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

Sub-Committee of Experts on the  
Transport of Dangerous Goods

REPORT OF THE SUB-COMMITTEE OF EXPERTS  
ON ITS TWENTY-THIRD SESSION

(Geneva, 30 June-4 July 2003)

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## REPORT

### ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its twenty-third session from 30 June to 4 July 2003 with Mr. S. Benassai (Italy) as Chairman and Mr. F. Wybenga (United States of America) as Vice-Chairman.
2. Experts from the following countries took part in the session: Australia; Austria; Belgium; Canada; China; Czech Republic; Finland; France; Germany; India; 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: Bahamas; Greece, Switzerland and Tunisia.
4. Representatives from the United Nations Environment Programme (Secretariat of the Basel Convention) (UNEP/SCB) and from the following specialized agencies were present: International Atomic Energy Agency (IAEA); International Maritime Organization (IMO) and World Health Organization (WHO).
5. The following intergovernmental organizations were also represented: European Commission, 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: American Biological Safety Association (ABSA); European Liquefied Petroleum Gas Association (AEGPL); International Association of the Soap, Detergent and Maintenance Products Industry (AISE); Compressed Gas Association (CGA); Dangerous Goods Advisory Council (DGAC); European Chemical Industry Council (CEFIC); European Industrial Gases Association (EIGA); Federation of European Aerosol Associations (FEA); International Federation of Freight Forwarders Associations (FIATA); International Air Transport Association (IATA); International Council of Chemical Associations (ICCA); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Plastics Packaging Manufacturers (ICPP); International Fibre Drum Institute (IFDI); International Organization for Standardization (ISO); International Tank Container Association (ITCA); International Technical Committee for the Prevention and Extinction of Fire (CTIF); International Union of Railways (UIC).

### OPENING OF THE SESSION

7. Mr. J. Capel Ferrer, Director of the Transport Division of the United Nations Economic Commission for Europe, welcomed the participants. He announced that the substantive session of the Economic and Social Council for 2003 was opening on the same day, and that since its agenda included the Secretary-General's report on the work of the Committee in 2001-2002, it provided an occasion for the experts of the Sub-Committee to contact their representatives on the Council with particular reference to the draft resolution submitted to the Council for adoption.
8. He also informed the Sub-Committee that, since the session of the Committee, the secretariat had published the first version of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in English and French but that this had delayed by a few weeks the publication in English of the thirteenth revised edition of the Recommendations on the Transport of Dangerous Goods which would be available only in mid-August. It would, however, be available in English and in French

simultaneously; this denoted considerable progress in respect of the French version which was usually only available in December.

9. The expert from the United Kingdom regretted that the new edition of the Model Regulations was not yet available and asked if it would not be possible to revise the priorities for the next publication, in view of the fact that it was indispensable that the Model Regulations should be available for the harmonization of the international and national modal regulations.

10. A member of the secretariat said that it had seemed more logical to give priority in the current year to the GHS since this text was currently not available in any form. Where the Model Regulations were concerned, the list of amendments which had been in circulation for some considerable time enabled the organizations concerned to harmonize their respective instruments. The possibility of expediting publication was limited on the one hand because the general services category resources requested from the Committee for the section in the context of the restructuring had not been granted, and on the other hand because publications had to be printed in-house rather than outside for reasons of economy and overall efficiency, and the secretariat's reproduction capabilities were also limited and subject to other rules of priority.

#### **ADOPTION OF THE AGENDA**

Document: ST/SG/AC.10/C.3/45 (Provisional agenda)  
ST/SG/AC.10/C.3/2003/1 (List of documents)

Informal documents: INF.1, INF.2, INF.11 and INF.24

11. 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.40).

#### **TRANSPORT OF GASES**

Documents: ST/SG/AC.10/C.3/2003/4 (EIGA)  
ST/SG/AC.10/C.3/2003/9 (United Kingdom)  
ST/SG/AC.10/C.3/2003/12 (EIGA)  
ST/SG/AC.10/C.3/2003/21 (United States of America)  
ST/SG/AC.10/C.3/2003/28 (United States of America)

Informal document: INF.13 (CGA)

12. After a brief introduction in plenary, consideration of these documents was entrusted to a working group which met from 30 June to 2 July with Mr. Puype (EIGA) as Chairman. The group was also asked to consider document ST/SG/AC.10/C.3/2003/9, submitted by the United Kingdom, concerning the use of cylinders for substances of classes other than Class 2.

