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COMMITEE 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 ITS TWENTY-NINTH SESSION
(Geneva, 3-11 July 2006)

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REPORT

ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its twenty-ninth session from 3 to 11 July 2006 with Mr. S. Benassai (Italy) as Chairman and Ms. Linda Hume-Sastre (Canada) as Vice-Chairman.

2. Experts from the following countries took part in the session: Argentina; Australia; Austria; Belgium; Brazil; Canada; China; Czech Republic; Finland; France; Germany; Italy; Japan; Mexico; Netherlands; Norway; Poland; Portugal; Russian Federation; South Africa; Spain; Sweden; United Kingdom; United States of America.

3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the following countries took part: Bulgaria; Kenya; New Zealand and Switzerland.

4. Representatives of the International Atomic Energy Agency (IAEA) were also present.

5. Representatives of the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the World Health Organization (WHO), were also present.

6. The following intergovernmental organizations were represented: European Commission (EC) and Intergovernmental Organization for International Carriage by Rail (OTIF).

7. 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 the European Manufacturers of Sporting Ammunition (AFEMS); Association of Hazmat Shippers, Inc. (AHS); Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); European Association of Automotive Suppliers (CLEPA); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Council of the Paint, Printing Ink and Artists’ Colours Industry (CEPE); European Fertilizer Manufacturers’ Association (EFMA); European Industrial Gases Association (EIGA); European Liquefied Petroleum Gas Association (AEGPL); European Secretariat of Manufacturers of Light Metal Packagings (SEFEL); European Aerosol Association (FEA); Global Express Association (GEA); International Air Transport Association (IATA); International Association for the Promotion and Management of Portable Rechargeable Batteries through their Life Cycle (RECHARGE aisbl); International Association of the Soaps, Detergents and Maintenance Products Industry (AISE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemicals Associations (ICCA); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Dangerous Goods and Containers Association (IDGCA); International Electrotechnical Commission (IEC); International Federation of Airline Pilots’ Associations (IFALPA); International Federation of Freight Forwarders Associations (FIATA); International Fibre Drum Institute (IFDI); International Organization for Standardization (ISO); International Union of Railways (UIC); International Vessel Operators Hazardous Materials Association (VOHMA); Portable
Rechargeable Battery Association (PRBA); Sporting Arms and Ammunition Manufacturers’ Institute (SAAMI); US Fuel Cells Council (USFCC); World Nuclear Transport Institute (WNTI).

ADOPTION OF THE AGENDA

Documents:  ST/SG/AC.10/C.3/57 (Provisional agenda)
             ST/SG/AC.10/C.3/57/Add.1 (List of documents)
             ST/SG/AC.10/C.3/57/Add.2 (Provisional timetable)

Informal documents:  INF.1 and INF.2 (Lists of documents)
                      INF.14 (Accreditation procedure)

8.  The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents (INF.1 to INF.74).

TRANSPORT OF EXPLOSIVES

Documents:  ST/SG/AC.10/C.3/2005/11 (Spain)
             ST/SG/AC.10/C.3/2005/29 (Germany)
             ST/SG/AC.10/C.3/2006/7 (Norway)
             ST/SG/AC.10/C.3/2006/29 (United Kingdom)
             ST/SG/AC.10/C.3/2006/62 (Canada)

Informal documents:  INF.39 (twenty-seventh session) Report of the Working Group on its session held during the twenty-seventh session)
                    INF.4 (twenty-seventh session) (Germany)
                    INF.7 (twenty-seventh session) (Sweden)
                    INF.20 (Sweden)
                    INF.22 (Germany)
                    INF.23 (Germany)
                    INF.29 (United States of America)
                    INF.32 (United Kingdom)
                    INF.33 (United Kingdom)
                    INF.51 (Australia)

9.  After being introduced, each document was entrusted to the Working Group on Explosives for detailed consideration, which met concurrently from 3 to 7 July under the chairmanship of Mr. A. Johansen (Norway).

10.  It was noted that paragraphs 2 and 3 of informal document INF.20 were the subject of a draft corrigendum to the 14th revised edition of the Recommendations on the Transport of Dangerous Goods (see informal document INF.36 under agenda item 13). The amendment proposal contained in paragraph 1 was adopted (see annex 1).

11.  The Working Group was also tasked with considering documents under agenda item 12 (Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)) in respect of explosive hazards (see also paragraphs 136-137).
Report of the Working Group on Explosives

Informal document: INF.65

12. The Sub-Committee approved the report of the Working Group for matters relating to transport of dangerous goods, i.e. sections 5, 6, 7, 8, 9, 12, 13, 14 and 16 of the report, as well as amendments listed in sections 1 to 4 and 9 of the part of the report entitled “Consequential amendments to the 14th edition of the Model Regulations, the 1st revised edition of the GHS document and the 4th revised edition of the Manual of Tests and Criteria”.

13. The conclusions are summarized as follows:

(a) The introduction of a Modified Vented Pipe Test “8(d)” in 18.7.2 of the Manual of Tests and Criteria was adopted (see annex 2);

(b) Only nitrates of alkali metals and alkaline-earth metals from Division 5.1 may be shipped with blasting explosives (except UN No. 0083) (see annex 1, amendments to 7.1.3.2.3 of the Model Regulations);

(c) Three new entries were included in Class 1 for marine distress signals and smoke signals in Division 1.4, Compatibility Groups G and S (see annex 1).

(d) Entries for 1-Hydroxybenzotriazole, anhydrous, were included in Division 1.3, Compatibility Group C and in Division 4.1 (see annex 1). More details would have to be supplied to the Sub-Committee for an entry for the monohydrate form in Division 4.1;

(e) The expert from Canada should prepare a new proposal for an additional test for determining 1.4 S classification;

(f) Changes to the Koenen Test in 11.5.1.2.1, 12.5.1.2.1, 18.6.1.2.1 and 25.4.1.2.1 of the Manual of Tests and Criteria were adopted, despite concerns by the expert from France over the cost implications for performing the test;

(g) There was no majority support for the proposal of the expert of Australia not to allow the carriage of ammonium nitrate emulsions (UN No. 3375) in tanks; and

(h) The expert from the United Kingdom recommends not to amend test 8 (b).

