

Distr. GENERAL

ST/SG/AC.10/C.3/56 15 December 2005

ORIGINAL: ENGLISH

# 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 ITS TWENTY-EIGHTH SESSION

(Geneva, 28 November-6 December 2005)

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#### REPORT

# ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its twenty-eighth session from 28 November to 6 December 2005 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; Australia; Belgium; Brazil; Canada; China; 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; Romania; Switzerland.

4. A representative of the International Atomic Energy Agency (IAEA) was also present.

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

6. Representatives of the following non-governmental organizations took part in the discussion of items of concern to their organizations: Compressed Gas Association (CGA); Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); European Aerosol Association (FEA); European Cosmetic, Toiletry and Perfumery Association (COLIPA); European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE); European Industrial Gases Association (EIGA); European Secretariat of Manufacturers of Light Metal Packagings (SEFEL); 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 Soap, Detergent and Maintenance Products Industry (AISE); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemicals Associations (ICCA); International Fibre Drum Institute (IFDI); International Organization for Standardization (ISO); International Vessel Operators Hazardous Materials Association (VOHMA); World Nuclear Transport Institute (WNTI);.

# **ADOPTION OF THE AGENDA**

Documents:	ST/SG/AC.10/C.3/55 (Provisional agenda)
	ST/SG/AC.10/C.3/55/Add.1 (List of documents)

Informal documents:	INF.1 and INF.2 (Lists of documents)
	INF.4 (PRBA)
	INF.7 (Provisional timetable)

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to include late submissions of informal documents (INF.1 to INF.51), with some changes, including the withdrawal of documents ST/SG/AC.10/C.3/2005/16, -/43; -/44; -/45 and -/46.

## **TRANSPORT OF GASES**

#### Amendments to Chapter 6.2

<u>Document:</u> ST/SG/AC.10/C.3/2005/25 (EIGA)

Informal document: INF.25 (United States of America)

8. The Sub-Committee adopted the draft amendments to 6.2.1.3.1 and 6.2.1.1.6 proposed by EIGA, as modified by the United States of America, except that the last sentence of 6.2.1.1.6 proposed in INF.25 should continue to refer to toxic liquefied gases (see annex). If the expert from the United States wished to come back to the question of toxic gases, he should submit a new proposal for the next session.

#### P200, special provision "n"

Document: ST/SG/AC.10/C.3/2005/26 (EIGA) <u>Informal documents</u>: INF.26 (Belgium) INF.45 (EIGA)

9. The Sub-Committee adopted the proposal by EIGA to amend special provision "n". It was noted, however, that the concept of "assemblies of cylinders" in "bundles of cylinders" led to confusion, since bundles of cylinders were themselves defined as "assemblies of cylinders". The representative of EIGA prepared a revised text of the amended special provision "n" which referred to "groups of cylinders" instead of "assemblies of cylinders". This revised text (INF.45) was adopted (see annex).

#### **P200 filling ratio amendments**

Document: ST/SG/AC.10/C.3/2005/55 (United States of America)

10. The proposal to amend the filling ratios for certain gases, prepared following a meeting of experts from Germany, the United States of America and CGA, was adopted, with the exception of UN No. 2192 (germane) for which the value proposed was placed in square brackets (see annex).

## Orientation arrows on closed cryogenic receptacles

<u>Document</u>: ST/SG/AC.10/C.3/2005/35 (EIGA)

11. The proposal to reinstate the requirement that closed cryogenic receptacles should carry an orientation arrow was adopted, and paragraph 5.2.1.7 was amended accordingly (see annex).

## PACKAGINGS (INCLUDING IBCs AND LARGE PACKAGINGS)

## **Miscellaneous** proposals

## Differential pressure tests for packagings intended for the carriage of infectious substances

Document: ST/SG/AC.10/C.3/2005/33 (United States of America)

12. The expert from the United States of America proposed that packing instruction P620 should be amended in order to specify more clearly that packagings must be capable of withstanding, without leakage, an internal pressure producing a pressure differential of not less than 95 kPa, and also of withstanding, without leakage, temperatures in the range of -40 °C to +55 °C. He considered that it was necessary to specify this since certain competent authorities interpreted the existing text of

instruction 602 of the ICAO Technical Instructions as if the packaging must be capable of withstanding the internal pressure at temperature extremes of -40 °C and +55 °C.

13. Several experts shared the opinion of the expert from the United States with regard to this interpretation, but some considered that the existing text of the Model Regulations was clear in this respect. Others pointed out that there was no test method specified in the Model Regulations.

14. Since the requirement of being capable of withstanding internal pressure was specific to carriage by air, some experts considered that ICAO should be asked for an opinion.

15. The expert from the United States said that he would prepare a new proposal for the next session.

## Reference to standard ISO 16103

Document: ST/SG/AC.10/C.3/2005/37 (United Kingdom)

16. The proposal to add a NOTE to the definition of recycled plastics material in 1.2.1 to specify that standard ISO 16103:2005 provided additional guidance on procedures to be followed in approving the use of recycled plastics material was adopted despite the opinion of certain experts that this standard was not sufficiently in accordance with the Model Regulations or was not the only one to provide such guidance (see annex).

