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Annex I

Letter from the United Nations Economic Commission for Europe to the Executive Secretary of the Basel Convention, expressing the interest of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals in cooperating with the appropriate body of the Basel Convention in defining hazard characteristics



**UNITED NATIONS
ECONOMIC COMMISSION FOR EUROPE**

The Executive Secretary

Under-Secretary-General

Ref: ECE/TRANS/ /2004/L

9 February 2004

Madam,

I am pleased to write to you on behalf of the United Nations Economic and Social Council's Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (SCEGHS), to which the UNECE Transport Division provides the secretariat, and to express the interest of this body in working with the appropriate body of the Basel Convention in order to explore the possible links between your work in further defining hazard characteristics under the Basel Convention and the elements of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

As you know, your secretariat and the Conference of the Parties to the Basel Convention have a long experience of cooperation with the Sub-Committee of Experts on the Transport of Dangerous Goods (SCETDG), which serves as the GHS focal point for physical hazards and will be implementing the GHS in the transport sector.

The GHS is a voluntary agreement designed to provide a common and coherent approach to the definition of chemical hazards and standardized hazard communication tools for appropriate use in the transport, workplace, and consumer use sectors. Development of the GHS was mandated under Chapter 19 of the Agenda 21 Programme of Action adopted at the UN Conference on Environment and Development (Rio, 1992). The World Summit on Sustainable Development has recommended GHS implementation by 2008 (Johannesburg, 2002).

.../...

Ms. Sachiko Kuwabara-Yamamoto
Executive Secretary
Secretariat of the Basel Convention (SBC)
United Nations Environment Programme (UNEP)
International Environment House (IEH)
Chemin des Anémones 15
CH-1219 Châtelaine

In its resolution 2003/64 of 25 July 2003¹, the Economic and Social Council invited, *inter alia*, United Nations programmes to promote the implementation of the GHS and, where relevant, to amend their respective legal international instruments addressing transport safety, work safety, consumer protection or the protection of the environment so as to give effect to the GHS through such instruments; and to provide feedback to the SCEGHS.

The GHS includes hazard identification/classification criteria for physical hazards, acute and chronic human health effects, and hazards to the aquatic environment. The SCEGHS believes that the work done in developing these GHS criteria may be of assistance to the Basel Convention Open Ended Working Group (OEWG) which is currently updating hazard characteristics listed in Annex III of the Basel Convention for chemical wastes. The SCEGHS would like to suggest that the experts and secretariats of the Basel Convention and the SCEGHS consider exploring this possibility further.

The SCEGHS understands that discussions are under way on several Annex III hazard characteristics. The GHS may be relevant to some though not all of these, specifically H10 (liberation of toxic gases), H11 (acute and chronic toxicity to human health) and H12 (ecotoxicity). The Sub-Committee would appreciate the opportunity to offer its comments on the matters, as they are contained in appendix 1 to this letter, for your consideration.

Furthermore, the SCEGHS would like to express its willingness to provide you with additional information and to assist as appropriate, if the OEWG of the Basel Convention so wishes, in working together on approaches to achieve a coherent system that will satisfy the needs of both international instruments.

Please accept, Madam, the assurances of my highest consideration.

Brigita Schmögnerová

¹ See appendix 2 to this letter.

Appendix 1

Comments on proposals concerning definition of hazard characteristics of hazardous waste covered by the Basel Convention

Transmitted by the experts from Finland, Germany and the United States of America to the Sixth session of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals (10-12 December 2003).

Introduction

1. The Subcommittee decided at its fifth session (7-9 July 2003) to set up a correspondence group (Germany, United States, Finland) to prepare draft comments on the proposals to define hazardous characteristics of certain categories of waste within the Basel Convention, for consideration at its sixth session. These hazardous characteristics were discussed at the first session of the Open-Ended Working Group (OEWG 1) of the Basel Convention (28 April-2 May 2003). Some draft proposals are now available for comments on the web site of the Basel Convention:
<http://www.basel.int/meetings/oewg/oewg1/home.htm>.