TRANSPORT OF GASES

Salvage packagings


14. Several experts supported the principle of including provisions on salvage packagings for gases in the Model Regulations.

15. The representative of EIGA took note of the various comments that had been made, and especially of current practice in North America, with a view to introducing a new proposal.
Criteria for flammable gases


16. Some delegations opposed adding references to the standard ISO 10156:1996 and its part 2 ISO 10156-2:2005, to classify gases as oxidizing, in particular because the standard set an oxygen-nitrogen ratio of 21% for the gas mixtures in question, when it had been agreed under special provision 292 that that ratio could be increased to 23.5%.

17. The Sub-Committee decided by a majority vote to accept the proposal by EIGA to amend 2.2.2.1 (b) and 2.2.3 (d) (see annex 1), on the understanding that its decision would require the endorsement of the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, since the criterion was a criterion of the GHS.

18. It was noted that the decision was not in conflict with special provision 292 for compressed air.

Definition of gases


19. The Sub-Committee adopted the proposal to clarify the values to be used in exempting gases in 2.2.2.3 (see annex 1). That amendment would necessitate amending the provisions of the GHS.

References to ISO standards in Chapter 6.2


Informal document: INF.55 (Secretariat)

20. Several delegations regretted that, as the ISO standards ISO 6406:2005, ISO 10461:2005 and ISO 10462:2005 had not been disseminated, they had been unable to check their compatibility with the essential requirements of the Model Regulations and were therefore unable to give an opinion on the proposed amendments to the references in 6.2.2.4.

21. The proposed amendment of 6.2.2.4 was put to the vote and adopted. The representative of EIGA stressed the need for interim measures, since, in safety terms, receptacles covered by the standards currently referred to in 6.2.2.4 were still acceptable.

22. In the ensuing discussion, speakers considered the advisability of referring to standards which were not freely available either to legislators or to the bodies which had to apply the regulations. That caused problems for the authorities in many countries.

23. It was pointed out that a process had been initiated in the United Nations Economic Commission for Europe (UNECE) to verify whether the standards referred to in RID/ADR/ADN met the basic requirements of the regulations (see INF.55). Standards prepared by standard organizations were not necessarily in compliance with recommendations of the United Nations.
Amendments to Chapter 6.2

Document: ST/SG/AC.10/C.3/2006/26 (Germany)

24. The proposals in section 2 (porous material for acetylene cylinders) and section 6 (deleting the reference to standard ISO 11118:1999) were adopted (see annex 1).

25. The proposal in section 3 (responsibility for initial inspection and test) was not adopted because the definition of competent authority was already quite clear on that subject.

26. The proposals in sections 4 (periodic inspections) and 5 (applicability of approval procedures to closures) would be dealt with under new proposals. Following a discussion, the proposal relating to operational marks for acetylene cylinders (section 7) was withdrawn.

Special provision (d) of Packing Instruction P200


Informal document: INF.21 (United States of America)

27. The Sub-Committee noted that the information provided in the documents pertained essentially to the transport of silane, but was not applicable to germane, arsine and phosphine.

28. It was decided to defer consideration of those documents and it was pointed out, in particular, that the note proposed for 6.2.2.2 would entail an amendment of standard ISO 11114-1, which would not be applicable to silane.

Filling ratio for germane

Documents: ST/SG/AC.10/C.3/2006/40 (United States of America)
ST/SG/AC.10/C.3/2006/44 (CGA)

29. The Sub-Committee adopted the amendments proposed by CGA with certain modifications (see annex 1).

Filling ratio


30. The proposed amendments to the filling ratios (P200) for UN Nos. 1982, 2599, 1035, 3220 and 1011 were adopted (see annex 1).

Informal document: INF.26 (CGA)

31. The proposed amendments would be the subject of an official document for consideration at the next session.
PACKAGINGS (INCLUDING IBCs AND LARGE PACKAGINGS)

Drop test

Document: ST/SG/AC.10/C.3/2006/59 (France)
Informal document: INF.61 (France)

32. The proposal to define the specifications of the target used in the drop test on the basis of the specifications in standard ISO 2248 was adopted with minor changes (see annex 1).

Reference to standard ISO 16106

Document: ST/SG/AC.10/C.3/2006/14 (Germany)

33. The Sub-Committee agreed to indicate in a NOTE that standard EN ISO 16106:2006 contains provisions that are acceptable for the application of standard ISO 9001 in the context of the requirements of paragraphs 6.1.1.4, 6.5.4.1 and 6.6.1.2 (see annex 1).

Bottom lift test for IBCs

Informal documents: INF.16 (ICIBCA)
INF.46 (ICCR)
INF.57 (China)

34. Following a vote, the Sub-Committee agreed to reverse its decision to amend the bottom lift test criteria in 6.5.6.4.4 (see also ST/SG/AC.10/C.3/56, paras. 25 to 27). The current text remains unchanged (see annex 1).

Hydraulic pressure test for IBCs

Document: ST/SG/AC.10/C.3/2006/24 (Germany)
Informal document: INF.19 (Canada)

35. Following a discussion, the expert from Germany withdrew his proposals and said that he would prepare a new document, taking into account the comments of other experts.

UV protection for IBCs

Document: ST/SG/AC.10/C.3/2006/25 (Germany)

36. Several experts commented on the recommended measures to enhance protection of IBCs against UV radiation and the expert from Germany said that she would submit a new proposal.
Displaying the safe stacking load on IBCs

Document: ST/SG/AC.10/C.3/2006/30 (United Kingdom)

37. The proposals contained in paragraphs 5, 6 and 7 of the document on displaying the safe stacking load on IBCs were adopted with certain amendments (see annex 1, amendment to the table in 6.5.2.2.1 and new 6.5.2.2.2).