# Limit of vapour pressure for authorizing the use of IBCs

Informal document: INF.15 (Italy)

17. The Sub-Committee shared the opinion of the expert from Italy that the vapour pressure limits of 4.1.1.10 were valid not only for metal IBCs intended for the carriage of liquids but also for rigid plastics or composite IBCs in accordance with the additional requirements of instructions IBC01, IBC02 and IBC03.

18. The Sub-Committee accordingly adopted amendments to 4.1.4.2 and to instructions IBC01, IBC02 and IBC03 (see annex).

## Work of the informal working group on IBCs (Paris, 10 to 13 October 2005)

Document: ST/SG/AC.10/C.3/2005/57 (Argentina)

Informal documents:INF.5 and Add.1-2 (Canada) (report of the working group)INF.24 (ICPP)INF.31 and INF.32 (Germany)INF.27, INF.29 and INF.33 (Australia)

19. The Sub-Committee welcomed the results of the work of the informal working group which had been chaired by the Vice-Chairman, Ms. L. Hume-Sastre, and considered its conclusions and proposals in detail.

20. Some experts continued to question the need for substantial changes to the test requirements or other provisions relating to IBCs. They felt that there is insufficient incident data to justify such changes. Other experts did not share such a view.

# Resistance of IBCs to ultraviolet radiation

21. The Sub-Committee agreed that the resistance of flexible, rigid plastics and composite IBCs to ultraviolet radiation needed to be improved, but that it would be necessary to define more precisely a minimum level of protection required. The required level could not take into account all conditions of extreme sunlight on earth, and the text should provide that different levels of protection might be required for specific local conditions.

22. The expert from Germany offered to prepare a proposal for the next session taking account of the discussion.

# Single-trip IBCs

23. The Sub-Committee shared the majority opinion of the informal group that it was not necessary to draw up provisions for IBCs which could only be used for a single trip. According to the existing provisions, metal, composite and rigid plastics IBCs corresponding to a successfully tested design type could be reused, subject to tests and periodic inspections. To call this principle into question would be tantamount to providing for two different levels of tests, depending on whether the IBCs could be reused or not.

24. The Sub-Committee decided not to come back to this question during the current biennium.

# Bottom-lift test

25. The Sub-Committee considered that the proposed amendments to the test method (6.5.6.4.3) were not sufficiently clear and that they could only be envisaged on the basis of a new and better drafted proposal in writing.

26. The Sub-Committee agreed to amend the criteria of 6.5.6.4.4 in order to specify that there must be no observable permanent deformation after the test (see annex).

27. Opinions were, however, divided on the addition of a NOTE to specify what was meant by an observable permanent deformation. Some experts considered that it was sufficient to refer to the good judgment of testing laboratories, while others on the contrary considered that a harmonized interpretation was necessary to prevent problems of distortion of industrial competition or even problems of liability in the event of an accident. In view of the support for the latter point of view, it was agreed that the Sub-Committee could come back to the issue on the basis of a proposal which would better reflect laboratory practices for an objective assessment of a permanent deformation.

# Top-lift test

28. Several experts acknowledged the legitimacy of the proposal to amend 6.5.6.5.1 with a view to subjecting IBCs fitted with lifting devices to this test, in order to prevent manufacturers from fitting lifting devices on IBCs that were not designed to be lifted. Other experts pointed out, however, that the problem arose, particularly in this case, from incorrect use of the IBCs, and that many types of IBC had protective devices or handling aids which could be considered to be lifting devices when that was not their purpose.

29. The Sub-Committee agreed that the problem raised could only be addressed on the basis of a new proposal in writing which would take account of the practical implications mentioned.

30. The Sub-Committee adopted the proposed amendments to the criteria of 6.5.6.5.5, except for the addition of a NOTE specifying what was meant by observable permanent deformation; it would be advisable to come back to this matter, as in the case of the bottom-lift test.

# Stacking test for flexible IBCs

31. The Sub-Committee adopted the principle whereby flexible IBCs could be exempted from the stacking test of 6.5.6.6.1 if the superimposed test load, as calculated according to 6.5.6.6.4 was lower than six times their maximum permissible gross mass, but it was agreed that it would be advisable to come back to this issue in order to take into account the marking of the stacking load on the IBC.

# Test criteria for the stacking test

32. Opinions were divided with regard to the use of the deformation criterion for the evaluation of the stacking test. Some experts considered that the case of plastics IBCs should be differentiated from that of metal IBCs, others that the existing conditions for plastic composite IBCs (28 days at 40  $^{\circ}$ C) were already stringent compared with normal conditions of carriage, others that these static conditions did not simulate the dynamic conditions of carriage, and others still that the proposed criterion for measuring deformation was not acceptable.

33. The Chairman observed that there was not sufficient consensus to adopt the proposed amendment to 6.5.6.6.5 (a). He concluded that it would be possible to come back to the issue with a proposal that could also concern paragraph (c) for rigid IBCs.