#### **Report of the Working Group on gases**

Informal document: INF.37

13. The Sub-Committee adopted the amendments proposed by the Working Group with some modifications (see annex 1) and the following comments:

para 3: The minimum wall thickness for pressure drums remains between square brackets because this will have to be further discussed, e.g. in relation to the diameter of the pressure drums;

para 4: The amendment proposed is unnecessary because it is already covered by corrigendum 3 to the 12th revised edition of the Recommendations;

para 13: There was no agreement on the changes of proper shipping names for UN 1010 and UN 1012. It was agreed that the third entry for UN 1010 (BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 40% butadienes) should remain unchanged, but the expert from the United States of America did not agree that there should be separate entries for 1, 2- and 1, 3-BUTADIENE, STABILIZED and considered that the entry “BUTADIENES, STABILIZED” covering also mixtures of butadienes should be kept. In such a case, an entry for butadienes mixtures might have to be developed in P200. Similarly, the expert of the United States of America did not see a need for separate proper shipping names for butylene isomers under UN 1012. It was also noted that the changes proposed to the proper shipping names for UN 1010 and UN 1012 would entail changes to T50.

14. The representative of UIC proposed to delete the minimum concentration of 40% in the butadiene mixtures because experience has shown that mixtures with lower concentrations should also be stabilized. He offered to submit a written proposal to the December session.

### **Gas cartridges**

Document: ST/SG/AC.10/C.3/2002/7 (AEGPL)

Informal document: INF.20 (AEGPL)

15. Several experts were of the opinion that the proposal by AEGPL was related to difficulties in interpreting the expression “release device” as opposed to “valve”. Some experts agreed that gas cartridges of UN 2037 could be fitted with a valve, but not with a release device similar to those fitted to aerosol dispensers; others stated that a valve was a release device.

16. The proposal by AEGPL, as amended by informal document INF.20, was put to the vote but was not adopted.

Documents: ST/SG/AC.10/C.3/2002/8 (AEGPL)  
ST/SG/AC.10/C.3/2002/81 (Sweden)

Informal documents: INF.3 (submitted at the twenty-second session) (United States of America)  
INF.19 (AEGPL)

17. The Sub-Committee noted that the proposal by AEGPL was linked to ongoing work in the RID/ADR/ADN Joint Meeting in connection with European standard EN 417. The expert from the United States of America said that he hoped that the American standards would also be taken into account. The representative of AEGPL finally withdrew his proposal, admitting that more detailed intersessional discussion was required.

Document: ST/SG/AC.10/C.3/2002/57 (Austria)

Informal document: INF.25(submitted at the twenty-second session) (United States of America)

18. The expert from the United States of America said that he did not oppose the restriction of the exemptions of special provision 191 to non-flammable, non-toxic gases provided that provision was made for an internal pressure limit of 970 kPa at 55° C as in the ICAO Technical Instructions.

19. Several experts were of the opinion that the conditions for exemptions should be studied in greater depth to take account of the nature of the gas, the quantity contained and the pressure. It was also suggested that similar changes should be considered for special provision 190.

20. It was agreed that this question should be the subject of a new document on which a decision would be taken at a subsequent session.

Informal document: INF.14 (FEA)

21. The representative of FEA said that he would submit a detailed proposal for alternative leakproofness tests on aerosol dispensers at a forthcoming session.

## **EXPLOSIVES, SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES**

### **Classification criteria for fireworks**

Document: ST/SG/AC.10/C.3/2003/14 (Netherlands)  
ST/SG/AC.10/C.3/2003/20 (United States of America)  
ST/SG/AC.10/C.3/2003/25 (CTIF)  
ST/SG/AC.10/C.3/42/Add.2 (Report of the Working Group on the classification of fireworks which met during the Sub-Committee's twenty-first session)

Informal document: INF.16 (CTIF)  
INF.25 (United Kingdom)

22. The Sub-Committee decided to entrust consideration of these documents to the Working Group on explosives on the understanding that, for the default system of classification, the working group should, if necessary, take account of the nature of the pyrotechnic composition, the quantity of explosive contained in the fireworks and their dimensions.

### **Ammonium nitrate emulsions**

Documents: ST/SG/AC.10/C.3/2003/13 (Spain)

Informal documents: INF.12 (Spain)  
INF.29 (Canada)  
INF.32 (Spain)

23. Consideration of these documents was entrusted to the Working Group on explosives.

### **Report of the Working Group on explosives**

Informal document: INF.38

24. For ammonium nitrate emulsions, the Sub-Committee noted that further work on the issues raised by the expert from Spain (definition of ammonium nitrate emulsions, suspensions and gels in special provision 309 was needed). The expert from Spain informed the Sub-Committee that he would submit a new proposal to the next session on the basis of the draft text developed by the Working Group (see also annex 2, paras. 3-10) (ST/SG/AC.10/C.3/46/Add.1).