38. The proposal to move paragraph 6.5.2.3 was not adopted.

Vibration test for design types of IBCs


Informal documents: INF.17 (ICIBCA)  
INF.18 (Canada)  
INF.27 (ICPP)  
INF.35 (Germany)  
INF.47 (ICCR)  
INF.60 (United Kingdom)

39. The proposal to introduce a vibration test was prompted by decisions taken at the Sub-Committee’s previous session (see ST/SG/AC.10/C.3/56, paras. 37 and 38). It was extensively debated, with some delegations maintaining that the introduction of such a test had not been properly justified, while others held that the test should only be required for the carriage of liquids and others still that the proposed test method was not the most appropriate or the most user-friendly.

40. The principle of introducing a vibration test for IBCs in the next edition of the Model Regulations was put to the vote and adopted. Accordingly, a working group was established to consider the proposal in detail.

Informal document: INF.69 (Revised proposal by the experts from France and the United States of America after discussion by a working group)

41. The Sub-Committee adopted amendments to Chapter 4.1 and Chapter 6.5 for the introduction of a new vibration test for IBCs intended for the carriage of liquids on the basis of the revised proposal with the following modifications:

(a) It was clarified that the test would be applicable to all IBC design types of IBCs manufactured after 31 December 2010;

(b) The sentence in square brackets in the proposed 6.5.6.13.4.1 was deleted (see annex 1).
42. It was pointed out that, in the case of inner receptacles for composite IBCs, rubber polymers were included under plastics (6.5.1.2). It was suggested that that extended definition should be applied more generally or that the definition of “plastic” should be moved from 6.5.1.2 to 1.2.1; it was also noted, however, that that might not be appropriate for all packagings.

43. Another solution might be to use the marking “W” for 1H2 plastic drums.

44. Several experts did not support the introduction of a new packaging code for rubber packagings.

45. The expert from Norway said that he would put forward a new proposal in the light of those comments.

Revision of Chapter 6.3

Informal document: INF.49 (Secretariat)

46. The Sub-Committee noted that comments on the texts adopted at the last session had been submitted to the secretariat and agreed that corrections to the adopted texts should be made (see annex 1).

LIMITED QUANTITIES

Miscellaneous proposals


47. The Sub-Committee decided to amend column 7 in the list of substances in Chapter 3.2, to take into account the comments by the secretariat regarding UN Nos. 3357, 0504, 3354, 3355, 3374, 3129, 3130, 3148 and 3356, and to amend the guiding principles for the Model Regulations accordingly (see annex 1).

Exemption for small quantities of pharmaceutical research and development samples


Informal document: INF.59 (DGAC, AHS)

48. A number of experts endorsed the principle of exemptions for small quantities of pharmaceutical research and development samples, but flagged certain issues, namely substances in Packing Group I, maximum quantity per package or per vehicle; respect for the classification principles in 2.0.4.1; link with work on excepted quantities, conditions of transport of samples in packagings containing dry ice.
49. The representative of ICCA said that he would formulate a new proposal before the next session.

**Comments on limited quantities**

**Document:** ST/SG/AC.10/C.3/2006/66 (ICAO)

50. The Sub-Committee noted with satisfaction the support of the ICAO Dangerous Goods Panel (DGP) for the elaboration of excepted quantity provisions for all modes of transport.

51. The Sub-Committee further noted that, effective 1 January 2009, ICAO would require limited quantity packages to be marked with the UN number placed inside a diamond outline, as prescribed by paragraph 3.4.8 of the Model Regulations.

52. With regard to the suggestion in paragraph 2.4 that “packages prepared according to the Technical Instructions should be acceptable to other modes, provided the packages were made easily recognizable by marking them with the UN number placed inside a diamond outline”, it was pointed out that limited quantity packages marked and labelled in conformity with the ICAO Technical Instructions are accepted in ground transport within the legal framework of the RID, ADR and ADN, if transported before or after a journey by air.

53. The representative of GEA said that the decision by ICAO would not improve the current situation because the simultaneous application of a UN number inside a diamond outline, synonymous with limited quantities, and a hazard warning label could lead to confusion during ground transport controls.

54. The Chairman said that the issue would be taken up again in December in the light of further discussions at ICAO.

**Excepted quantities**

**Document:** ST/SG/AC.10/C.3/2006/45 (United Kingdom)

**Informal documents:** INF.3/Rev.1 (United Kingdom)  
INF.28 (VOHMA)  
INF.52 (Belgium)  
INF.72 (United Kingdom)  
INF.73 (United Kingdom)

55. The Sub-Committee adopted the text for a new Chapter 3.5 as proposed in INF.73 with some modifications (see annex 1). It was agreed that the case of gases without any subsidiary risk would have to be reconsidered at the next session.
LISTING, CLASSIFICATION AND PACKING

Batteries and fuel cells

**Lithium batteries**

Documents:  
ST/SG/AC.10/C.3/2005/43 (PRBA)  
ST/SG/AC.10/C.3/2005/44 (PRBA)  
ST/SG/AC.10/C.3/2005/45 (PRBA)  
ST/SG/AC.10/C.3/2005/46 (PRBA)

Informal documents: INF.42, INF.43, INF.44, INF.45 (United States of America)

56. Some experts indicated that they did not see any need to add new entries for lithium ion batteries because the proposed conditions of transport appeared to be the same as those for UN numbers 3090 and 3091 applicable to lithium batteries.

57. The proposal in section 7 of document ST/SG/AC.10/C.3/2005/45 to add new entries for lithium ion batteries was not adopted.

