DANGEROUS GOODS PANEL

Dubai, 31 March to 4 April 2003

SUMMARY OF DECISIONS TAKEN 6 MAY 2003

(Presented by the Secretary)

WP	INFECTIOUS SUBSTANCES	
40		Noted
41		Proposed deletion of text "including those taken from apparently healthy individuals" not agreed Agreed addition of word "urine" Proposed new text "The ICAO TIs excludes....subject to the Technical Instructions" withdrawn Agreed amended heading "Substances that must be transported as infectious substances" Proposed deletion of entries listing cultures in table not agreed
43		Agreed to raise concerns in working group; issues to include hazard communication - label and documentation; acceptance check; quality assurance Noted that many risk group 2 and 3 entries would be classified as category A

47		Explanation provided regarding conscious decision by UN to include all relevant items in packing instruction 650 and to minimise cross references Quality - covered by “good quality” Ullage - covered by “constructed and closed to prevent any loss of contents” Orientation - unnecessary; carried in air mail; also very small dimensions of packages Embrittlement - covered under compatibility requirement Salvage packagings - irrelevant; (most salvage packaging have approximately 300 L capacity) Agreed to ask UN for note on solid becoming liquid during transport

38	6.3.1.3	Clarification needed on cultures - potential for person to claim culture was developed for diagnostic purpose and thus be classified as UN 3373
	6.3.1.4	Queried if definition of GMMO / GMO should be moved to Part 2, Chapter 9 (RR to check with UN Secretariat)
	6.3.1	Noted that definition for diagnostic specimen was unnecessary as term now used as proper shipping name and sufficient information was contained in A140
	6.3.2	List of entries for UN 2814 to be corrected (missing entries after Monkeypox virus)
	Note after 6.3.2.2.1	Agreed physical contact included exposure by inhalation (language versions to be checked for DGP/19)
	6.3.2.4	Queried what effect blood containing infectious substances before screening; issue had been raised at UN and text modified
	6.3.2.5	Difficulties with “low probability”, “living persons” and “neutralized or deactivated” “Low probability” - old text/concept which should be avoided to minimize confusion “Living person” - queried if sample taken from such a person could then be considered as not included in the Instructions “Neutralized or deactivated” - use of neutralized implied specific use of antibodies whereas concept of deactivation had been added to expand what could be considered non-injurious substances Agreed to add “so that they no longer pose a health risk” after “deactivated” and to place this in square brackets UN to be asked for clarification
	6.3.5.1	Apparent anomaly regarding medical or clinical wastes, consigned as UN3373 when diagnostic specimens were present, requiring consignment as UN 3291 (with resultant documentation, labelling and marking requirements) discussed. Noted that waste diagnostic specimens would unlikely be transported as a single item of clinical waste but rather in large quantities Noted that UK paper on wastes in bulk would be presented at July 2003 UNSCOE meeting
	6.3.5.2	Queried what was intended to be included
	--------	Queried which hazard took precedent if diagnostic specimens were packed with dangerous goods of other classes was queried. Noted that 6.2 was missing from Table 3-1. Suggested note to Table 2-1 clarifying 6.2 “including those consigned as UN3373” would always take precedence

38	P620	renumbered as P602
	1	References to be checked in square brackets
	2 (b)	Agreed to add "Provisions for the consignment of dry ice must also be fulfilled"
	Special packing provisions	Agreed to delete text in square brackets
	P650	
	(4)	Agreed to ask UN for minimum size for mark Agreed mark should be UN 3373 in all languages Suggested UN be asked to have "Diagnostic specimen" mark as this was multimodal issue
	(8)	Noted labels/marking would be required for dry ice/liquid nitrogen - covered by "all applicable requirements of these Instructions must be met". Noted other dangerous goods could be present with diagnostic specimens eg flammable liquid; agreed to add text "If dangerous goods other than diagnostic specimens are contained in the packaging or overpack, all applicable requirements of these Instructions must be met." and to place this in square brackets Suggested simplification of requirements for dangerous goods other than diagnostic specimens necessary; concept of single source of information for users who were non-transport experts explained.
	(9)	Agreed to place in square brackets
	--------	Agreed working group should examine the following issues: quantity limits; marking requirement (is UN 3373 diamond mark sufficient?); acceptance checklist; NOTOC; training; incident reporting; definition of Category B; documentation requirement - AWB presently required; overpack/packaging and other dangerous goods; air eligibility mark