2. The draft comments of the correspondence group as reflected in the letter to the Basel Convention Executive Secretary are based on a suggestion that the Parties to the Basel Convention may wish to consider closer coordination with the GHS in the context of defining the hazardous characteristics of wastes under the Basel Convention while satisfying the needs of both international instruments. The OEWG has requested comments on various draft proposals for hazard characteristics by the end of September 2003; however, we understand that development of the particular hazard characteristics of interest to the GHS is in the early stages with further comment opportunities in the future, so this issue is ripe for discussion at this sixth session.

3. At the same time the Subcommittee may take the opportunity to comment on some general issues concerning the relationship of classification and hazard communication, as provided in the GHS, and as noted in Annex VA of the Basel Convention.

General issues

4. Article 4.7 (b) of the Basel Convention states:

“Furthermore, each party shall:

...

(b) Require that hazardous wastes and other wastes that are subject of a transboundary movement be packaged, labelled, and transported in conformity with generally accepted and recognized international rules and standards in the field of packaging, labelling, and transport, and that due account is taken of relevant internationally recognized practices;”

5. Point 13 of Annex V A on ‘Information to be provided on notification’ requires information to be provided

“on designation, physical description of the waste including Y-number and UN number and its composition (see note 5) and information on any special handling requirements including emergency provisions in case of accidents.”

6. Note 5 to point 13 indicates an explanation of composition of waste:

“the nature and concentration of the most hazardous components, in terms of toxicity and other dangers presented by the waste both in handling and in relation to the proposed disposal method”.

7. Similarly point 8 of Annex V B on ‘Information to be provided on the Movement Document’ requires information to be provided on

“general description of the waste (physical state, proper UN shipping name and class, UN number, Y number and H number as applicable.”

8. It is understood that so far the only international rules and standards applied to identification, packaging and labelling of wastes are UN Model Regulations for Transport of Dangerous Goods (Orange Book). At this time, not all hazard aspects of chemical wastes are covered by the Transport Regulations.

9. The situation in the context of international recommendations for classification and labelling of chemicals recently changed with the adoption of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) by the Committee, and with the UN Economic and Social Council resolution 2003/64 of 25 July 2003.

10. The GHS describes for chemicals the general principles for hazard identification (i.e., type of hazard, such as acute toxicity, eye irritation, carcinogenicity, etc.), criteria for classification by hazard category, and hazard communication elements for most of the known hazard end points (GHS “hazard classes”). The classification criteria are based on the intrinsic properties of chemicals and do not take site-specific exposure situations or specific environmental conditions into consideration. The GHS is not intended to harmonize risk assessment procedures or risk management measures.

11. The GHS was developed in accordance with the mandate set forth in Chapter 19 of Agenda 21: Programme of Action for Sustainable Development, adopted in 1992 at the UN Conference on Environment and Development (UNCED). The World Summit for Sustainable Development (2002) recommended GHS implementation by 2008.

12. The system of transport of dangerous goods is intending to apply the classification criteria of the GHS to certain hazards. At present the hazards covered are explosive, oxidising and flammable hazards; gases under pressure; reactive substances (e.g., self-heating/reactive); acute toxicity; corrosivity to the skin; corrosivity to metals; and dangerous for the aquatic environment for some transport modes.

13. The scope of the GHS is wider and covers hazards that are not within the scope of the transport regulations. These are hazards like acute toxicity at higher LD50-value cut-offs, severe eye damage, skin and eye irritation, target organ systemic toxicity (TOST) after single and repeated exposure, sensitising effects on the skin and respiratory organs, carcinogenicity, mutagenicity, reproductive toxicity, and both acute and chronic effects in the aquatic environment.

14. The Subcommittee understands that the hazard characteristics of concern in the Basel Convention also have a broader scope than the transport regulations, e.g., H11 (delayed or chronic toxicity). Information on all hazards would obviously be needed for waste management purposes.

15. Hazard identification for chemical wastes may sometimes be difficult and problematic as wastes are often mixtures of chemicals with compositions that are not well known, and which vary over time and by waste generator. The Basel Convention contains lists of wastes for the purposes of the Convention’s transboundary movement procedures; however, in the absence of defined hazard characteristics, the basis for listing the particular waste streams on Annexes VIII and IX is assumptions about their hazardousness. Further, when the hazard characteristics of waste are studied, often the only information available is the hazardousness of the original pure substances or chemical mixtures that are components of the waste. Chemicals will, in the future, be classified in accordance with the GHS, and hazard information will be available on that basis. It is also recognised that the hazards of wastes due to the impurities created during the use of the chemical will need to be considered for hazard identification.