58. The Sub-Committee noted that there was a correlation between the lithium equivalent content and the minimum energy expressed in Watt-hours. The proposal in document ST/SG/AC.10/C.3/2005/46 to replace the reference to lithium equivalent content in Special Provision 188 with a reference to rated energy in Watt-hours, and to require the marking of this rated energy in Watt-hours on the outside case of the battery, was adopted (see annex 1). The Manual of Tests and Criteria was amended accordingly (see annex 2).

59. The proposals in document ST/SG/AC.10/C.3/2005/44 to amend special provision 188 in Chapter 3.3 of the Model Regulations and to add a definition of “State of discharge” in 38.3.3.2 of the Manual of Tests and Criteria were not adopted.

**Fuel cells**


Informal documents: INF.11 (Canada)  
INF.15 (DGAC/USFCC)  
INF.25 (Switzerland)  
INF.68 (Report of the working group)

60. The proposal and comments thereon were discussed by a working group. The recommendations of the working group for two new entries in Division 4.3 and Class 8, amendments to the existing entries for UN 3473 and to special provision 328 and a new packing instruction P004 were adopted (see annex 1).
ISO draft technical specification ISO/DTS 16111, Transportable gas storage devices—Hydrogen absorbed on reversible, metal hydrides

Informal documents: INF.56 and INF.58 (ISO)

61. The Sub-Committee noted ISO Technical Committee TC 197 was preparing DTS 16111 and comments on this draft specification could be sent directly to the ISO TC 197 secretariat since this specification was intended to be adopted before the end of 2006.

Transport of infectious substances

Definition of cultures

Document: ST/SG/AC.10/C.3/2006/3 (Germany)

62. The expert from Germany proposed that a distinction should be made between cultures used for diagnostic purposes and those intended for industrial or scientific uses, arguing that the very exacting transport conditions for category A infectious substances would cause an unacceptable obstruction to the treatment of patients and national and international efforts to monitor the spread of infectious diseases.

63. Several delegations opposed amending the definition, maintaining that cultures should be classified on the basis of the risk posed by the infectious agents which they contained and not on the basis of the reasons for which they were being transported.

64. Following a discussion, the expert from Germany withdrew her proposal, expressing the hope that a solution could be found for the monitoring of diseases caused by Escherichia coli (verotoxigenic), Mycobacterium tuberculosis and Shigella dysenteriae.

Classification of “medical or clinical wastes”

Document: ST/SG/AC.10/C.3/2006/13 (Germany)

65. The proposal to indicate in 2.6.3.5.2 that international, regional or national waste catalogues could be taken into account for the assignment of medical or clinical wastes was adopted.

Requirements regarding dry ice and liquid nitrogen

Document: ST/SG/AC.10/C.3/2006/16 (Austria)

66. Several experts stated the view that there was no need to amend paragraph 9 (a) of packing instruction P650 because the requirements applicable to the use of dry ice or liquid nitrogen for the purpose of keeping samples of infectious substances cold varied according to the type of transport or relevant legal instrument.

67. The expert from Austria said that he would try accordingly to resolve the interpretation of the paragraph for land transport at the RID/ADR/ADN Joint Meeting.
Amendments to 2.6.3.2.3.1, 2.6.3.2.3.2 and 2.6.3.2.3.6 adopted at the twenty-eighth session (see ST/SG/AC.10/C.3/56, paras. 90 and 91)


68. Given the comments by WHO regarding the amendments which had been adopted at the previous session on the basis of informal documents (INF.9 and INF.39) from Germany, the Sub-Committee agreed to revise its decisions and the current texts of 2.6.3.2.3.1 and of 2.6.3.2.3.2 remain unchanged. In addition the Sub-Committee decided to restore the reference to antibody detection at the end of the note to 2.6.3.2.3.6 with the clarifications proposed in paragraph 8 of the WHO document (see annex 1).

Classification of dead infected animals


Informal document: INF.64 (WHO)

69. The expert from Austria considered that animal carcasses infected with pathogens which would be assigned to Category A in cultures only should be carried in accordance with the provisions applicable to the carriage of animal carcasses infected with Category B infectious substances because he felt that animal carcasses could not be considered as cultures. After discussion, he withdrew his proposal in favour of an alternative text proposed by WHO in INF.64.

70. It was noted however that all pathogens under UN No. 2900 (infectious to animals only) are classified as Category A “in culture only”. As a consequence, if this proposal were adopted, any animal carcasse affected by such pathogens, e.g. foot and mouth disease, would no longer be assigned to UN 2900 but to UN 3373. The Sub-Committee felt that this would have serious implications on the existing legislation and that the proposal would require further consideration.

Carriage of infected animal carcasses in bulk

Document: ST/SG/AC.10/C.3/2006/46 (United Kingdom)

71. The Sub-Committee was informed that this proposal had been submitted due to the fact that the RID/ADR/ADN Joint Meeting had considered that the existing provisions of the Model Regulations were not sufficiently developed for the following reasons:

(a) No suitable provisions are provided for the carriage of animal carcasses or animal foodstuffs infected with Category B pathogens;

(b) Except for animal carcasses, substances assigned to UN 2814 should not be allowed for carriage in bulk;

(c) No suitable provisions exist for the carriage of infected products (e.g. blood) in tanks, since UN No. 3373 does not seem appropriate for classification of such products.
72. After discussion, the expert from the United Kingdom said that he would submit a revised proposal at the next session.

**Packing instruction P650**

**Document:** ST/SG/AC.10/C.3/2006/60 (IATA)

**Informal document:** INF.30 (United States of America)

73. Several experts considered that it was obvious that the classification of infectious substances carried under the conditions of P650 had to be done in accordance with 2.6.3.2, otherwise it would not be possible to apply P650.

74. Some experts considered that there was no need to include a reference to the training provision of Chapter 1.3 in packing instruction P650, and the proposal, put to the vote, was not adopted.