AMENDMENTS TO GUIDANCE DOCUMENT (DGP-WG/03-WP/41)

Interpretation/Guidance Document developed by the ICAO Dangerous Goods Panel ~~members nominated by Canada, United Kingdom and United States~~ in collaboration with the World Health Organisation

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Diagnostic specimens, including those taken from apparently healthy individuals, may contain pathogens that meet the criteria for risk groups 1, 2, 3 or 4. Pathogens are defined as micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions, that can cause disease in humans or animals. Pathogens are carried in blood, on the skin, in urine, saliva or faeces. Specimens containing risk group 1 pathogens are not subject to the Technical Instructions. Specimens containing risk group 4 pathogens are not permitted for transport as diagnostic specimens. Diagnostic specimens containing risk group 2 or 3 pathogens present a lower risk in transport as compared to infectious substances containing risk group 4 pathogens or pathogens that are in intentionally propagated in high concentrations such as those being transported for medical research. Effective treatments are available and the risk of the spread of infection is limited for risk group 2 or 3 pathogens. Additionally, the risk of transmission from one infected individual to another is not as great for these pathogens. Since the packaging requirements of packing instruction 650 afford a high level of safety, the probability of exposure is relatively low. The probability of transmission of an infection or disease to an exposed individual from a diagnostic specimen is also relatively low. Effective and cautious emergency response procedures and employee training significantly minimize the risk of exposure and subsequent transmission of infection or disease.

Consignors, who would normally be health care professionals, must make a judgement about the presence of pathogens of risk group 4. However, such judgement is not required for ~~in respect of~~ risk group 2 or 3, provided the specimens are being transported for diagnostic or investigational purposes. Specimens containing pathogens of risk group 2 or 3 transported for any other purpose must be consigned as UN2814 or UN2900.

~~The ICAO TI excludes from regulation infectious substances including diagnostic specimens that are unlikely to cause human or animal disease (see 2;6.3.1.1). On this basis, diagnostic specimens that do not contain a pathogen, that contain only a Risk Group 1 pathogen, or that contain a pathogen that has been neutralized or inactivated with preservative or other means are not considered to be subject to the Technical Instructions. On this basis, the following would not be required to be transported as diagnostic specimens:~~

- ~~Blood which has been collected for the purpose of blood transfusion or for the preparation of blood products, and blood products and any tissues or organs intended for use in transplants;~~

- ~~Urine samples from healthy individuals that are being transported for purposes of testing as part of a drug usage or diabetes monitoring program;~~

- ~~Blood samples from healthy individuals that are being transported to analyze cholesterol levels or other non-infectious conditions;~~

- ~~Faeces samples from healthy individuals that are being transported for testing the presence of a non-contagious disease (e.g., prostate cancer) other than one that would involve the presence of infectious pathogens.~~

~~If in the judgement of a medical professional, a diagnostic specimen does not contain or is not suspected to contain an infectious substance, then it is not subject to the requirements of the Technical Instructions. It should be noted that determining if a substance is infectious has always included subjective analysis in the absence of actual testing. This determination should be based on the known medical condition, history, and symptoms of the source patient or animal; endemic local conditions; or other individual circumstances of the source patient or animal. Classifying these materials based on the level of risk and applying transport requirements commensurate with that risk should ensure an adequate level of safety. If there is any doubt as to whether a substance may contain infectious substances of risk group 2 or 3 then the substance should be transported as subject to the Technical Instructions.~~

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Substances that must be transported as infectious substances ~~excluded from shipment as diagnostic specimens~~