# Stacking of IBCs in cargo transport units

Informal document: INF.46 (United Kingdom)

34. The expert from the United Kingdom, recalling that problems of stacking IBCs were often linked to bad practice in stowing IBCs in cargo transport units, said that his Government had undertaken to prepare a practical guide for packing cargo transport units which it would submit to the International Maritime Organization (IMO); he invited interested experts to send him any comments they had on the first draft.

## Marking of IBCs for stacking

35. The Sub-Committee accepted the principle of using the pictograms in 6.5.2.2 to mark IBCs that should not be stacked and the permissible stacking mass on those that could be stacked.

36. The expert from the United Kingdom said that he would submit a proposal in this regard.

## Vibration test

37. The Sub-Committee noted that the informal working group had initiated discussions on the possibility of requiring a vibration test for IBCs, and that in the light of available data on vibration-related problems, a growing number of experts were favouring a requirement of this nature. It recalled, however, that at its December 2004 session it had decided that vibration tests would not be discussed during the current biennium.

38. It was agreed that a proposal could be studied in this connection, but only under the following conditions:

- Appropriate justification must be provided, bearing in mind that a broad consensus was necessary for introducing additional requirements that would significantly affect the packaging industry, while the case of packagings other than IBCs should not be addressed;
- The issues mentioned in para. 10 of the report of the working group (INF.5) must be resolved;
- Account must be taken of the availability and cost of test equipment worldwide, particularly with a view to the effective possibility of applying this test in developing countries.

# Leakproofness test

39. The Sub-Committee agreed that the design type leakproofness test should be conducted at a gauge pressure of at least 20 kPa and only according to the conditions for which 6.5.6.7.3 provided; methods that were at least equivalent would only be accepted for periodic tests. In addition, the test should be performed on IBCs fitted with a primary bottom closure. Paragraphs 6.5.4.4.2 and 6.5.6.7.3 were amended accordingly (see annex).

40. Opinions were divided on the addition of a deformation criterion, since some experts considered that the test was only intended to ensure leakproofness while others thought that IBCs experiencing deformations at a pressure as low as 20 kPa should not be accepted for carriage. The expert from Germany was of the opinion that this pressure problem should rather be settled by maximum allowable working pressure requirements, as in the case of tanks (see INF.32).

41. The Sub-Committee agreed that this question should be the subject of new proposals in writing.

# Drop test

42. The proposed amendment to paragraph 6.5.6.9.5 concerning the suitability of handling IBCs subsequent to the drop test was adopted with some changes (see annex).

43. Some experts mentioned the need to have more details of the operational aspect of this test.

44. The expert from France pointed out in particular that different results could be obtained depending on the target used in the drop test and said that he would submit a proposal referring to the standard ISO 2248 at the next session.

# Secondary means of closure of bottom discharge valves

Informal document: INF.27 (Australia)

45. Several experts recalled that leaks from the bottom discharge valve of IBCs were a source of incidents. A representative of industry said, however, that a system for securing the secondary means of closure seemed unnecessary and that it would be liable to give rise to maintenance problems.

46. Some experts noted that the implementation of secondary closure systems seemed to concern the use of the IBCs rather than their construction and could therefore be the subject of provisions in 4.1.1.7, for example.

47. The expert from Australia said that he would consider submitting a new proposal for the next session.

## Protection and strength of bottom discharge valves

Informal document: INF.33 (Australia)

48. The expert from Australia said that inadequate protection of bottom discharge valves could lead to leaks during carriage and that, because of where they were situated, the valves could experience cracking as a result of the vibrations during normal conditions of carriage.

49. Several delegations approved the principle of including additional provisions in the Model Regulations for the construction of these valves.

50. Some experts and representatives of industry hoped that the principle would be studied in depth, particularly as the problem could be treated by adding new requirements for the use of IBCs in Chapter 4.1, while the new provisions proposed could be in contradiction with the requirements for drop tests.

51. Some experts said that adding new construction provisions would require the introduction of a transitional measure.

52. The expert from Australia said that he would consider submitting a new proposal for the next session.

# Water resistance of IBCs

Informal document: INF.29 (Australia)

53. Several experts and representatives of industry agreed that it was necessary to define the term "water-resistant" clearly, but also stressed that the term "leakproof" was equally used in the Model Regulations and that the two terms had different meanings.

54. The expert from Australia said that he would consider submitting a new proposal for the next session.

## **Revision of Chapter 6.3**

Document: ST/SG/AC.10/C.3/2005/49 (United Kingdom)

Informal documents: INF.41, INF.43 and INF.44 (United Kingdom)

55. Following consideration by a group of experts, the Sub-Committee adopted amendments to Chapter 6.3 on the basis of proposals by the United Kingdom (see annex).

## LIMITED QUANTITIES

## **Excepted** quantities

Document: ST/SG/AC.10/C.3/2005/42 (United Kingdom)

Informal documents: INF.34 (United Kingdom) INF.40 (Belgium) INF.49 (IATA)

56. The Sub-Committee welcomed the proposal by the United Kingdom to introduce into the Model Regulations provisions exempting certain dangerous goods packed in very small quantities in order to

generalize the principle already applied in the ICAO Technical Instructions to all transport modes and thus achieve multimodal harmonization.