25. The Sub-Committee also noted that the Working Group had discussed informal document INF.32 which provided information on the work carried out in Canada on a Minimum Burning Pressure Test for

possible future inclusion into the Manual of Tests and Criteria. The Sub-Committee agreed with the Working Group that the expert from Canada should be encouraged to carry on his work on this issue.

26. For the default system of classification of fireworks, the Sub-Committee noted that the Working Group had made good progress, but that at least another session of the Working Group would be necessary to complete the work. The Sub-Committee agreed that the Working Group should meet again in parallel at the next session.

27. The expert from the United Kingdom said that he would provide additional test data but that these would not be available until Spring 2004.

28. The expert from the United States of America said that he could not agree with the conclusions of the Working Group. In his opinion, the default system should be based on the amount of explosives contained in fireworks and their composition rather than on the size of fireworks, which would be more realistic not only from the perspective of transport of dangerous goods regulations but also for storage and workplace safety regulations. He recalled that the UN Model Regulations on the Transport of Dangerous Goods had been used as a basis for GHS criteria, and therefore the default system for classification of fireworks should be relevant for all safety regulations, including storage, workplace safety and consumer protection. He said that the default system presently in force in his country was more conservative than that developed by the Working Group, and if the conclusions reached so far by the Working Group were to be adopted by the Sub-Committee, he could not commit his country to implement such a different system.

29. Other experts considered on the contrary that, from the standpoint of enforcement, a system based on the size of fireworks would be easier to implement.

30. The Chairman said that the default system of classification should be relevant for all GHS applications.

31. The Sub-Committee agreed that the report of the Working Group should be annexed as an addendum to this Sub-Committee report for further consideration (see annex 2 under cover of ST/SG/AC.10/C.3/46/Add.1).

## **PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINGS)**

### **Evaluation of the United Nations packaging requirements**

Document: ST/SG/AC.10/C.3/2003/16 (Netherlands)

32. Several experts were of the opinion that the United Nations requirements had considerably increased the safety of packagings for the carriage of dangerous goods and that there was no reason to call them in question as a whole.

33. The Sub-Committee agreed that any problems should continue to be submitted to it on the basis of specific information, and that case-by-case solutions could be found without any need for envisaging an overall revision.

34. With reference to the proposal to establish a working group, the Sub-Committee requested the expert from the Netherlands to submit an advance list of the problems identified, so as to be able to decide whether the proposal was justified.

## **Performance testing**

### ***Reference to standard ISO 16104:2003***

Document: ST/SG/AC.10/C.3/2003/10 (United Kingdom)

Informal documents: INF.21 (France)  
INF.26 (ICCR)  
INF.33 (Canada)

35. The majority of delegations said that they were opposed in principle to the idea of replacing the requirements of the Model Regulations regarding the testing of packagings by a reference to a standard, considering that this would be tantamount to transferring responsibility for issuing such rules to a standardization body and losing control of the development of the regulations.

36. Some delegations considered that it was unproductive to reiterate in the standards the statutory requirements of the Model Regulations. Some felt it would be undesirable to introduce requirements contrary to the Model Regulations, but that it was useful for standards to contain additional provisions which could contribute to a harmonized interpretation of how testing should be carried out. Others considered on the contrary that some degree of flexibility should be kept in the approach to testing.

37. Several experts also considered that the difficulty of access to ISO standards and their prohibitive cost both for administrations and for users were not conducive to wide international distribution and implementation of the United Nations Recommendations, and that this factor was alone sufficient to justify maintaining the existing requirements in the Model Regulations.

38. In view of some comments on the compatibility of the new ISO standard with the Model Regulations, a member of the secretariat said that, for legal reasons concerning the use of the United Nations logo, the ISO standard should not permit packagings to be marked with the UN sign if the requirements of the standard were not in strict keeping with those of the Model Regulations.

39. The expert from the United Kingdom requested that his proposal should remain on the agenda and that ISO standard 16104:2003 should be distributed to all delegations for further discussion at the next session.

40. The Chairman suggested that the expert from the United Kingdom should submit a new proposal in the light of the comments made if he wished for a new debate on this issue. Referring to document ST/SG/AC.10/C.3/2003/16, he asked whether the expert from the Netherlands intended also to prepare proposals in relation to the ISO standard.

41. The expert from the Netherlands said that he would submit formal proposals of editorial amendments to the existing provisions of the Model Regulations during this biennium.

### ***IBC testing***

Document: ST/SG/AC.10/C.3/2003/27 (United States of America)

Informal document: INF.36 (Drafting Group)

42. Several experts supported in principle the proposal to amend 6.5.4.9.2, but in view of the number of comments it was decided to entrust the proposal to a drafting group. The texts adopted can be found in annex 1.



