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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

Twenty-sixth session, 29 November-3 December 2004
Item 2 of the provisional agenda

TEXTS ADOPTED BY THE SUB-COMMITTEE AT ITS TWENTY-THIRD, TWENTY-FOURTH
AND TWENTY-FIFTH SESSIONS AND RELATED PROPOSALS

Transport of infectious substances

Comments on ST/SG/AC.10/C.3/50/Add.1

Note by the secretariat

1. At its twenty-fourth session, the Sub-Committee adopted amendments to the provisions concerning the transport of infectious substances, which are reflected in ST/SG/AC.10/C.3/50/Add.1 and will also be reflected in ST/SG/AC.10/C.3/2004/80 (see ST/SG/AC.10/C.3/50, paras. 75-77). The Sub-Committee may wish to consider the following comments regarding some of the decisions taken.

Deletion of special provision 319

2. The Sub-Committee adopted the proposal by the expert from Canada to delete special provision 319 on the grounds that the information provided by the first sentence was not needed and that the fact that transport of UN 3373 was subject only to the packing conditions of P 650, as stated in the second sentence, was already reflected in packing instruction P 650.

3. According to the principles used for reformatting the UN Recommendations into Model Regulations, each part of the Regulations is addressed to specific users, and Chapter 4.1, which contains the packing instructions, is mainly addressed to those who have the responsibility to pack dangerous goods or to offer them for shipment. Certain participants in the transport chain, such as carriers or drivers, are not expected to consult the details of each packing instruction, and for this reason a packing instruction is not the appropriate place, in the Regulations, for exemptions. The secretariat believes that Chapter 3.3 is a more appropriate place, since it is already used in many cases for this purpose.

Therefore, the secretariat proposes not to delete Special Provision 319, but to delete only the first sentence. Paragraph (9) of Packing Instruction P 650 could be maintained but is not necessary and could be deleted.

Transport conditions for cultures of pathogens of category B

4. The Sub-Committee adopted revised provisions concerning the carriage of UN 3373 DIAGNOSTIC SPECIMENS or CLINICAL SPECIMENS which are now renamed BIOLOGICAL SUBSTANCES, CATEGORY B. On the basis of proposals by the World Health Organization (WHO) and the World Federation for Cultures Collections (WFCC), the Sub-Committee also agreed to transfer cultures of pathogens of category B from UN 2814/UN2900 to UN No. 3373, BIOLOGICAL SUBSTANCE, CATEGORY B, mainly on the grounds that P 650 was an appropriate packing instruction for such cultures.

5. However, this decision has a number of side effects as far as the safety of the carriage of cultures of pathogens of category B is concerned, since these cultures, which were until now to be carried under UN Nos. 2814 or 2900, will, in addition to being subjected to less stringent packing requirements, also be exempted from the following provisions of the Model Regulations:

- (a) Training of personnel (Chapter 1.3);
- (b) Biohazard labelling and package marking of infectious risk (since neither "UN 3373" nor the name "BIOLOGICAL SUBSTANCE, CATEGORY B" are likely to convey any kind of hazard information to untrained personnel) (Chapter 5.2);
- (c) Indication of the proper shipping name in the transport document, and of the name of the pathogen (which would be useful for treatment in case of accidental exposure) (Chapter 5.4);
- (d) Incident reporting requirements (future 7.1.9);
- (e) Requirement for decontamination of transport units in case of spillage (7.1.6.2.3);
- (f) In the case of RID, ADR, ADN and ICAO Technical Instructions, segregation from foodstuffs requirements.

6. In accordance with the definition of Category B substances, such cultures are cultures of pathogens which do not meet the definition of Category A, i.e. which, in the form transported, when exposure occurs, are not capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals. They are, nevertheless, capable of causing such problems to non-healthy humans or animals, and causing other diseases to healthy humans or animals.