57. It was recalled that the principle was based on the fact that these dangerous goods are carried, in good quality inner packagings containing very small quantities, inside outer packagings also of a very limited capacity. The packages are capable of withstanding certain test conditions, thereby posing negligible risk during carriage. For carriage by air, the particulars in the transport document were not currently necessary, and the required marking of the packages was not intended for the emergency services but was to enable carriers to give notification of any incident involving the packages.

58. Some experts considered that the risk was not completely negligible when these goods were carried in a full load in a cargo transport unit, and that provision should also be made for certain particulars in a transport or other document, and for placarding cargo transport units in order to be able to identify the presence of these goods, at least as from a certain quantity, as suggested in the proposal by the United Kingdom.

59. Some experts proposed that the quantity per cargo transport unit should be limited, but others were firmly opposed to this.

60. It was also suggested that the hazard class should be included in the marking and also mentioned in the accompanying document along with the quantity carried.

61. Some experts were of the opinion that the system should be simple, since if it was too complicated consignors would have no interest in using it and there would no longer be any need for these new provisions.

62. The proposals were discussed at two lunchtime working group meetings in which participants agreed in principle on issues discussed in Plenary. The expert from the United Kingdom agreed to submit a revised proposal for the next session based on these agreements.

# LISTING, CLASSIFICATION AND PACKING

## Fuel cells

Documents: ST/SG/AC.10/C.3/2005/16 (Japan) (document withdrawn) ST/SG/AC.10/C.3/2005/32 (United States of America)

Informal document: INF.19 (France)

63. It was pointed out that current major developments in fuel cell technology regularly led to numerous new proposals. Several experts expressed the hope that a more rational approach would be adopted, so that it would not be necessary to deal with a new special case each time. For example, fuel cells, fuel cartridges and equipment containing or carried with fuel cells or cartridges could be classified according to the hazard class of the chemical they contained rather than to the exact composition of the product. There could equally be a reference to the appropriate standards for their construction, in cooperation with the standardization bodies, in order to ensure that these standards were acceptable from the standpoint of safety of carriage.

64. With regard to the proposal concerning UN No. 3468 (ST/SG/AC.10/C.3/2005/32), it was pointed out that the standard ISO 16111 had been adopted only as a "PAS" (Publicly Available Specification) on the basis of a simple majority vote within the Working Group of TC 197. This status did not appear to be adequate for including a reference to this standard and the representative of ISO

said that he would take the necessary steps to ensure that the TC 197 Technical Committee propose its adoption as a full technical specification by the ISO/IEC members by the end of 2006.

65. The Sub-Committee agreed that it was not possible to take a decision on the propose packing instruction but accepted a modification of the proper shipping name of UN No. 3468.

66. With regard to the proposal for a new entry for fuel cells containing borohydrides (INF.19), it was agreed that it would be possible to come back to the question on the basis of an official proposal, possibly in the context of the consideration of more generic proposals.

## UN No. 2031, nitric acid

Document: ST/SG/AC.10/C.3/2005/27 (Germany)

Informal document: INF.17 (ICCA)

67. The Sub-Committee agreed that solutions of nitric acid with more than 65% nitric acid should be considered to be oxidizing substances in accordance with the criteria of the Manual of Tests and Criteria, but that this did not justify classification in packing group I of solutions with a concentration of between 65 and 70%. It therefore adopted the proposal by ICCA for a new row in the table in Chapter 3.2 for these solutions (see annex). It was pointed out that PP81 should also be applied to IBC02 and ICCA undertook to submit a formal proposal at the next session.

#### Fibres, rags and textiles of UN Nos. 1372, 1387, 1856, 1857 and 3360

Document: ST/SG/AC.10/C.3/2005/28 (Germany)

68. The expert from Germany explained that the fact that these goods were only subject to maritime regulations raised practical problems because the cargo transport units containing them were not subject to land regulations and were frequently not declared as containing dangerous goods when presented for embarkation.

69. The Sub-Committee considered that this argument was not sufficient reason to impose land regulations on goods considered hazardous only for carriage by sea.

## 1-hydroxybenzotriazole

Document: ST/SG/AC.10/C.3/2005/29 (Germany)

70. The Sub-Committee agreed that this substance belonged to Class 1 but not necessarily to Division 1.1, Compatibility Group D. Several experts requested that the proposal should be backed by additional information on the result of test series 6, results concerning the product in its hydrated forms and the quantities carried.

#### Packing containers for calcium carbide

<u>Document</u>: ST/SG/AC.10/C.3/2005/30 (China)

Informal document: INF.10 (EIGA)

71. It was pointed out that special provision TP7 applied to carriage in tanks and that amending it would not settle the problem raised by China concerning the carriage of calcium carbide. In addition, it also applied to other substances.