***Drop test on steel drums***

Informal document: INF.34 (Canada)

43. The Sub-Committee took note of the results of a survey by the Canadian Government of the ability of steel drums from various different manufacturers to pass the drop test.

**Miscellaneous proposals**

***Aerosol dispensers and small receptacles for gas used for medicinal purposes***

Document: ST/SG/AC.10/C.3/2003/6 (United Kingdom)

44. Some experts considered that the WHO system of good manufacturing practices did not guarantee that the packagings used met the criteria of the United Nations Model Regulations.

45. It was noted that the hot water bath test of 6.2.4.1 could cause problems for pharmaceutical products, but also for heat-sensitive products, and that FEA was working on a proposal of alternative methods for aerosols. The majority of experts therefore preferred to consider the problem as a whole rather than find a solution for the special case of pharmaceutical products.

46. The expert from the United Kingdom amended his proposal by keeping only the text proposed for 6.2.4.3, with the addition of a reference to approval by the competent authority in the first sentence and the replacement of “may” by “need”. He requested that his proposal, as amended, should remain on the agenda for the next session.

***Waste aerosols sent for disposal and recycling***

Document: ST/SG/AC.10/C.3/2003/7 (United Kingdom)

47. Several experts recognized that the transport of used, damaged or unusable aerosol dispensers sent for disposal or recycling raised a problem in that these dispensers were themselves already no longer in conformity with the regulations and that it was not easy to apply packaging requirements for aerosols in good condition to aerosols which were defective.

48. Several experts considered, however, that the conditions proposed by the United Kingdom were not adequate, particularly as, in the form in which they were presented, they could apply to all aerosol dispensers. These measures should therefore be restricted to defective aerosols and provision made for additional safety factors for large packagings.

49. The expert from the United Kingdom said that he would prepare a new proposal to take account of the various suggestions made.

***Transport of clinical waste in bulk***

Document: ST/SG/AC.10/C.3/2003/8 (United Kingdom)

Informal document: INF.40 (Drafting group)

50. The expert from the United Kingdom explained that the transport of clinical waste in bulk was permitted by ADR and RID and that his proposal was intended to permit multimodal transport by stipulating more specific conditions than currently provided for in ADR and RID.

51. Following discussion of the question, it was decided that a drafting group should be entrusted with preparing a modified text. The text presented in INF.40 was provisionally adopted (see annex 1).

***New requirements for rigid plastic IBCs (H) and composite IBCs (HZ)***

Informal documents: INF.4 and INF.4/Add.1 (Spain)  
INF.22 (ICCR/ICCA/ICPP)

52. The Sub-Committee discussed the problems observed by some experts with IBCs which had been presented by their manufacturers as single-trip IBCs and for that reason would be less resistant than IBCs designed for multiple trip.

53. It was pointed out, however, that IBCs which had been tested successfully were normally designed for a five-year lifespan whatever their planned use. The problems encountered were perhaps linked more to faulty compliance with the conditions of use or loading rather than to a problem of construction or testing. It was also stressed that the case mentioned by the expert from Spain was related to an accident and that the tests were designed for normal conditions of carriage and not for accident situations.

***Approval of IBCs***

Informal document: INF.23 (Australia)

54. Several experts were of the opinion that the problems mentioned by the expert from Australia concerning non-authorized stacking of IBCs could not be settled by additional particulars in the approval certificates or additional markings which were not likely to be any better observed in practice.

55. It would seem that the best solution would rather be a better application of guidelines for the loading and stowage of goods in containers or vehicles (e.g. IMO/ILO/UNECE guidelines); it was suggested that these guidelines could be better promoted, for example, by including parts of them in the United Nations Recommendations in some form or other.

56. The expert from Australia took note of the comments and said that he might possibly submit a new proposal.

**DANGEROUS GOODS PACKED IN LIMITED QUANTITIES**

Informal documents: INF.3 (AEGPL, AISE, CEPE, FEA, FIATA, ICCA/CEFIC, IECC, IRU)  
INF.30 (Report of the informal working group)

57. The expert from France introduced the report on the informal working group session which took place at his invitation in Paris from 25 to 27 June 2003.

58. The expert from the United States of America expressed concern at the fact that a new informal working group session had been planned at the invitation of Canada in Montreal from 22 to 24 October 2003, because he feared that this new working group might develop, without proper terms of reference or guidance from the Sub-Committee, completely new provisions which would not take account of existing well-established requirements in force for limited quantities, excepted quantities and consumer commodities. Furthermore he did not see a need for the working group communicating with other modal organizations since decisions would have to be taken by the Sub-Committee where these organizations are represented.