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INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES FORBIDDEN AS DIAGNOSTIC SPECIMENS IN ANY FORM UNLESS OTHERWISE INDICATED	
UN Number and Proper Shipping Name	**Micro-organism**
UN 2814 Infectious substances affecting humans	*Bacillus anthracis (cultures only)* *Brucella abortus* (cultures only) *Brucella melitensis* (cultures only) *Brucella suis* (cultures only) *Burkholderia mallei - Pseudomonas mallei* – Glanders (cultures only) *Burkholderia pseudomallei – Pseudomonas pseudomallei* (cultures only) *Chlamydia psittaci* - avian strains (cultures only) *Clostridium botulinum (cultures only)* *Coccidioides immitis* (cultures only) *Coxiella burnetii* (cultures only) Crimean-Congo hemorrhagic fever virus *Dengue virus (cultures only)* *Eastern equine encephalitis virus (cultures only)* *Escherichia coli*, verotoxigenic (cultures only) Ebola virus Flexal virus *Francisella tularensis (cultures only)* Guanarito virus Hantaan virus

UN Number and Proper Shipping Name	**Micro-organism**
	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
UN 2814 Infectious substances affecting humans *(cont'd)*	*Mycobacterium tuberculosis (cultures only)* Nipah virus Omsk hemorrhagic fever virus *Poliovirus (cultures only)* Rabies virus *Rickettsia prowazekii (cultures only)* *Rickettsia rickettsii* (cultures only) Rift Valley fever virus *Russian spring-summer encephalitis virus (cultures only)* Sabia virus *Shigella dysenteriae type 1 (cultures only)* *Tick-borne encephalitis virus (cultures only)* Variola virus Venezuelan equine encephalitis virus *West Nile virus (cultures only)* *Yellow fever virus (cultures only)* *Yersinia pestis* (cultures only)
UN 2900 Infectious substances affecting animals	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 *Mycoplasma mycoides* - Contagious bovine pleuropneumonia Peste des petits ruminants virus Rinderpest virus Sheep-pox virus Goatpox virus

UN Number and Proper Shipping Name	Micro-organism
	Swine vesicular disease virus Vesicular stomatitis virus

Emergency response procedures

Mitigation procedures:

Isolate spill or leak area immediately in all directions.
Keep unauthorized personnel away.
Obtain identity of substance involved if possible and report the spill to the appropriate authorities.
Do not touch or walk through spilled material.
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Be particularly careful to avoid contact with broken glass or sharp objects that may cause cuts or abrasions that could significantly increase the risk of exposure.
Damaged packages containing solid CO2 as a refrigerant may produce water or frost from condensation of air. Do not touch this liquid as it could be contaminated by the contents of the parcel.
Liquid nitrogen may be present and can cause severe burns.
Absorb spilled materials with earth, sand or other non-combustible material while avoiding direct contact.
Cover damaged package or spilled material with damp towel or rag and keep wet with liquid bleach or other disinfectant. [Liquid bleach will generally effectively inactivate the released substance.]

AMENDMENTS TO INFECTIOUS SUBSTANCES (DGP-WG/03-WP/38)

Part 2; Chapter 6

CLASS 6 – TOXIC AND INFECTIOUS SUBSTANCES

INTRODUCTORY NOTES

~~*Note 1 – Genetically modified micro-organisms and organisms which do not meet the definition of an infectious substance should be considered for classification in class 9 and assignment to UN 3245.*~~

Note ~~1.~~ 2. – Toxins from plant, animal or bacterial sources which do not contain any infectious substances or toxins that are not contained in substances which are infectious substances should be considered for classification in division 6.1 and assignment to UN 3172.