72. The representative of EIGA said that he was not in favour of amending this provision, since even if the acetylene concentration was measured before dispatch, calcium carbide continued to produce acetylene during carriage, and the layer of nitrogen required by provision TP7 enabled the risks to be eliminated. EIGA was, however, in favour of measures for purging air from the vapour phase in IBCs by introducing nitrogen or by other means, since it was then possible to avoid the formation of acetylene/oxygen explosive atmospheres and prevent the production of acetylene on contact with ambient humidity.

73. The expert from China was invited to discuss these problems with EIGA and CGA.

## **Classification of lead compounds**

Document: ST/SG/AC.10/C.3/2005/31 (United States of America)

74. The Sub-Committee adopted the amendment to special provision 199 specifying that lead compounds considered to be insoluble according to this provision did not belong to Division 6.1 (see annex).

## Portable tank instructions for n.o.s. entries concerning water-reactive substances

Document: ST/SG/AC.10/C.3/2005/34 (United States of America)

75. The Sub-Committee agreed to introduce instructions for the carriage in tanks of n.o.s. entries concerning water-reactive substances but of a more stringent nature than those proposed for corrosive water-reactive liquids, and to prescribe a nitrogen blanket for substances of packing group I (see annex).

# UN No. 2059 nitrocellulose solution, flammable - packing groups II and III

Document: ST/SG/AC.10/C.3/2005/38 (United Kingdom)

76. The proposal to permit the carriage of these substances in IBCs was adopted (see annex).

## Use of pressure receptacles in accordance with packing instructions P400(1), P401(1) and P402(1)

Document: ST/SG/AC.10/C.3/2005/40 (United Kingdom)

77. The expert from the United Kingdom proposed that there should not be a fixed minimum pressure of 20 kPa for the layer of inert gas required by these packing instructions. Since this proposal as presented did not meet with consensus, the expert from the United Kingdom said that he would prepare a new proposal.

## Testing of stabilized maneb (special provision 273)

Document: ST/SG/AC.10/C.3/2005/47 (South Africa)

78. The Sub-Committee took note of the test method developed in South Africa for conducting the tests for which special provision 273 provided, but would like more information on the test data before studying the possible inclusion of this method in the Manual of Tests and Criteria.

#### Classification of magnesium nitrate hexahydrate

Document: ST/SG/AC.10/C.3/2005/48 (South Africa)

79. The Sub-Committee agreed to introduce a new special provision applicable to UN No. 1474, specifying that magnesium nitrate hexahydrate was not subject to the Model Regulations (see annex).

#### Packing instruction for UN No. 1744 (bromine)

Informal document: INF.6 and INF.6/Rev.1 (United Kingdom)

80. After considering the proposal for a new packing instruction for bromine, the expert from the United Kingdom said that he would submit a new official proposal for the next session.

#### Classification criteria for viscous substances of Class 3

Document: ST/SG/AC.10/C.3/2005/56 (United Kingdom)

Informal document: INF.18 (CEPE)

81. The Sub-Committee adopted the proposed amendment of 2.3.2.5 to the effect that viscous substances that were hazardous for the aquatic environment should not be exempted from the Model Regulations (see annex).

#### Definition of "cargo transport unit" and "closed cargo transport unit"

Informal documents: INF.28 and INF.30 (Australia)

82. The Sub-Committee noted with interest the proposals by the expert from Australia to introduce new definitions into section 1.2.1 and invited him to submit an official proposal, bearing in mind any comments that might be sent to him.

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

#### Security of dangerous goods in transport

Document: ST/SG/AC.10/C.3/2005/39 (United Kingdom)

83. Bearing in mind that the assignment of an explosive substance or article to a hazard division depended, from the safety standpoint, on the packing conditions and not on the nature of the substance or article, the Sub-Committee acknowledged that this classification principle could give rise to security problems, since the same article, for example a detonator, could be classified in Division 1.1 or in Division 1.4 depending on how it was packaged. The Sub-Committee therefore adopted the proposal to consider certain explosive articles classified in Division 1.4 as high-consequence dangerous goods from the security point of view and amended Table 1.4.1 accordingly (see annex).

#### **Remanufactured portable tanks**

Document: ST/SG/AC.10/C.3/2005/41 (United Kingdom)

84. Several experts considered that the portable tanks described as "remanufactured" in this document were more properly repaired portable tanks, in that the original tank shell was reinstalled in a

new framework. They were also of the opinion that the practice of indicating a new construction date corresponding to the "remanufacturing" date on the data plate of these portable tanks was incorrect and that the problem raised should be resolved in the context of the monitoring of the correct implementation of the regulations.

85. The expert from the United Kingdom said that he would reconsider the question bearing these comments in mind.

## Special provisions for carriage in tanks

Document: ST/SG/AC.10/C.3/2005/53 (United States of America)

86. The Sub-Committee adopted the proposals to delete special provision TP9 for all entries except UN No. 3375, since in practice the requirements applicable to n.o.s. entries were already more stringent than those applicable to substances mentioned by name and there was no need to request the approval of the competent body on a case-by-case basis since the competent authority only confirmed the provisions of the Model Regulations.

87. The Sub-Committee also adopted the proposal to delete provision TP12 since it did not properly constitute a requirement.