59. Most other experts did not share this view since the Sub-Committee had unsuccessfully discussed during the past four years this question of dangerous goods packed in limited quantities. There is still no harmonization between the regulations applicable to various modes of transport and this situation is causing important problems for international multimodal transport. This shows that the UN Recommendations in this respect are not suitable since they are not effectively worldwide implemented by any mode of transport, except for sea transport where, nevertheless, there are also some variations.

60. The question whether this issue should continue to be dealt with by an informal working group was put to the vote, and since the expert from the United States was the only objecting expert, the Sub-Committee agreed that the informal working group should pursue its work, and that a full day discussion on this issue should be scheduled for the December 2003 session of the Sub-Committee.

## **LISTING, CLASSIFICATION AND PACKING**

### **UN 2936 Thiolactic acid**

Document: ST/SG/AC.10/C.3/2002/59 (Germany)

61. The expert from Germany withdrew his proposal since he intended to provide additional information at a future session.

62. The expert from the United States of America said that reclassification of thiolactic acid from Division 6.1 to Class 8 would require justification by data.

### **Portable tank instruction for UN 2015**

Document: ST/SG/AC.10/C.3/2003/5 (France)

63. The proposal to assign T9 instead of T10 to UN No. 2015 was adopted (see annex 1).

### **Special provision 319**

Document: ST/SG/AC.10/C.3/2003/11 (United Kingdom)

64. The amendment proposed was adopted (see annex 1).

### **UN 2662 Hydroquinone**

Document: ST/SG/AC.10/C.3/2003/17 (ICCA)

65. On the basis of the data sheet presented, the Sub-Committee agreed that hydroquinone does not meet the criteria for Division 6.1 and that the entry UN 2662 should be deleted. The entry UN 3435 should also be deleted and hydroquinone solutions should be classified under the appropriate N.O.S. entry of Division 6.1 if they meet the classification criteria for that Division (liquids).

66. It was noted nevertheless that hydroquinone might meet the criteria for substances which are pollutant of the aquatic environment and might need be classified under UN Nos. 3077 or 3082 accordingly in Class 9.

### **Self-reactive substances with oxidizing properties**

Document: ST/SG/AC.10/C.3/2003/19 (France)

Informal documents: INF.28 (France)  
INF.7 (United Kingdom)

67. The expert from France presented his proposal to delete paragraph 2.4.2.3.1.1 (b) based on experimental data that demonstrates that some self-reactive substances may present oxidizing properties.

68. The expert from the United Kingdom did not agree. He noted that a similar proposal had been rejected in the past on the grounds of safety considerations. He felt that it was not good practice to transport oxidisers or fuels together as this would make any fire substantially worse. The expert from France said that he felt that the current Recommendations already permitted this situation.

69. The representative of ICCA said that this question was under consideration by his organization and other groups and that he would submit data relevant to new substances for the next session.

70. It was agreed to defer consideration of this question to the next session and that INF.28 should be issued as an official document.

71. The expert from France said that this proposal had also been submitted to the GHS Sub-Committee, but that he would withdraw it because the Sub-Committee of Experts on the Transport of Dangerous Goods was the relevant body to deal with physical hazards. However, he underlined that opposition to his proposal was linked to the principle of assignment to classes which is not relevant in the GHS context, and that if no solution could be found for transport, he would have to raise this problem in the GHS context.

### **Toxic by inhalation substances**

Document: ST/SG/AC.10/C.3/2003/22 (United States of America)

Informal document: INF.15 (CTIF)

72. Some delegations supported the idea of a specific labelling for toxic by inhalation substances, notably because this would provide useful information for emergency services and for risk analysis in the context of routeing.

73. Others recalled that this principle had not been accepted by the Sub-Committee in the recent past and considered that this specific labelling would constitute an unnecessary burden for the industry with no added safety value. They were also opposed to the introduction of a dual system whereby each country would be allowed to impose or not this specific labelling. They were not inclined to take a decision on the basis of this proposal without a precise indication of all substances that would be subject to this specific labelling.

74. It was also suggested to create for these substances new divisions in Classes 2 and 6.

75. After extensive discussion on the subject, the Sub-Committee agreed by a vote of 7 to 6 that the expert from the United States of America should pursue his work towards proposing a specific labelling for toxic by inhalation substances and prepare a new proposal that would take account of the various comments made.

### **Classification of methanol, UN 1230**

Document: ST/SG/AC.10/C.3/2003/23 (United States of America)

76. Many experts said that they could not support the proposal because it was well known that methanol was responsible for numerous deaths due to ingestion of adulterated alcohol and therefore they considered that the Division 6.1 label was justified by human experience not only for pure methanol but also its solutions.

77. Some experts could support an entry for solutions in packing group III, but with the Division 6.1 subsidiary risk and without special provision 144 and without special packing provision PP2.