**Exemption for human or animal specimens**

**Document:** ST/SG/AC.10/C.3/2006/67 (ICAO)

75. Proposal No. 2 to add a note to 2.6.3.2.3.6 mentioning that the packagings for specimens exempted under this paragraph had to meet the conditions of (a) to (c) for air transport was adopted (see annex 1).

**Miscellaneous**

**Special provision for cleaning pads containing environmentally hazardous substances**

**Document:** ST/SG/AC.10/C.3/2006/9 (ICCA)

76. The proposal to add a new special provision applicable to UN 3077 and 3082 with a view to classifying and possibly exempting cleaning pads containing environmentally hazardous substances was adopted (see annex 1).

**Nitric acid (UN 2031) in plastics IBCs**

**Document:** ST/SG/AC.10/C.3/2006/10 (ICCA)

77. The proposal to limit to two years the use of rigid plastics IBCs and composite IBCs with a plastics inner receptacle for the transport of nitric acid at concentrations above 55% was adopted (see annex 1).

**Chlorosilanes**

**Document:** ST/SG/AC.10/C.3/2006/11 (ICCA)

78. Several experts supported the proposals to reclassify certain chlorosilanes and reconsider their conditions of transport. Others wanted more information.
79. The document was kept on the agenda for the next session in the expectation that ICCA would provide additional information.

**Organic peroxides**


80. The proposal to include new organic peroxide entries was adopted with some amendments (see annex 1).

81. Given that some of the experts had doubts about the classifications proposed in certain cases, they were invited to submit formal proposals, if this was judged necessary.

**Classification criteria for Division 6.1 and Class 8 human experience**

Document: ST/SG/AC.10/C.3/2006/19 (United Kingdom)

82. Several experts shared the view of the expert from the United Kingdom that the classification of substances on the basis of human experience raises practical problems given that information of this nature is not always publicly available and it is not always possible to confirm the validity of the information that is. Accordingly, the Sub-Committee decided to follow up on the work done by the expert from the United Kingdom in order to promote international consistency in the use of data on human experience. The expert from the United Kingdom agreed to submit a revised proposal in due course.

**Use of IBCs for certain substances**


83. The proposal to revise the assignment of special IBC provisions for certain substances in accordance with the rationalized approach was adopted. It was agreed that B2 and B4 should be assigned to UN Nos. 3152 and 3432 (see annex 1).

**Subsidiary risk 5.1 for chlorine**

Document: ST/SG/AC.10/C.3/2006/23 (Germany)

84. The Sub-Committee assigned subsidiary risk 5.1 to chlorine in 1990 and subsequently removed it in 1994. Some experts were of the view that it was unnecessary to indicate this risk because it seemed negligible compared to the risk of poisoning by inhalation. However, the majority of the Sub-Committee believed that due account should be taken of classification criteria, and since chlorine had oxidizing properties according to ISO standards 10156:1996 and 10156-2:2005, this should be indicated (see annex 1).
**Special packing provision PP1 for UN 3082**


85. Some experts were not in favour of adding a special packing provision PP1 for UN 3082 because this entry covered a wide range of items other than paints.

86. The representative of CEPE said that he would submit a new proposal so that the adhesives, paints, printing inks and resin solutions classified under UN 3082 could benefit from the same special conditions as those applicable to UN 1133, 1210, 1263 and 1866.

**Rationalized approach for the transport of solid substances in bulk containers**


87. Some experts considered that the ICCA proposal was tantamount to authorizing the bulk transport of more substances than could be transported in this manner under existing modal regulations, specifically substances in Division 5.1 and Packing Group II.

88. The representative of ICCA invited experts to communicate their comments to him in writing so that he could draft a revised proposal.

**UN 1569 Bromoacetone**


89. The Sub-Committee agreed that bromoacetone could be transported in tanks in accordance with instruction T20 and special provisions TP2 and TP13 (see annex 1).

**Special provision 198**

Document: ST/SG/AC.10/C.3/2006/58 (Secretariat)

90. The Sub-Committee agreed that special provision 198 should apply to UN 3469 and 3470 (see annex 1).

**Ethanol and gasoline fuel mixtures**


Informal document: INF.70 (United States of America)

91. The revised proposal in INF.70 for a new entry for ethanol and gasoline or motor spirit or petrol mixtures was adopted (see annex 1).
92. The revised proposal INF.71 for a new packing instruction applicable to UN No. 1744, bromine, was adopted (see annex 1).

MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Overpacks

93. Several experts regretted that the RID/ADR/ADN Joint Meeting had amended the definition of overpack in RID, ADR and ADN, which from 2007 would cause discrepancies between the rules applicable to different means of transport in Europe.

94. It was explained that the Joint Meeting had wanted to take into account the common practice in road transport whereby different packagings were consolidated into an overpack, not by the consignor but by a freight forwarder or even the carrier.

95. The proposal by FIATA that those amendments should be reflected in the Model Regulations was not adopted and some experts stated their view that, in particular for other means of transport, the overpack operation, in particular the marking, should be the exclusive responsibility of the consignor and that an overpack should therefore only contain packages originating from the same consignor.

96. Some delegations suggested that such issues should be considered intersessionally in the wider context of overpacking, consolidation and unit load handling in all modes.

Cargo transport units ventilated after fumigation

97. The Sub-Committee adopted the proposal that the fumigation marking should indicate the date of ventilation and that the marking should remain on the unit until the goods or materials had been unloaded (see annex 1).

98. The Sub-Committee took note of document DSC 11/14 (INF.34) submitted by the Government of the United Kingdom to IMO, with a view to revisiting the IMO
Recommendations on the safe use of pesticides in ships, including for the fumigation of containers, given the considerable problems encountered in ports.

99. A proposal by the expert from the United Kingdom (INF.62) to move text in Chapter 5.5 to other parts of the Model Regulations would be considered in the context of a formal proposal for the next session.