Suggestion

16. The Subcommittee suggests that the experts and secretariats of the Basel Convention and the SCEGHS may wish to explore the relationship between hazard characterization of wastes under the Basel Convention and the GHS classification system, and identify possible links between them. The Subcommittee recognizes that special attention would need to be paid to problems in hazard identification and classification of chemical wastes.

Definitions of hazard characteristics in the Basel Convention under discussion

17. At its December 2002 meeting, the Conference of Parties to the Basel Convention adopted interim guidelines on hazardous characteristic H12, ecotoxicity, that took into account the criteria developed in the GHS.

18. The Basel Convention OEWG is now in the process of developing other hazard characteristics on Annex III, namely:

- H6.2 *infectious substances*
- H10 *liberation of toxic gases in contact with air or water*
- H11 *toxic (delayed or chronic)*
- H13 *capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.*

19. The United Kingdom is preparing a proposal for H6.2, *infectious substances* (Room Document prepared by United Kingdom for the first session of the Open-ended Working Group (OEWG 1).

20. The Netherlands is preparing a proposal for H10, *liberation of toxic gases in contact with air or water* which is not yet ready.

21. The United States is preparing a proposal for H11, *toxic (delayed or chronic)* (UNEP/CHW/OEWG/1/INF/8).

22. The Basel Convention Secretariat is preparing a proposal (UNEP/CHW/OEWG/1/INF/9) for H13, *capable, by any means, after disposal of yielding another material, e.g., leachate which possesses any of the characteristics listed above.*

Proposed initial comments of the Subcommittee on definitions of hazard characteristics

H 12 Ecotoxic characteristics

23. For H12, *ecotoxic*, guidelines already introduced in the December 2002 Basel Convention meeting seem to apply the same parameters, i.e. toxicity, degradability and bioaccumulation, as the GHS classification criteria for chemicals which are considered to be hazardous to the aquatic environment.

H 6.2 Infectious substances

24. The scope of the GHS does not include materials other than chemicals. Infectious substances are thus outside the scope of the Subcommittee's work programme and there is no need to comment on the proposal for H6.2, *infectious substances*. As transport regulations do cover infectious substances, the Subcommittee of Experts on the Transport of Dangerous Goods (TDG Subcommittee) may wish to comment.

H 10 Liberation of toxic gases

25. The proposal to be prepared by the Netherlands for H10, *liberation of toxic gases in contact with air or water*, is not yet available. The Subcommittee may wish to note that GHS classification criteria for substances and mixtures which in contact with water release toxic/corrosive gases (water-activated toxicity), are nearing completion and are expected to be considered by the Subcommittee in December 2003. The proposal for classification criteria and hazard communication elements was developed by the Organization for Economic Cooperation and Development (OECD).

26. The Subcommittee may wish to recognise that the H10 characteristic on liberation of toxic gases may involve substances other than water (like acids), and thus may not be limited to cases where toxic gases are released in contact with water.

Suggestion

27. The Subcommittee may wish to propose that GHS classification criteria for substances and mixtures which in contact with water release toxic/corrosive gases be considered by the Basel Convention OEWG during its deliberations on the further definition of characteristic of H10, *liberation of toxic gases in contact with air or water*.

H 11 Toxic (delayed or chronic) characteristics

28. The Subcommittee may wish to note the following:

Definition of the characteristic H11, *toxic (delayed or chronic)*, involves a range of hazards including carcinogenicity. Within the GHS several hazard classes could be considered to cover delayed or chronic toxic effects, namely hazard classes for

- target organ systemic toxicity (TOST – single exposure,
- target organ systemic toxicity (TOST) – repeated exposure,
- carcinogenicity,
- mutagenicity,
- reproductive toxicity,
- respiratory and skin sensitisation.