78. The expert from the United States of America withdrew his proposal.

### **Corrosiveness of solids**

Document: ST/SG/AC.10/C.3/2003/26 (Austria)

79. Different views were expressed as to how to classify hygroscopic substances which are not corrosive in the solid dry form but may become corrosive in contact with water.

80. The Sub-Committee noted that the question of corrosivity was under discussion by the GHS Sub-Committee, and therefore invited the expert from Austria to submit a new proposal that would take account of the outcome of the GHS discussions and of the comments made during this session.

### **Fuel cells cartridges and fuel cell powered devices**

Informal documents: INF.35 and -/Add.1 (United States of America)

81. The Sub-Committee noted that direct methanol fuel cells technology was developing quickly and would lead very soon to applications similar to lithium batteries. The expert from the United States of America said that he intended to propose two new entries for regulating the transport of such cartridges and devices similar to lithium batteries.

### **HARMONIZATION WITH THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS)**

Document: ST/SG/AC.10/C.3/2003/15 (Netherlands)

82. The Sub-Committee agreed that implementation of the GHS would have to be done on a step-by-step basis. The GHS criteria for environmentally hazardous substances had already been introduced in the 13th revised edition of the UN Recommendations and should be implemented through international transport legal instruments as from 1 January 2005. The next priority was the harmonization of existing acute toxicity and corrosivity criteria and, if necessary, physical hazard criteria, and this could be done during this biennium. The expert from the United States of America said that he would prepare a proposal for acute toxicity.

83. Revision of classification of substances already listed, in order to reflect the GHS criteria, may be made on the basis of specific proposals. The expert from the Netherlands recalled that he intended also to make proposals addressing the environmental hazards of substances already classified under Classes 1-8.

84. At a later stage, the Sub-Committee could consider whether certain hazards, such as chronic toxicity, etc., which are not taken into account in dangerous goods transport regulations, would also have to be regulated.

Informal document: INF.39 (Secretariat)

85. The Sub-Committee noted that, as long as it would not assign specific UN numbers to individual substances falling under Class 9 as environmentally hazardous substances, or as it would not identify the pollutant hazard for substances classified under Classes 1 to 8, there would be no need for a section on hazards to the environment in the data sheet of Figure 1 of the UN Recommendations. This could be further discussed in the context of the proposal expected from the expert from the Netherlands concerning hazards to the aquatic environment.

### **Basel Convention on the Control of Transboundary Movements of hazardous wastes and their disposal**

Informal document: INF.27 (Secretariat)

86. The Sub-Committee noted that Contracting Parties to the Basel Convention were considering to what extent they could apply the GHS criteria to the hazard characteristics of Annex III of the Convention. The criteria for waste hazard category H6.2 were also being revised in order to take account of the revision of the new UN criteria for Division 6.2. Hazard categories H10 (liberation of toxic gases), H11 (delayed chronic toxicity) and H13 (capable, by any means after disposal, of yielding another material) were also under review.

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

Documents: ST/SG/AC.10/C.3/2003/2 (IAEA)  
ST/SG/AC.10/C.3/2003/3 (IAEA)  
ST/SG/AC.10/C.3/2003/24 (Secretariat)

87. The Sub-Committee noted that the amendment presented by IAEA in -/C.3/2003/2 had already been adopted for the 2005 version of the IAEA Regulations, but those in -/C.3/2003/3 were still under review. In order to facilitate the discussion, they had been consolidated by the secretariat in -/C.3/2003/24 as adapted to the UN Recommendations format.

88. The Sub-Committee did not have any comments on these draft amendments, and noted that the final set of amendments for 2005 would be agreed by the IAEA Revision Panel in November 2003, subject to endorsement by "TRANSSEC" in March 2004. During that period, and mainly before 15 September 2003 which is the deadline for proposals to be submitted to the IAEA Revision Panel, international organizations concerned and governments could convey their comments and proposals to the IAEA.

89. A final version of the amendments adopted by IAEA will be submitted to the Sub-Committee in July 2004 for integration of corresponding amendments in the parts of the UN Model Regulations dealing with Class 7 material.

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

Informal document: INF.31 (ICAO) (Comments on new requirements for infectious substances)

90. For the question concerning the precedence of hazards, the Sub-Committee considered that it was quite clear from the precedence of hazard table that Division 6.2 takes precedence over other hazards.

91. For the other questions, several experts considered that although some clarification might be necessary, the answers could be found from a careful reading of the provisions. Some were of the view that this informal paper reflected questions raised by individual experts of the ICAO Dangerous Goods Panel rather than by the Dangerous Goods Panel itself.

92. The general view was that it was not possible to provide answers to, or to discuss amendments on the basis of, an informal paper submitted during the meeting, and that ICAO or any other interested delegation should prepare an official document with more substantiated queries that could be considered at the next session.