88. The Sub-Committee did not agree to the deletion of provision TP6 since Chapter 6.7 did not provide for equivalent requirements for the United Nations numbers in question.

#### **Infectious substances**

Document: ST/SG/AC.10/C.3/2005/59 (ICAO)

89. The various proposals for amendments to Chapter 2.6, submitted by ICAO, were not adopted.

Informal document: INF.38 (Germany)

90. The proposal to delete the reference to the detection of antibodies at the end of the NOTE in 2.6.3.2.3.6 was adopted (see annex).

Informal document: INF.9 (Germany)

91. Proposals No. 2 to amend paragraph 2.6.3.2.3.1 and No. 3 to delete 2.6.3.2.3.2 were adopted (see annex).

#### **Definition of cultures**

Informal document: INF.39 (Germany)

92. Several experts supported the intention of the expert from Germany to prepare new provisions for cultures of infectious substances; an official proposal would be submitted at the next session.

## Mandatory requirements in notes 2 and 3 to 2.4.2.3.1.1

<u>Document</u>: ST/SG/AC.10/C.3/2005/58 (ICAO)

93. The Sub-Committee noted the request by ICAO that mandatory requirements should not be included in notes on the grounds that "notes have no legal status when transposed into legal instruments".

94. The Sub-Committee noted that, in accordance with conventional rules related to the Convention on International Civil Aviation, notes included in the text of the annexes to that Convention, such as Annex 18 dealing with the Safe Transport of Dangerous Goods by Air, were supposed to contain factual information or references bearing on the Standards or Recommended Practices of theses annexes, but were not constituting part of the Standards or Recommended Practices. As a consequence, some governments felt that notes included in the Technical Instructions for the Safe Transport of Dangerous Goods by Air, which are not themselves an integral part of the said annex 18 but whose application is made mandatory under paragraph 2.2.1 of that annex, should not contain mandatory requirements.

95. The Sub-Committee noted that, whatever interpretation may be made of the legal status of the notes contained in the ICAO Technical Instructions, many national legal instruments, and international treaties contained notes which had legal status and contained mandatory requirements.

96. The Sub-Committee agreed that, if the inclusion of mandatory requirements in the notes contained in the UN Model Regulations caused legal problems of implementation when transposed into the ICAO Technical Instructions, this practice should be avoided in future. Nevertheless, the Sub-Committee noted also that ICAO had not yet aligned its paragraph numbering system on the Model Regulations, and considered that nothing prevented ICAO from transforming a note into a paragraph in the ICAO Technical Instructions if this caused a problem. Therefore the Sub-Committee did not agree to proceed to an editorial review of all notes presently containing mandatory requirements, since this would mainly affect those legal instruments which are editorially aligned on the UN Model Regulations format and for which no such problem had been raised.

#### Substances whose transport is prohibited

Informal documents:	INF.11 (Italy)
	INF.21 (United States of America)

97. The Sub-Committee noted that several national or international instruments contained lists of substances the transport of which is prohibited and agreed that a rationalized approach should be adopted in future in the Model Regulations for this purpose.

## Miscellaneous editorial proposals

Informal document: INF.12 (Italy)

98. The Sub-Committee agreed to the proposals in sections 2, 3 and 4 of the document aiming at bringing consistency in the proper shipping names (see annex). The proposal concerning the subsidiary risk 6.1 for sodium dinitrocresolates was withdrawn and should be submitted as an official proposal.

#### Assignment of special provision 274 to N.O.S. entries

Informal document: INF.13 (Italy)

99. The Sub-Committee agreed that a rationale for assignment of special provision 274 to N.O.S. entries should be defined since there was no harmony between various modal regulations in this respect.

#### Special provisions 61 and 274

Informal document: INF.14 (Italy)

100. The Sub-Committee considered that the assignment of special provisions 61 and 274 to pesticide entries was not necessarily redundant since, in the case of pesticides with several hazards, the

technical name would not consist only of the technical name of the pesticide. The expert from Italy said that he would submit a new proposal.

#### **Default firework classification**

Informal document: INF.51 (Secretariat)

101. The editorial changes to NOTE 2 to 2.1.3.5.2 were adopted (see annex...).

#### HARMONIZATION OF THE IAEA REGULATIONS AND THE UN MODEL REGULATIONS

Document: ST/SG/AC.10/C.3/2005/19 (United Kingdom)

Informal documents: INF.35 (United Kingdom) INF.36 (IAEA) INF.50 (IAEA)

102. The Sub-Committee noted the information provided in INF.36 by the IAEA concerning the work of the Transport Safety Standards Committee (TRANSSC).

103. The Sub-Committee noted that the IAEA intended to convene a Consultant Service Meeting in early February 2006 to consider the proposals by the United Kingdom in ST/SG/AC.10/C.3/2005/19 and INF.36, to make sure that they are consistent and aligned with the IAEA Regulations and the UN Model Regulations, and to evaluate if there is any other area where there would be a need for better harmonization. Proposals would then be submitted to TRANSSC and to the Sub-Committee.