Suggestion

29. It is suggested that Basel Convention and Subcommittee experts work together to explore the possible links between GHS criteria and the definition of delayed or chronic toxicity under Basel Convention characteristic H11, and to develop appropriate explanatory notes. In this context it may also be useful to consider and clarify the scope of hazard characteristic H 6.1 and its relationship to H 11 and GHS definitions. The Subcommittee may wish to recommend that GHS definitions and criteria be considered also in terms of their potential usefulness for the Basel Convention. The secretariat and experts of the Subcommittee may wish to express their willingness to assist as appropriate, if the Open Ended Working Group of the Basel Convention so wishes, to develop explanations of the relationship between the hazard characteristics in the Basel Convention and hazard classes in the GHS.

SUMMARY

30. It is suggested that the experts and secretariats of the Basel Convention and the SCEGHS explore the relationship and possible links between ongoing work under the Basel Convention and the GHS, recognizing that special attention should be paid to problems in hazard identification and classification of chemical wastes, since these were not specifically considered in the development of the GHS. The Subcommittee may wish to urge the Basel Convention experts and secretariat to consider possible options for use of the different GHS elements in the framework of Basel Convention.

31. The Subcommittee may wish to recommend that definitions and criteria developed under the GHS be considered for the Basel Convention. The Secretariat and experts of the SCEGHS would like to express their willingness to assist as appropriate, if the Open Ended Working Group of the Basel Convention so wishes, and to work together to achieve a coherent system satisfying the needs of both international instruments.

Appendix 2

2003/64

Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

The Economic and Social Council,

Recalling its resolutions 1999/65 of 26 October 1999, 2001/34 of 26 July 2001 and 2001/44 of 20 December 2001,

Having considered the report of the Secretary-General 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 Chemicals² during the biennium 2001-2002,

A

Work of the Committee regarding the transport of dangerous goods

Recognizing the importance of the work of the Committee for the harmonization of codes and regulations relating to the transport of dangerous goods,

Bearing in mind the need to maintain safety standards at all times and to facilitate trade, as well as the importance of this to the various organizations responsible for modal regulations, while meeting the growing concern for the protection of life, property and the environment through the safe transport of dangerous goods, including their security in transport,

Noting the increasing volume of dangerous goods being introduced into worldwide commerce and the rapid expansion of technology and innovation,

1. *Expresses its appreciation* for 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 with respect to matters relating to the transport of dangerous goods, including their security in transport;

2. *Requests* the Secretary-General:

- (a) To circulate the new and amended recommendations³ on the transport of dangerous goods to the Governments of Member States, the specialized agencies, the International Atomic Energy Agency and other international organizations concerned;
- (b) To publish the thirteenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*⁴ and the fourth revised edition of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria*⁵ in all the official languages of the United Nations, in the most cost-effective manner, not later than the end of 2003;

² E/2003/46.

³ ST/SG/AC.10/29/Add.1 and 2.

⁴ ST/SG/AC.10/1/Rev.13.

⁵ ST/SG/AC.10/11/Rev.4.

- (c) To make these publications available on the web site of the Economic Commission for Europe, which also provides secretariat services to the Committee, and to make them available also on CD-ROM;

3. *Invites* all Governments, the specialized agencies, the International Atomic Energy Agency and the other international organizations concerned to transmit to the secretariat of the Committee their views on the Committee's work, together with any comments that they may wish to make on the amended recommendations;

4. *Invites* all interested Governments, the regional commissions, the specialized agencies and the international organizations concerned, when developing or updating appropriate codes and regulations, to consider taking into account the recommendations of the Committee;

5. *Requests* the Secretary-General to submit a report on the status of the effective implementation of the *Model Regulations on the Transport of Dangerous Goods* by Member States and international organizations on a worldwide level;

B

Work of the Committee regarding the Globally Harmonized System of Classification and Labelling of Chemicals

Bearing in mind that, pursuant to paragraph 19.27 of Agenda 21,⁶ the Inter-Organization Programme for the Sound Management of Chemicals has cooperated for a decade with the International Labour Organization, the Organisation for Economic Cooperation and Development and the Subcommittee of Experts on the Transport of Dangerous Goods to develop a globally harmonized hazard classification and compatible labelling system for chemicals,

Bearing in mind also that the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals was created pursuant to resolution 1999/65 to make the Globally Harmonized System available worldwide, to keep it up-to-date and to promote and monitor its implementation,