### **STANDARDIZATION OF EMERGENCY PROCEDURES**

93. The representative of UIC said that CTIF and UIC might submit a document on this issue at the December 2003 or July 2004 sessions.

### **GUIDING PRINCIPLES RELATED TO THE VARIOUS PARTS OF THE MODEL REGULATIONS**

94. A member of the secretariat said that the secretariat had started consolidating such principles in relation to assignment of packing/tank/bulk containers instructions to individual substances. He felt that the other principles relating to classification, labelling and documentation were self-explanatory in Parts 2 and 5 of the Model Regulations.

95. The expert from the Netherlands said that he intended to submit a document on systematic assignment of dangerous goods to classes/divisions according to the classification criteria and on a systematic presentation of the dangerous goods list.

### **OTHER BUSINESS**

#### **Application for consultative status**

Informal document: INF.5 (Application by AEROBAL)

96. The Sub-Committee noted that most companies affiliated to the European Association of Aluminium Aerosol Container Manufacturers (AEROBAL) are also affiliated to FEA, and considered therefore that, to preserve an appropriate balance between industry interests of various parts of the world, AEROBAL should be requested to coordinate its positions with FEA which could represent its interests.

Informal document: INF.6 (Application by World Federation for Culture Collections (WFCC))

97. The Sub-Committee agreed to grant consultative status to WFCC.

Informal document: INF.10 (Application by International Vessel Operators Hazardous Materials Association, Inc. (VOHMA))

98. The Sub-Committee noted that VOHMA was in consultative status with IMO and therefore would soon be placed in the Roster of non-governmental organizations in consultative status with the Economic and Social Council by virtue of their consultative status with specialized agencies. Therefore, the Sub-Committee agreed to the participation of VOHMA.

#### **Sequence of information in the transport document**

Informal document: INF.9 (IATA)

99. The Sub-Committee noted that, in accordance with the request made at the twenty-second session (ST/SG/AC.10/C.3/44, para. 68), the secretariat had conveyed to IATA the Sub-Committee's concern at the IATA decision to impose one particular sequence of information in the transport document.

100. The Sub-Committee took note of the IATA's response, according to which the industry favoured a single sequence of information in the transport document and the IATA Dangerous Goods Board agreed to delay the implementation of the single sequence to 2007.

#### **Report of the Secretary-General to ECOSOC on the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals**

Informal document: INF.18 (E/2003/46)

101. The Sub-Committee took note of the report to be discussed by the Economic and Social Council in its 2003 substantive session (Geneva, 30 June-25 July 2003).

#### **ADOPTION OF THE REPORT**

102. The Sub-Committee adopted the report on its twenty-third session and the annexes thereto on the basis of a draft prepared by the Secretariat.

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## Annex 1

### Draft amendments to the Recommendations on the Transport of Dangerous Goods, Model Regulations

#### PART 3

##### **Dangerous Goods List**

UN No. 2015 Replace "T10" with "T9" in column (10).

UN No. 2662 Delete this entry.

UN No. 3435 Delete this entry.

##### **Chapter 3.3**

**SP 319** Amend the beginning of the last sentence to read: "Substances packed and packages marked in accordance with..." (*remainder unchanged*).

##### **Alphabetical index**

Delete the entries for "1,4-Benzenediol", "p-Dihydroxybenzene", "Hydroquinol", "HYDROQUINONE, SOLID", "Quinol" and "HYDROQUINONE SOLUTION".

#### PART 4

##### **Chapter 4.1**

4.1.4.1 **P200** In paragraph (4), amend special provisions "k", "n" and "z" as follows:

Special provision "k": Replace the sentence "The pressure receptacle(s) shall:" and subparagraphs i) and ii) with the following text:

"Cylinders and individual cylinders in a bundle shall have a test pressure greater than or equal to 200 bar and a minimum wall thickness of 3.5 mm for aluminium alloy or 2 mm for steel. Individual cylinders not complying with this requirement shall be transported in a rigid outer packaging that will adequately protect the cylinder and its fittings and meeting the packing group I performance level. Pressure drums shall have a minimum wall thickness of [3.5] mm for aluminium alloy or [2] mm for steel."

Special provision "n": Amend to read as follows:

"Cylinders and individual cylinders in a bundle shall contain not more than 5 kg of the gas. [Bundles containing UN 1045 Fluorine, compressed, may be constructed with isolation valves on assemblies (groups) of cylinders not exceeding 150 litres total water capacity instead of valves on every cylinder. The gas contents of such assemblies shall be limited to 5 kg.]".

Special provision "z": Amend the third paragraph to read as follows:

"Toxic substances with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> shall not be transported in tubes, pressure drums or MEGCs and shall meet the requirements of special packing provision "k". However, UN 1975 Nitric oxide and dinitrogen tetroxide mixture may be transported in pressure drums."