Transport of solid environmentally hazardous substances in bulk containers


100. The Sub-Committee adopted the proposal by the United States of America that the use of closed bulk containers should be authorized for the transport of solid environmentally hazardous substances (see annex 1).

Transport of various substances in portable tanks


Informal document: INF.38 (Germany)

101. The Sub-Committee noted that the aim of the proposal was to include provisions for the transport in tanks of substances for which there were no such provisions in the Model Regulations, although there were such provisions in RID and ADR.

102. Several experts pointed out that some of those substances were toxic by inhalation and that, if they were to be carried in tanks, more stringent requirements would have to be applied than those in the proposal.

103. Other substances, like mercury, were not likely to be carried in tanks.

104. The expert from the United Kingdom said that he would prepare a new proposal, taking those comments into consideration.

Label for Division 5.2

Informal document: INF.50 (secretariat)

105. The Sub-Committee adopted changes to Chapter 5.2 in order to reflect correctly the description of label No. 5.2 (see annex 1)

P099

Informal document: INF.48 (Australia)

106. The expert from Australia drew the attention of the Sub-Committee to problems related to the interpretation and implementation of P099 which requires the approval of packagings by the competent authority. It happens, in international maritime transport, that such packagings are approved in the country of origin only. This causes problems when the packagings which are not accompanied by a packaging approval documentation are stored in a transit country before new
shipment to another country, since the competent authority of the country of transit, which is not aware of the conditions of carriage approved in the country of origin, has to ascertain the status of the packaging or to approve it before the new shipment.

107. This led to a long discussion as to how to interpret this reference to the competent authority in P099 in case of international transport, since without clear explanation, it could mean the competent authorities of all countries involved in the transport operation. This might need to be clarified in the legal context of each international legal instrument applicable to the transport operation (e.g. SOLAS Convention, ADR, RID, national inland transport law, etc.).

108. The expert from Australia invited other experts to provide comments and he would submit a new proposal clarifying P099 to the next session.

Assignment of responsibilities to persons involved in the transport of dangerous goods


109. The expert from Austria proposed that assignment of responsibilities to particular persons should be avoided in the Model Regulations since this appeared to be in contradiction with the provisions of 1.1.1.3.

110. Some experts felt that the use of the word “responsibility” was not correct since this word implies the notion of liability of persons involved in transport operations and this would depend on the legal context and may have to be decided by a court of justice in case of accidents or prosecution. In the case of international multimodal transport of dangerous goods, several legal national or international instruments apply during successive legs of the voyage and the present assignment of responsibilities in the Model Regulations does not always reflect the assignment of duties in these instruments.

111. Several experts felt nevertheless that it was useful to provide guidance in the Model Regulations on who has to do what, since this guidance may be used by regulators to assign duties to the various participants in a transport operation under each legal system.

112. The Sub-Committee agreed that paragraph 1.1.1.3 might need to be revised in order to better reflect the principles to be followed but this could be done on the basis of a written proposal only.

HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL


Informal documents: INF.40 (WNTI)
INF.66 (IAEA)
INF.74 (IAEA)

113. The Sub-Committee noted that the IAEA had decided not to publish a 2007 edition of its Regulations, and as a consequence did not recommend to any organization to implement the
changes it had adopted in the past two years (refer to informal document INF.36 submitted at the last session).

114. The Sub-Committee noted that the IAEA Transport Safety Standards Committee (TRANSSC) would consider proposals developed by an IAEA Consultant Service Meeting and contained in ST/SG/AC.10/C.3/2006/53 at its 13th meeting (4-7 September 2006), but that any change to the IAEA Regulations resulting from this work of harmonization would be reflected only in the next published edition of the IAEA Regulations, i.e. probably in 2009.

115. The Sub-Committee considered that annex 1 of document ST/SG/AC.10/C.3/2006/53 contained proposed consolidated amendments to the UN Model Regulations which concerned mainly the lay-out of the provisions concerning Class 7, but which did not affect the substance of the IAEA Regulations. Therefore it was decided to adopt these amendments, subject to changes proposed in annex 4 of the document and in annex 1 of informal document INF.40 (see annex 3).

116. The Sub-Committee noted that the definition of “Freight container” had been amended and did not contain any longer the requirement that freight containers should comply with the requirements of the International Convention for Safe Containers of 1972 (CSC). It was noted that this requirement appeared in Chapter 6.8 for bulk containers, but it was agreed that it should be included in an appropriate place, e.g. in Part 7, for all freight containers. The expert from the United Kingdom undertook to submit a proposal to the next session.

Radiation protection programme

Informal document: INF.67 (IAEA)

117. The Sub-Committee agreed to add the note proposed by ICAO to 1.1.2.2.5 since this note was consistent with the explanations contained in paragraph 305.2 of the “Advisory Material for IAEA Regulations for the Safe Transport of Radioactive Material, Safety Guide No. TS-G-1.1 (ST-2), IAEA, 2002” (see annex 3).

OPTIONS TO FACILITATE GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS

ST/SG/AC.10/C.3/2006/38 (Netherlands)

118. Some experts agreed with the expert from the Netherlands that the provisions currently reflected in international legal instruments specific to each mode of transport could be made applicable to all modes of transport through a single legal instrument when these provisions are relevant for all modes, and that this would avoid the deviations which currently complicate multimodal transport operations. This would also simplify the implementation tasks of governments and the related administrative burden.

119. Nevertheless, several experts reiterated their views that a world convention was not necessarily the best solution and that the need for such a convention had not been demonstrated. Some of them felt that there were not so many variations, and when variations existed they were
justified either by modal or regional considerations. Reflecting such variations in a world
convention would require a complex system of cooperation with the international organizations
concerned. In addition, the existing international legal instruments would still be needed for
requirements which concern one mode of transport only.