Noting with satisfaction that the Committee could reach consensus on the Globally Harmonized System after consideration of a draft consolidated by the Inter-Organization Programme for the Sound Management of Chemicals on the basis of input from the Subcommittee of Experts on the Transport of Dangerous Goods, the International Labour Organization and the Organisation for Economic Cooperation and Development,

Aware that the World Summit on Sustainable Development at its 2002 session in Johannesburg, in paragraph 23 (c) of its Plan of Implementation,⁷ encouraged countries to implement the Globally Harmonized System as soon as possible with a view to having the system fully operational by 2008,

Also aware that the General Assembly, by its resolution 57/253 of 20 December 2002, endorsed the Johannesburg Plan of Implementation and requested the Economic and Social Council to implement the provisions of the Plan relevant to its mandate and, in particular, to promote the implementation of Agenda 21 by strengthening system-wide coordination,

⁶ *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992* (United Nations publication, Sales No. E.93.I.8 and corrigenda), vol. I: *Resolutions adopted by the Conference*, resolution 1, annex II.

⁷ *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

Further aware of and recognizing the significance of the United Nations Institute for Training and Research/International Labour Organization/Organisation for Economic Cooperation and Development Global Partnership for Capacity-Building to Implement the Globally Harmonized System for building capacities at all levels to achieve the 2008 target,

1. *Expresses its deep appreciation* to the Committee and other organizations concerned for their fruitful cooperation;
2. *Requests* the Secretary-General:
 - (a) To publish the Globally Harmonized System of Classification and Labelling of Chemicals in all the official languages of the United Nations, in the most cost-effective manner and to circulate it to the Governments of Member States, the specialized agencies and other international organizations concerned as soon as possible and no later than 2004;
 - (b) To consider disseminating the Globally Harmonized System as a CD-ROM;
 - (c) To make the Globally Harmonized System available on the web site of the secretariat of the Economic Commission for Europe, which also provides secretariat services to the Committee;
3. *Invites* all Governments to take the necessary steps, through appropriate national procedures and/or legislation, to implement the Globally Harmonized System, as soon as possible and no later than 2008;
4. *Reiterates* the call for support to developing countries in strengthening their capacity of the sound management of chemicals by providing technical and financial assistance;
5. *Invites* the regional commissions, United Nations programmes, the specialized agencies and other organizations concerned to promote the implementation of the Globally Harmonized System and, where relevant, to amend their respective legal international instruments addressing transport safety, work safety, consumer protection or the protection of the environment so as to give effect to the Globally Harmonized System through such instruments;
6. *Invites* Governments, the regional commissions, United Nations programmes, the specialized agencies and other organizations concerned to provide feedback to the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals;
7. *Requests* the Secretary-General to submit a report on the status of implementation of the Globally Harmonized System;
8. *Encourages* Governments, regional commissions, United Nations programmes, specialized agencies and other relevant international organizations and non-governmental organizations, in particular industry, to support implementation of the Globally Harmonized System and capacity-building activities in developing countries and countries in transition by providing financial contributions and/or technical assistance;

C

Programme of work of the Committee

Taking note of the programme of work of the Committee for the biennium 2003-2004 as contained in paragraphs 29 to 31 of the report of the Secretary-General,²⁰⁹

Noting the relatively poor representation of experts from developing countries and countries with economies in transition in the work of the Committee and the need to ensure their wider participation in its work,

1. *Decides* to approve the programme of work of the Committee;
2. *Stresses* the importance of the participation of experts from developing countries as well as countries with economies in transition in the work of the Committee, calls, in this regard, for voluntary contributions to facilitate their participation, including through support for travel and daily subsistence allowance, and invites Member States and international organizations in a position to do so to contribute;
3. *Notes* the recommendations of the Committee regarding staff resources⁸ and invites the General Assembly to consider this issue in the context of its review of the proposed programme budget for the biennium 2004-2005;
4. *Requests* the Secretary-General to submit a report to the Economic and Social Council in 2005 on the implementation of the present resolution.

*49th plenary meeting
25 July 2003*

⁸ As contained in E/2003/46, para. 33; see also A/54/443/Add.1, para. 7.