104. The Sub-Committee noted with satisfaction that it was the intention of the IAEA to invite the secretariat to participate in such a meeting. The expert from the United Kingdom said that the IAEA also intended to invite experts of the Sub-Committee to participate in this work, at their own expense, and therefore experts of the Sub-Committee who would be interested in participating in such a meeting should inform the secretariat of the Sub-Committee well in time. The secretariat would communicate the list to the IAEA secretariat so that experts may receive an invitation for participation.

105. A member of the secretariat drew the attention to the fact that the proposal by the United Kingdom was based on the 13th revised edition of the UN Model Regulations and on the 2003 version of the IAEA Regulations, and therefore it should be updated so that the meeting to be organized by IAEA would not spend unnecessary time to check the consistency with the 14th revised edition of the UN Model Regulations and the 2005 version of the IAEA Regulations. The expert from the United Kingdom said that he would prepare and circulate an updated version in due time before the meeting takes place.

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

Documents: ST/SG/AC.10/C.3/2005/20 (Canada/United Kingdom) ST/SG/AC.10/C.3/2005/60 (ECOSOC Resolution 2005/53)

Informal documents: INF.16 (Italy) INF.22 (Secretariat)

106. The Sub-Committee noted that the Economic and Social Council had amended operative paragraph 5 proposed by the Committee in section A of the draft resolution it had prepared in December 2004. The final resolution places more emphasis on studying the possibilities of improving the

implementation of the Model Regulations including through further harmonization between international agreements and conventions, but also keeps the possible alternative of a joint approach to the development of an effective international instrument on multimodal international transport of dangerous goods, as appropriate.

107. Several experts supported the two-step approach suggested by the expert from Italy in INF.16, i.e. first discuss the possibility of improved cooperation between the international organizations concerned and national delegations participating in that meeting, and then analyzing in 2007-2008 whether this enhanced cooperation produced real improvements and whether it would be appropriate to develop a proposal for a world convention.

108. With respect to the first step, it was mentioned that there was already a rather effective cooperation between organizations, and although some well-known differences remained, in general the provisions included in the modal instruments were largely harmonized with the UN Model Regulations. However this was not the case for national regulations in all countries of the world, and the disparity of such national regulations caused practical problems of trade facilitation when international transport was not governed by international instruments after maritime or air transport. Another area where progress could be made was harmonizing the dates of entry into force of amendments to the various existing international legal instruments.

109. Some experts felt that it would be useful to carry out a survey at worldwide level in order to evaluate whether governments would be favorable to the development of an international convention for multimodal transport of dangerous goods. Others recalled that there were already several conventions for different modes of transport and the development of a new global convention would require close cooperation with several organizations.

110. Some experts felt that the secretariat should provide guidance on the procedure for drafting a convention.

111. It was also noted that the present periodicity of amendments to the Model Regulations causes problems of implementation in some countries which had difficulties in updating their national regulations every two years. It was suggested that the Sub-Committee should avoid amending the Model Regulations when not absolutely necessary, bearing in mind that the Model Regulations had reached a reasonable maturity and were often subject to editorial changes which did not change the substances of the regulations.

112. It was also mentioned that the present system was rather flexible and allowed the Sub-Committee to take ambitious decisions which could be quickly put into question if not accepted by modal bodies, while in the context of a global convention, such decisions would require a wide consensus and, as a consequence, it might be much more difficult to take efficiently account of the technological developments.

113. Attention was drawn to informal documents INF.47 and INF.48 which reflected the discussions which took place in this respect at the last sessions of the IMO Sub-Committee on Dangerous Goods, Solid Bulk Cargoes and Containers, and of the ICAO Dangerous Goods Panel, whereby both organizations had expressed their commitment to improve multimodal harmonization, but whereby ICAO had also expressed some reluctance to the development of a global multimodal convention.

114. It was finally agreed that this issue required more consultations with the various international bodies concerned and Member States, and that it should be further discussed at the next session on the basis of official documents.

# IMPROVEMENT OF HAZARD COMMUNICATION

#### Stencilling of the UN mark on packagings

<u>Document</u>: ST/SG/AC.10/C.3/2005/54 (DGAC)

115. Several experts considered that the DGAC proposal to amend paragraph 6.1.3.1 to allow small gaps resulting from applying the UN package marking by stencilling was mainly intended to solve an enforcement issue linked to the interpretation of the Model Regulations in one country. It was noted that the Model Regulations only required that the mark should be durable and legible and did not provide for a standardized interpretation of how this could be achieved. Even though most experts considered that the stencilling technique mentioned by DGAC was acceptable, referring to this specific technique in the Model Regulations would imply that all other acceptable techniques would also have to be mentioned, and not only in Chapter 6.1, but also in all other relevant chapters of Part 6.

116. The representative of DGAC said that he would consider submitting a new proposal.

## Tolerance for labels deviating from the models of Chapter 5.2

Document: ST/SG/AC.10/C.3/2005/50 (United Kingdom)

Informal document: INF.20 (United Kingdom)

117. While recognizing that the minor differences between the model of labels shown in the various modal instruments did not constitute a major safety concern, several experts considered that inspectors could not be requested to exert their own judgment in order to determine whether or not non compliance with the requirements of a given legal instrument had to be considered as an infringement. Therefore, the solution to the problem raised was probably closer harmonization with the UN Model Regulations in this respect. Others experts indicated that inspectors should be better trained.