120. The representative of IMO said that this issue was likely to be discussed by his
organization in September 2006.

**First steps in resolving outstanding issues**

**Document:** ST/SG/AC.10/C.3/2006/65 (ICAO)

121. The Sub-Committee noted that ICAO supported efforts for further harmonization and
would revisit this issue during 2006-2007.

**Document:** ST/SG/AC.10/C.3/2006/43 (United Kingdom)

122. The Sub-Committee discussed the various proposals submitted by the expert from the
United Kingdom in items 3 to 9 as follows.

**Item 3**

123. Several experts supported the idea to review the text of the Model Regulations to identify
inconsistencies in language and format. Others recalled that since many provisions of the Model
Regulations are integrated without any change in certain instruments such as the IMDG Code,
RID, ADR, ADN and national regulations of many countries, editorial reviews imply subsequent
changes in all these instruments and are not necessarily welcome by governments and
international organizations such as IMO which has repeatedly expressed the wish to avoid
frequent editorial changes which are not justified for safety reasons.

124. A member of the secretariat drew the attention to the costs of these changes, since an
editorial review of the English text would imply corresponding reviews of the other versions in
the five other UN official languages. He recalled that, in the process of reformatting the UN
Recommendations into Model Regulations and in the parallel adaptation of the IMDG Code,
ADR, RID and ADN, all the provisions had been reviewed and he doubted that there would
remain many inconsistencies in the language. He recalled also that since the Sub-Committee is
an expert body, expert work is normally carried out by the Sub-Committee itself, and not by the
secretariat or experts paid by the secretariat. If the work to be done were mainly editorial, it
could be done by the secretariat within the available resources and in accordance with the
applicable administrative rules. He invited all delegations to bring to the secretariat’s attention
any inconsistency in the existing text.

125. The expert from the United Kingdom said that he would consult the secretariat and would
prepare a more precise proposal describing the proposed tasks.

**Item 4**

126. Some experts felt that essential requirements concerning classification should remain in
the Model Regulations and should not be transferred to the Manual of Tests and Criteria. If the
Sub-Committee decided that the classification criteria should be made mandatory through references to other texts, referring to the GHS might be a more appropriate solution than amending the Manual of Tests and Criteria. Some experts mentioned also that referring to the Manual of Tests and Criteria might cause legal problems in their country if the Manual contained essential requirements to be known by all users rather than very technical provisions of interest to specialized bodies only, since they would then have to translate the Manual and include it in their legislation.

Item 5

127. It was recalled that the Economic and Social Council coordinates the work of its specialized agencies and regional commissions. The UN Recommendations are addressed to governments, specialized agencies and regional commissions through its resolutions, but the way to amend legal texts remains the prerogative of Member States for national regulations and of Contracting Parties to conventions for international legal instruments. The public accessibility of documents and legal texts depends also on the policy decided by the governing body of each organization.

Item 6

128. The representative of IAEA said that certain governments use directly the IAEA Regulations and some of them have expressed reluctance to changing the IAEA format. The issue had been considered, but for the time-being the IAEA had decided to keep the existing format, decision which could be revisited in the future when the new UN format for Class 7 provisions are discussed by IAEA. The representative of ICAO recalled that closer harmonization with the UN Model Regulations format would also be discussed by her organization, e.g. numbering of special provisions, etc.

Item 7

129. The Sub-Committee agreed that it would be useful to indicate where changes have been made when revised editions are published. The secretariat will study the practices followed by different publishers and will consider how this can most easily be done in the most cost effective way. The secretariat said also that this might not be possible for all linguistic versions and that this will entail delays for issuing the publication. It was also recalled that the list of changes was issued in all official languages whenever a new publication was published.

Item 8

130. The secretariat was invited to consult the Universal Postal Union about the existing provisions regarding the consignment of dangerous goods by mail in order to provide a basis for the future work of the Sub-Committee on this issue and to inform the Sub-Committee accordingly.

Item 9

131. The Sub-Committee agreed that when a transitional period is deemed necessary for the effective implementation of new or revised provisions, the recommended date of application should be mentioned in the Model Regulations.
132. After a general debate on how to avoid too strict interpretations of the regulations by enforcement authorities, the expert from the United Kingdom withdrew her proposal to amend paragraphs 1.1.1.1 and 1.3.2 intended to allow minor variations from the regulations.

133. The Sub-Committee noted that the proposed text of the Guiding Principles contained explanations on certain provisions which had not yet been adopted by the Committee (e.g. for excepted quantities). It was agreed that the Guiding Principles could be placed on the UNECE website once the 15th revised edition of the UN Recommendations have also been placed on this website, and after final checking that there is no contradiction between the Guiding Principles and the UN Recommendations.

134. The Sub-Committee noted that some parts of the proposed Guiding Principles need to be corrected or updated. The expert of the United Kingdom took note of the comments and said that he would prepare a revised version for the next session. He invited delegations to provide comments in writing.

135. The Sub-Committee noted that the systematic list prepared by the expert from the Netherlands was intended to facilitate classification and was based on the current edition of the Model Regulations. It agreed that this list could be placed on the UNECE website as guidance for competent authorities and persons responsible for classification but with clear explanations on its status vis-à-vis the official version of the Model Regulations which takes precedence in case of mistakes or contradictions.

136. The two documents were submitted to the Working Group on Explosives for preliminary discussion. The Sub-Committee approved the conclusion of the Working Group as reproduced in sections 10, 11, 15 and 16 of INF.65, except that in section 11, letter (d) (Desensitized explosives), only three possible solutions were identified:
- Making no change;
- Creating a new chapter in Part 2 of the GHS for desensitized explosives;
- Creating a new Division 1.7.

The consequences of each solution must be clearly assessed before the Sub-Committee takes a decision on the best way forward.