7. According to the documents submitted at the last session (e.g. ST/SG/AC.10/C.3/2004/51, UN/SCETDG/25/INF.29 and INF.95), these cultures would be of risk group 2. It is not clear, however, whether Category B includes only risk group 2 pathogens. For reference, a list of pathogens and their assignment to risk groups may be found on the website of the American Biological Safety Association (ABSA) at www.absa.org/resriskgroup.html. Not all pathogens of risk groups 3 or even 4 in this list are listed in 2.6.3.2.2.1. Furthermore, it has been indicated that many risk group 2 pathogens were harmless, although the WHO definition implies that some are capable of causing serious infection on exposure but that effective treatment and preventive measures are available and the risk of spread is limited.

8. According to WHO document WHO/CDS/CSR/LYO/2004.9 (http://www.who.int/csr/resources/publications/biosafety/en/WHO_CDS_CSR_LYO_2004_9Final.pdf), the reason why cultures of pathogens of Category B were assigned to P 620 in the 13th revised edition was that cultures (laboratory stocks) contain higher concentrations of microorganisms in a given volume compared with diagnostic specimens and consequently have a greater probability of releasing an infectious dose as a result of an exposure incident.

9. According to the same document, transport exposures are more likely to occur when individuals clean up materials which have leaked without appropriate safety precautions. Clean up is one of the identified risk reduction factors, and the appropriate response in the event of exposure to any infectious substance (including one of an unknown nature) is to wash or disinfect the affected area as soon as possible, regardless of the agent.

10. It is not clear, at least in the case of cultures of pathogens of category B, how effective treatment, preventive measures and appropriate clean-up operations could be carried out in the case of transport accidents leading to exposure, if the personnel has not been trained, is unaware of the infectious nature of the consignment, and if no indication of the name of the pathogen, the consignor and the consignee is available.

11. Therefore, the secretariat suggests that the Sub-Committee should consider carefully each of these additional exemptions before adopting them definitively.

Transport in bulk

12. According to the 13th revised edition, the transport in bulk of UN 2900 is authorized under the conditions specified in 4.3.2.4. These provisions were included essentially to allow the carriage of infected carcasses of dead animals under UN No. 2900.

13. Since the words "(Cultures only)" have been added after all Category A microorganisms under UN 2900, and since carcasses do not meet the definition of cultures, it is not clear whether the transport in bulk of carcasses contaminated with any of the microorganisms listed under UN No. 2900 would have to be carried out under UN 2900 or UN 3373. If they are to be carried under UN 2900, a special provision or a NOTE in section 2.6.2 should be provided for. Otherwise, the codes BK1/BK2 should be deleted from UN 2900 and transferred to UN 3373, and 4.3.2.4 should be amended accordingly.

14. Some carcasses of dead animals, or wastes from slaughterhouses are infected with pathogens other than those listed under UN 2814 or 2900, which develop quickly in the process of putrefaction. Due to the risk of transmission of diseases or contamination of the environment, they are usually carried in bulk to the knacker's yards or disposal plants under the provisions of division 6.2. Therefore, the secretariat suggests that BK1 and BK2 be assigned to UN 3373 since they could no longer be assigned to UN 2814 or UN 2900, and 4.3.2.4 be amended accordingly.

15. Some dead animals may be contaminated with microorganisms affecting humans (e.g. rabies). Obviously, they cannot all be carried under the conditions of P 620 and are also most likely to be carried in bulk under veterinary control. The Sub-Committee may wish to consider whether transport in bulk of UN 2814 may be authorized, at least under the conditions specified by the competent authorities. When the pathogen is assigned to UN 2814 in culture only (which is the case of the rabies virus according to the decision taken at the last session), the Sub-Committee may wish to consider whether the dead animal would have to be assigned to UN 2814 or UN 3373.

Security provisions

16. According to table 1.4.1, Division 6.2, infectious substances of Category A are high consequence dangerous goods and are therefore subject to the provisions for security plans. Since the words "Category A" are not included in the proper shipping name, and since only UN 2814 and UN 2900 are assigned to Category A, the secretariat suggests that the words "(UN Nos. 2814 and 2900)" be added after "Category A" in table 1.4.1.
