Netherlands will lead a correspondence group on harmonization of the corrosivity criteria with those of the GHS.

### XIV. DRAFT RESOLUTION 2009/... OF THE ECONOMIC AND SOCIAL COUNCIL (agenda item 13)

<u>Informal document</u>: INF.74 (Secretariat)

121. The Sub-Committee took note of the draft resolution prepared by the secretariat and invited the Chairman and experts who would attend the sixteenth session of the GHS

Sub-Committee to finalize this draft resolution for submission to the Committee in order to reflect the intended future work on improving global harmonization of national, regional and international transport of dangerous goods regulations with the UN Model Regulations.

#### XV. ELECTION OF OFFICERS FOR THE BIENNIUM 2009-2010 (agenda item 14)

122. On a proposal by the expert from Norway, supported by the expert from Australia, the Sub-Committee re-elected Mr. R. Richard (United States of America) and Mr. C. Pfauvadel (France) as Chairman and Vice-Chairman respectively.

#### XVI. ANY OTHER BUSINESS (agenda item 15)

1. Draft amendments to the Recommendations on the Transport of Dangerous Goods, Model Regulations and Manual of Tests and Criteria adopted by the Sub-Committee at its thirty-first, thirty-second and thirty-third sessions

Document: ST/SG/AC.10/C.3/2008/97 (Secretariat)

123. The Sub-Committee confirmed the draft amendments adopted at its three previous sessions subject to changes resulting from the decisions taken at this session. Decisions concerning texts in square brackets were recorded in Conference Room Paper ST/SG/AC.10/C.3/2008/CRP.4/Add.1.

#### 2. Request from kiloFarad International (kFI) for consultative status

Informal documents: INF.14 and INF.14/Add.1 (Secretariat)

- 124. The Sub-Committee noted that kFI was an organization governed by the by-laws of the Electronic Components, Assemblies and Materials Association (ECA), of which it was an affiliate.
- 125. The Sub-Committee agreed to grant consultative status to kFI so that it could participate in its future work on ultracapacitors.
  - 3. International Transport and Environmental Conference, Durban, 2-4 March 2009

<u>Informal document</u>: INF.70 (RCMASA)

126. The Sub-Committee noted that RCMASA would host an international transport and environmental conference in Durban from 2-4 March 2009.

#### **XVII. ADOPTION OF THE REPORT** (agenda item 16)

127. The Sub-Committee adopted the report on its thirty-fourth session and the annexes thereto on the basis of a draft prepared by the secretariat.

#### Annex I

## DRAFT AMENDMENTS TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS, MODEL REGULATIONS AND MANUAL OF TESTS AND CRITERIA

The draft amendments adopted during the session were listed in:

Documents ST/SG/AC.10/C.3/2008/CRP.4 and addenda 1-11.

They were adopted with some minor corrections and transmitted to the Committee, which endorsed them, as corrected, at its fourth session (12 December 2008). The adopted texts may be found as annexes 1 and 2 to the Committee's report as follows:

Amendments to the Recommendations on the Transport of Dangerous Goods, Model Regulations: ST/SG/AC.10/36/Add.1;

Amendments to the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria: ST/SG/AC.10/36/Add.2.

#### Annex II

#### MULTIMODAL HARMONIZATION

#### Recommendations for feedback to be sought

- 1. The various interested modal, regional and national bodies are invited to work with the Sub-Committee to address the consolidation, clarification, and alignment of multimodal texts, and the identification of necessary differing and additional modal requirements.
- 2. They are invited to send their feedback to the Sub-Committee regarding the table below and the following issues in particular:
  - (a) Developing a common understanding on what is meant by harmonization;
  - (b) Identifying existing substantial international modal, regional, and national differences with the aim of reducing differences to the greatest extent practicable, and ensuring that where differences are necessary that they do not pose an impediment to the safe and efficient transport of dangerous goods;
  - (c) Establishing cooperative guidelines for enhancing consistency between the requirements of international modal, regional, and national bodies and reducing unnecessary impediments;
  - (d) Undertaking a technical editorial review to identify inconsistencies of use of language with the goal of ensuring that the text of each regulation is user-friendly and clear, and is easily translated into other languages.

#### <u>Table</u>

No	Issue	Potential solution	Action
1	Editorial differences	Editorial working groups	
2	Differences of substance (by regulators	Document reasons for	
3	and industry) Inter-modal differences	Identify the differences, develop agreed procedures between	Expert from the United Kingdom to circulate list of
4	Unclear text	modes to cooperate  Editorial working group	differences
5	National laws inconsistent with the UN Model Regulations	Editorial Working group	
6	Changes to the UN Model Regulations not always justified in a way that can be adopted by status	Proposals to be accompanied by cost benefit analysis	
7	Unrealistic time pressures	Editorial working group	_
8	Difficult to identify inter-modal differences	Working group to review	Expert from the United Kingdom to circulate list of differences
9	Modal organizations sometimes identify problems that the Sub-Committee will not accept/resolve	Develop agreed procedures between modal organizations to cooperate	
10	Experts of the Sub-Committee may not have authority to effect changes nationally/regionally		
11	Not clear what is meant by "harmonization"		
12	Ease of access to decision making (not always possible for other bodies to understand decisions of the Sub-Committee)		
13	Inadequate breadth of participation - countries, industry, modes		
14	Duplication of work on classification	Develop agreed procedures between modal organizations to cooperate	
15	Different opinions from national representatives at different forums	Develop agreed procedures between modal organizations to cooperate	
16	Some delegations do not have multimodal view (not always possible to do this for some delegations)	Enhance the documentation of reasons for decisions for modal organizations	
17	Inadequate procedure to resolve differences other than voting	Rules of procedure minimal amount of support before proposal can be introduced (like ICAO Dangerous Goods Panel and RID/ADR/ADN Joint Meeting)	