137. The Sub-Committee approved also the draft amendments to the GHS to be proposed to the Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, as laid down in items 5, 6, 7, 8 and 10 of the part of INF.65 entitled “Consequential amendments to the 14th edition of the Model Regulations, the 1st revised edition of the GHS document and the 4th revised edition of the Manual of Tests and Criteria”, with a change to the last sentence of item 5 which should read “Classification procedures for specific sectors (e.g. storage) should take experience and expertise into account”.

Physical hazards of chemically unstable gases

Document: ST/SG/AC.10/C.3/2006/28 (Germany)

138. Several experts underlined that the chemical instability of gases may result from many different factors and that it might not be easy to define criteria. The instability of gases was duly taken into account in the transport regulations on a case-by-case basis when defining the conditions of transport.

139. Several experts considered that, even though transport conditions for unstable gases had been satisfactorily developed, the UN Model Regulations did not contain hazard communication provisions in this respect, and therefore it would be useful to consider gas instability under the GHS for all sectors.

140. The Sub-Committee accepted an offer by the expert from Germany to organize an intersessional informal working group on this subject.

Hazards to the aquatic environment


Informal document: INF.9 (submitted to the 26th session) (Secretariat)

141. The expert from the Netherlands recalled that neither IMO nor the RID/ADR/ADN Joint Meeting had fully accepted the recommendations of the 14th revised edition of the Model Regulations. IMO had agreed to adopt the criteria, but would continue to identify substances of Classes 1 to 8 which meet the criteria and would require their marking with the mark shown in Figure 5.2.2 (instead of the existing IMO marine pollutant mark) and their identification with the words MARINE POLLUTANT in the transport document. It was reported that the RID/ADR/ADN Joint Meeting, noting that the IMO approach was not consistent with the UN Recommendations approach, decided not to change the present ADR/RID/ADN provisions since harmonization with the UN Recommendations would not result in harmonization with the IMO provisions.
142. Several experts explained that they did not agree with the proposal by the expert from the Netherlands to require identification and marking of environmentally hazardous substances of Classes 1 to 8 for reasons explained in length at previous sessions, notably that this additional marking would be costly for the industry for no additional safety benefits. They did not consider that it was necessary to make the public and emergency responders more aware of the pollutant nature of such goods because their main hazards and subsidiary risks took precedence, and because they felt that emergency responders, at least for inland transport, would treat all dangerous goods of Classes 1 to 8 as potentially hazardous to the environment. They recognized that the approach for maritime transport could be different because the requirements of the MARPOL convention had to be complied with, but they considered that these requirements were not relevant for air and inland transport. Their views were supported by several representatives of the industry.

143. Other experts and organizations expressed support for the proposal. They felt that harmonization with the provisions applicable to maritime transport was particularly important in international transport, that different marking provisions entailed problems of compliance and enforcement and that the system applied for many years in maritime transport had proven to be practicable. They recalled that it is also necessary to protect, during inland transport, ecologically sensitive zones, and the identification of aquatic pollutants is useful for the purposes of regulating traffic and of emergency response to avoid freshwater pollution in case of spillage.

144. The proposal, put to the vote, was not accepted.

OTHER BUSINESS

Test methods for the determination of the self-accelerating decomposition temperature


Informal documents: INF.53 (IDGCA) INF.24 (Germany)

145. The expert from Germany proposed to host a working group session to discuss the proposed revision of the test methods for determining the SADT in the Manual of Tests and Criteria.

146. Several experts considered that the existing methods were appropriate and suggested that IDGCA should first explain the problems experienced with these methods.

147. The representative of IDGCA was invited to submit detailed justification for the need for revising the test methods at the next session, and the Sub-Committee could then decide whether or not it is appropriate to undertake a review of Section 28 of the Manual during the next biennium.
Decisions taken at DGP20


148. The Sub-Committee took note of the information provided by ICAO to justify deviations from the UN Model Regulations agreed by DGP20 in the context of air transport.

Reformatting of the ICAO Packing Instructions

Document: ST/SG/AC.10/C.3/2006/64 (ICAO)

149. The Sub-Committee was informed that ICAO was undertaking a revision of its packing instructions and comments could be provided by completing a survey available on the ICAO website.

Interpretation of 2.4.2.3.2.4 and 2.5.3.2.5

Informal document: INF.12 (Austria)

150. It was underlined that the interpretation of the words “country of origin” and “transport conditions” in these paragraphs had to be interpreted in the legal context of the instrument implementing the UN Model Regulations. Unless otherwise specified, “country of origin” would normally mean the country where the transport operation subject to the legal instrument starts. The words “transport conditions” would mean the transport conditions normally specified in the legal instrument for specific substances.

Signature of container/vehicle packing certificates

Informal document: INF.13 (ICCA)

151. Several experts supported the proposal by ICCA which was intended to solve a practical problem of acceptance of non manual signatures. Others felt that the whole question of dangerous goods declaration, certificates and signatures would have to be reconsidered because these declarations and certificates had little legal status when the respective duties of participants were indicated in the regulations.

152. The representative of ICCA was invited to submit an official proposal for the next session.

Requests for consultative status

Informal documents: INF.6 (Application for consultative status by the Association of Hazmat Shippers (AHS))
INF.7 (Application for consultative status by the US Fuel Cell Council (USFCC))
INF.9 (Application for consultative status by the Association of European Manufacturers of Sporting Ammunition (AFEMS))
153. The Sub-Committee agreed to grant consultative status to the above-mentioned non-governmental organizations.

Tribute to Mrs. Daleen Fourie

154. The Sub-Committee, on learning that Mrs. Daleen Fourie, expert from South Africa, who had participated in its work since 1996 had retired, expressed its deep appreciation for her distinguished contribution, and wished her every happiness and fulfilment in her retirement.

ADOPTION OF THE REPORT

155. The Sub-Committee adopted the report on its twenty-ninth session and the annexes thereto on the basis of a draft prepared by the secretariat.