In Table 2 of packing instruction P200, for UN Nos. 2192 and 2199, add "q" (twice for UN No. 2199) in the column under the heading "Special packing provisions".

### Chapter 4.3

4.3.2.4 Existing paragraph 4.3.2.4 becomes new 4.3.2.4.1. Add a new 4.3.2.4 to read as follows:  
**"4.3.2.4 Bulk waste goods of Division 6.2"**.

4.3.2.4.2 Add a new paragraph 4.3.2.4.2 to read as follows:

*"4.3.2.4.2 Bulk wastes of Division 6.2 (UN 3291)*

- (a) Only closed bulk containers (BK2) shall be permitted;
- (b) Closed bulk containers, and their openings, shall be leakproof by design. These bulk containers shall have non porous interior surfaces and shall be free from cracks or other features that could damage packagings inside, impede disinfection or permit inadvertent release;
- (c) Wastes of UN 3291 shall be contained within the closed bulk container in UN type tested and approved sealed leakproof plastics bags tested for solids of packing group II and marked in accordance with 6.1.3.1. Such plastics bags shall be capable of passing the tests for tear and impact resistance according to ISO 7765-1:1988 "Plastics film and sheeting. Determination of impact resistance by the free-falling dart method. Part 1: Staircase methods" and ISO 6383-2:1983 "Plastics. Film and sheeting. Determination of tear resistance. Part 2: Elmendorf method". [Each bag shall have an impact resistance of at least 165 g and a tear resistance of at least 480 g in both parallel and perpendicular planes with respect to the length of the bag]. The maximum net mass of each plastics bag shall be 30 kg;
- (d) Single articles exceeding 30 kg such as soiled mattresses may be transported without the need for a plastics bag when authorized by the competent authority;
- (e) Wastes of UN 3291 which contain liquids shall only be transported in plastics bags containing sufficient absorbent material to absorb the entire amount of liquid without it spilling in the bulk container;
- (f) Wastes of UN 3291 containing sharp objects shall only be transported in UN type tested and approved rigid packagings meeting the provisions of packing instructions P621, IBC620 or LP621.
- (g) Rigid packagings specified in packing instructions P621, IBC620 or LP621 may also be used. They shall be properly secured to prevent damage during normal conditions of transport. Wastes transported in rigid packagings and plastics bags together in the same closed bulk container shall be adequately segregated from each other, e.g. by suitable rigid barriers or dividers, mesh nets or otherwise securing the

packagings, such that they prevent damage to the packagings during normal conditions of transport;

- (h) Wastes of UN 3291 in plastics bags shall not be compressed in a closed bulk container in such a way that bags may be rendered no longer leakproof;
- (i) The closed bulk container shall be inspected for leakage or spillage after each journey. If any wastes of UN 3291 have leaked or been spilled in the closed bulk container, it shall not be re-used until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated with an appropriate agent. No other goods shall be transported together with UN 3291 other than medical or veterinary wastes. Any such other wastes transported in the same closed bulk container shall be inspected for possible contamination."

## **PART 6**

### **Chapter 6.2**

6.2.1.5.1 Amend subparagraph (c) to read as follows:

"(c) Checking the threads if there is evidence of corrosion or if the fittings are removed.

Amend the end of Note 2 under subparagraph (d) to read as follows:

"... based on acoustic emission testing, ultrasonic examination or a combination of acoustic emission testing and ultrasonic examination."

### **Chapter 6.5**

6.5.4.1.3 Renumber this paragraph 6.5.4.9.4 and amend as follows:

"6.5.4.9.4 *Drop height*

For solids and liquids, if the test is performed with the solid or liquid to be transported or with another substance having essentially the same physical characteristics:

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

For liquids if the test is performed with water:

- (a) Where the substances to be transported have a relative density not exceeding 1.2:

Packing group II	Packing group III
1.2 m	0.8 m

- (b) Where the substances to be transported have a relative density exceeding 1.2, the drop heights shall be calculated on the basis of the relative density ( $d$ ) of the substance to be transported rounded up to the first decimal as follows:

Packing group II	Packing group III
$d \times 1.0$ m	$d \times 0.67$ m

## 6.5.4.9.2

In subparagraph (a), amend the first sentence to read: "Metal IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids."

Amend subparagraph (b) to read as follows: "Flexible IBCs: the IBC shall be filled to [the maximum permissible gross mass], the contents being evenly distributed."

In subparagraph (c), amend the first sentence to read: "Rigid and plastics IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids."

In subparagraph (d), insert "maximum" before "capacity" and delete "in accordance with the design type".

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