118. The expert from the United Kingdom withdrew her proposal and said that she would consider submitting a revised one.

Informal document: INF.23 (United States of America)

119. The Sub-Committee accepted the proposal to allow more flexibility for the location of the UN number on placards, or of additional text and the UN number on a label, and amended 5.3.2.1.2 (a) and 5.2.2.2.1.3 accordingly (see annex).

# **GUIDING PRINCIPLES FOR THE MODEL REGULATIONS**

#### Portable tanks

Document: ST/SG/AC.10/C.3/2005/51 (United States of America)

120. The Sub-Committee welcomed the work done by the expert from the United States and the experts were invited to send in their comments so that he could take them into account in a new version.

# **IBCs**

Document: ST/SG/AC.10/C.3/2005/52 (United States of America)

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

121. The expert from the United States of America took note of the comments by the other experts and would prepare a new proposal for the next session. He requested that annex 2 of informal document INF.37 should already be submitted as an official proposal.

Informal document: INF.8 (United Kingdom)

122. Some experts felt that certain principles laid down in the draft guiding principles were questionable and would prefer that they be restricted to explanatory material related to the Model Regulations and that they do not duplicate existing text.

123. The Sub-Committee considered that additional work was needed and that the publication of such guiding principles on the UNECE website should be subject to approval by the Committee.

## **OTHER BUSINESS**

#### Outcome of the 20th session of the ICAO Dangerous Goods Panel

Informal document: INF.47 (Secretariat)

124. The Sub-Committee took note of the decisions of the ICAO Dangerous Goods Panel.

# Outcome of the 10th session of the IMO Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC 10)

Informal document: INF.48 (Secretariat)

125. The Sub-Committee took note of the decisions of DSC 10 and noted in particular that DSC had adopted the GHS criteria for aquatic pollutants. Substances meeting the criteria will have to be identified as marine pollutants in the transport document. The IMDG Code will contain a non-exhaustive list of marine pollutants, and non listed substances meeting the criteria will have to be carried in accordance with the relevant provisions. The existing marine pollutant mark will be replaced by the GHS mark. Annex 3 of the MARPOL Convention will be amended accordingly and the provisions will be of voluntary application as from 1 January 2009 and of mandatory application as from 1 January 2010.

## Updating of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Document: ST/SG/AC.10/C.3/2005/36 (Germany)

126. The Sub-Committee took note of some issues related to physical hazards which were considered not to be properly addressed in the GHS by the expert from Germany.

127. Since the Sub-Committee was deemed to be the focal point for the GHS physical hazards, it expressed the wish to be entrusted with the responsibility of carrying out this work if the GHS Sub-Committee decided to pursue these matters. This work could not be completed in the present biennium and would have to be carried forward to the next biennium, but since a meeting of experts in explosives was scheduled for the July 2006 session, it would be possible to envisage preliminary consultations at that session. Experts in the storage and supply of explosives should be invited to participate in the work

since it was not specific to the transport sector and would require intersectoral cooperation. The expert from Germany agreed to submit a more detailed proposal for the next session.

#### Request for consultative status by "RECHARGE"

Informal document: INF.3 (RECHARGE)

128. The Sub-Committee agreed to grant consultative status to the non-governmental organization "RECHARGE".

#### **Emergency procedures**

129. The Sub-Committee noted that the Government of Romania had published a translation of the North American Emergency Response Guide in the Romanian language with some adaptations to take account of the national context.

#### **Building block approach**

Document: ST/SG/AC.10/C.4/2005/6 (Canada)

Informal document: INF.42 (United Kingdom)

130. The Sub-Committee took note of the document on the Building Block Approach which was submitted by Canada to the GHS Sub-Committee, and of the comments by the expert form the United Kingdom as regards the transport sector.

131. Several views were expressed, but several experts considered that it would not be appropriate to agree on a Sub-Committee's position on the document prepared by Canada. Several experts recalled that, for the transport sector, the approach was coordinated at international level through the TDG Sub-Committee, and this prevented disparities which would be due to national competent authorities decisions. They wished that each sector should adopt a similar uniform sector-related approach.

132. There was significant support, but no consensus, for the interpretation of the building block approach prepared by the expert from the United Kingdom in INF.42 for the transport sector. The proposed example, for hazard communication, that aquatic pollutants required a class 9 label in the transport sector was not correct since this would not be the case for maritime transport where the GHS criteria for aquatic pollution would apply also to substances meeting the criteria for other endpoints.

133. The Sub-Committee agreed that, in paragraph 1.1.3.1.5.5 of the GHS proposal by Canada, reference should be made to the fact that, in the transport sector, some packagings may be exempted from the labelling provisions in certain conditions, or some variations in the labelling provisions may be envisaged.

## **ADOPTION OF THE REPORT**

134. The Sub-Committee adopted the report on its twenty-eighth session and the annex thereto on the basis of a draft prepared by the secretariat.