Annex II

Abstract from the Recommendations on the Transport of Dangerous Goods, thirteenth revised edition, Model Regulations, division 2.6.3, infectious substances

2.6.3 Division 6.2 - Infectious substances

2.6.3.1 Definitions

For the purposes of these Regulations:

2.6.3.1.1 *Infectious substances* are substances which are known or are reasonably expected to contain pathogens. Pathogens are defined as micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals.

2.6.3.1.2 *Biological products* are those products derived from living organisms which are manufactured and distributed in accordance with the requirements of appropriate national authorities, which may have special licensing requirements, and are used either for prevention, treatment, or diagnosis of disease in humans or animals, or for development, experimental or investigational purposes related thereto. They include, but are not limited to, finished or unfinished products such as vaccines.

2.6.3.1.3 *Cultures* (laboratory stocks) are the result of a process by which pathogens are amplified or propagated in order to generate high concentrations, thereby increasing the risk of infection when exposure to them occurs. This definition refers to cultures prepared for the intentional generation of pathogens and does not include cultures intended for diagnostic and clinical purposes.

2.6.3.1.4 *Genetically modified micro-organisms and organisms* are micro-organisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally.

2.6.3.1.5 *Medical or clinical wastes* are wastes derived from the medical treatment of animals or humans or from bio-research.

2.6.3.2 Classification of infectious substances

2.6.3.2.1 Infectious substances shall be classified in Division 6.2 and assigned to UN 2814, UN 2900 or UN 3373, as appropriate.

2.6.3.2.2 Infectious substances are divided into the following categories:

2.6.3.2.2.1 Category A: An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease to humans or animals. Indicative examples of substances that meet these criteria are given in the table in this paragraph.

NOTE: *Exposure occurs when an infectious substance is released outside of the protective packaging, resulting in physical contact with humans or animals.*

- (a) Infectious substances meeting these criteria which cause disease in humans or both in humans and animals shall be assigned to UN 2814. Infectious substances which cause disease only in animals shall be assigned to UN 2900.
- (b) Assignment to UN 2814 or UN 2900 shall be based on the known medical history and symptoms of the source human or animal, endemic local conditions, or professional judgement concerning individual circumstances of the source human or animal.

NOTE 1: *The proper shipping name for UN 2814 is INFECTIOUS SUBSTANCE, AFFECTING HUMANS. The proper shipping name for UN 2900 is INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only.*

NOTE 2: *The following table is not exhaustive. Infectious substances, including new or emerging pathogens, which do not appear in the table but which meet the same criteria shall be assigned to Category A. In addition, if there is doubt as to whether or not a substance meets the criteria it shall be included in Category A.*

NOTE 3: *In the following table, the micro-organisms written in italics are bacteria, mycoplasmas, rickettsia or fungi.*

INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (2.6.3.2.2.1 (a))	
UN Number and Proper Shipping Name	Micro-organism
UN 2814 Infectious substances affecting humans	<i>Bacillus anthracis (cultures only)</i> <i>Brucella abortus (cultures only)</i> <i>Brucella melitensis (cultures only)</i> <i>Brucella suis (cultures only)</i> <i>Burkholderia mallei</i> - <i>Pseudomonas mallei</i> – Glanders (cultures only) <i>Burkholderia pseudomallei</i> – <i>Pseudomonas pseudomallei (cultures only)</i> <i>Chlamydia psittaci</i> - avian strains (cultures only) <i>Clostridium botulinum (cultures only)</i> <i>Coccidioides immitis (cultures only)</i> <i>Coxiella burnetii (cultures only)</i> Crimean-Congo hemorrhagic fever virus Dengue virus (cultures only) Eastern equine encephalitis virus (cultures only) <i>Escherichia coli</i> , verotoxigenic (cultures only) Ebola virus Flexal virus <i>Francisella tularensis (cultures only)</i> Guanarito virus Hantaan virus Hantaviruses causing hantavirus pulmonary syndrome Hendra virus Hepatitis B virus (cultures only) Herpes B virus (cultures only) Human immunodeficiency virus (cultures only) Highly pathogenic avian influenza virus (cultures only) Japanese Encephalitis virus (cultures only) Junin virus Kyasanur Forest disease virus Lassa virus Machupo virus Marburg virus Monkeypox virus <i>Mycobacterium tuberculosis (cultures only)</i> Nipah virus Omsk hemorrhagic fever virus Poliovirus (cultures only) Rabies virus <i>Rickettsia prowazekii (cultures only)</i> <i>Rickettsia rickettsii (cultures only)</i> Rift Valley fever virus Russian spring-summer encephalitis virus (cultures only) Sabia virus <i>Shigella dysenteriae type 1 (cultures only)</i> Tick-borne encephalitis virus (cultures only) Variola virus

INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (2.6.3.2.2.1 (a))	
UN Number and Proper Shipping Name	Micro-organism
UN 2814 Infectious substances affecting humans (<i>cont'd</i>)	Venezuelan equine encephalitis virus West Nile virus (cultures only) Yellow fever virus (cultures only) <i>Yersinia pestis</i> (cultures only)
UN 2900 Infectious substances affecting animals only	African horse sickness virus African swine fever virus Avian paramyxovirus Type 1 - Newcastle disease virus Bluetongue virus Classical swine fever virus Foot and mouth disease virus Lumpy skin disease virus <i>Mycoplasma mycoides</i> - Contagious bovine pleuropneumonia Peste des petits ruminants virus Rinderpest virus Sheep-pox virus Goatpox virus Swine vesicular disease virus Vesicular stomatitis virus

2.6.3.2.2.2 **Category B:** An infectious substance which does not meet the criteria for inclusion in Category A. Infectious substances in Category B shall be assigned to UN 3373 except that cultures, as defined in 2.6.3.1.3, shall be assigned to UN 2814 or UN 2900 as appropriate.

NOTE: The proper shipping name of UN 3373 is "DIAGNOSTIC SPECIMENS" or "CLINICAL SPECIMENS."

2.6.3.2.3 Substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals are not subject to these Regulations unless they meet the criteria for inclusion in another class.

2.6.3.2.4 Blood or blood components which have been collected for the purposes of transfusion or for the preparation of blood products to be used for transfusion or transplantation and any tissues or organs intended for use in transplantation are not subject to these Regulations.

2.6.3.2.5 Substances for which there is a low probability that infectious substances are present, or where the concentration is at a level naturally encountered, are not subject to these Regulations. Examples are: foodstuffs, water samples, living persons and substances which have been treated so that the pathogens have been neutralized or deactivated.

2.6.3.2.6 A live animal which has been intentionally infected and is known or suspected to contain an infectious substance shall only be transported under terms and conditions approved by the competent authority.

2.6.3.3 Biological products

2.6.3.3.1 For the purposes of these Regulations, biological products are divided into the following groups:

- (a) those which are manufactured and packaged in accordance with the requirements of appropriate national authorities and transported for the purposes of final packaging or distribution, and use for personal health care by medical professionals or individuals. Substances in this group are not subject to these Regulations.

- (b) those which do not fall under paragraph (a) and are known or reasonably believed to contain infectious substances and which meet the criteria for inclusion in Category A or Category B. Substances in this group shall be assigned to UN 2814, UN 2900 or UN 3373, as appropriate.

NOTE: *Some licensed biological products may present a biohazard only in certain parts of the world. In that case, competent authorities may require these biological products to be in compliance with local requirements for infectious substances or may impose other restrictions.*

2.6.3.4 Genetically modified micro-organisms and organisms

2.6.3.4. Genetically modified micro-organisms not meeting the definition of infectious substance shall be classified according to Chapter 2.9.

2.6.3.5 Medical or clinical wastes

2.6.3.5.1 Medical or clinical wastes containing Category A infectious substances or containing Category B infectious substances in cultures shall be assigned to UN 2814 or UN 2900 as appropriate. Medical or clinical wastes containing infectious substances in Category B, other than cultures, shall be assigned to UN 3291.

2.6.3.5.2 Medical or clinical wastes which are reasonably believed to have a low probability of containing infectious substances shall be assigned to UN 3291.

NOTE: *The proper shipping name for UN 3291 is "CLINICAL WASTE, UNSPECIFIED, N.O.S." or "(BIO) MEDICAL WASTE, N.O.S." or "REGULATED MEDICAL WASTE, N.O.S."*

2.6.3.5.3 Decontaminated medical or clinical wastes which previously contained infectious substances are not subject to these Regulations unless they meet the criteria for inclusion in another class.