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6.3 Division 6.2 - Infectious substances

[~~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.~~]

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INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (6.3.2.2.1 (a))	
UN Number and Proper Shipping Name	**Micro-organism**
UN 2814 Infectious substances affecting humans	*Bacillus anthracis (cultures only)* *Brucella abortus (cultures only)* *Brucella melitensis (cultures only)* *Brucella suis (cultures only)* *Burkholderia mallei - Pseudomonas mallei* – Glanders *(cultures only)* *Burkholderia pseudomallei – Pseudomonas pseudomallei (cultures only)* *Chlamydia psittaci* - avian strains (cultures only) *Clostridium botulinum (cultures only)* *Coccidioides immitis (cultures only)* *Coxiella burnetii (cultures only)* Crimean-Congo hemorrhagic fever virus Dengue virus (cultures only) Eastern equine encephalitis virus (cultures only) *Escherichia coli*, verotoxigenic (cultures only) Ebola virus Flexal virus *Francisella tularensis (cultures only)* 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)

INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (6.3.2.2.1 (a))	
UN Number and Proper Shipping Name	**Micro-organism**
	Japanese Encephalitis virus (cultures only) Junin virus Kyasanur Forest disease virus Lassa virus Machupo virus Marburg virus Monkeypox virus *Mycobacterium tuberculosis (cultures only)* *Nipah virus* *Omsk hemorrhagic fever virus* *Poliovirus (cultures only)* *Rabies virus* *Rickettsia prowazekii (cultures only)* *Rickettsia rickettsii (cultures only*) Rift Valley fever virus *Russian spring-summer encephalitis virus (cultures only*) Sabia virus *Shigella dysenteriae type 1 (cultures only)* *Tick-borne encephalitis virus (cultures only*) Variola virus Venezuelan equine encephalitis virus *West Nile virus (cultures only*) *Yellow fever virus (cultures only*) *Yersinia pestis* (cultures only)
UN 2900 African horse sickness virus	
Infectious substances affecting animals only	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 *Mycoplasma mycoides* - Contagious bovine pleuropneumonia Peste des petits ruminants virus Rinderpest virus Sheep-pox virus Goatpox virus Swine vesicular disease virus Vesicular stomatitis virus

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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 Instructions. Examples are: foodstuffs, water samples, living persons and substances which have been treated so that the pathogens have been neutralized or deactivated [so that they no longer pose a health risk].

Part 3; Chapter 3

SPECIAL PROVISIONS

[~~A81 The quantity limits shown in column 10 does not apply to body fluids known to contain or suspected of containing infectious substances provided they are not in risk group 4, when in primary receptacles not exceeding 1000 mL, and in outer packagings not exceeding 4 L. The quantity limits shown in columns 10 and 12 do not apply to body parts, organs or whole bodies known to contain or suspected of containing infectious substances. These materials must be packed in accordance with Packing Instruction 602 so as to present no hazard to persons or animals during transport. This special provision does not apply to infectious substances carried in air mail.~~]

A140 This entry applies to human or animal material including, but not limited to, excreta, secreta, blood and its components, tissue and tissue fluids, and body parts being transported for purposes such as research, diagnosis, investigational activities, disease treatment or prevention. [Substances packed and marked in accordance with Packing Instruction 650 are not subject to any other requirements in these Instructions.]

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Part 4; Chapter 8

~~P620~~ 602	PACKING INSTRUCTION	~~P620~~ 602
This instruction applies to UN Nos. 2814 and 2900.		

Additional requirements:

1. Inner packagings containing infectious substances must not be consolidated with inner packagings containing unrelated types of goods. [Complete packages may be overpacked in accordance with the provisions of 1.2.1 and 5.1.2: such an overpack may contain dry ice.]

2. Other than for exceptional consignments, e.g. whole organs which require special packaging, the following additional requirements must apply:

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(b) *Substances consigned refrigerated or frozen.* Ice, dry ice or other refrigerant must be placed around the secondary packaging(s) or alternatively in an overpack with one or more complete packages marked in accordance with

6;2.2.2. Interior supports must be provided to secure secondary packaging(s) or packages in position after the ice or dry ice has dissipated. If ice is used, the outer packaging or overpack must be leakproof. ~~If dry ice is used, the outer packaging or overpack must permit the release of carbon dioxide gas.~~ Provisions for the consignment of dry ice must also be fulfilled. The primary receptacle and the secondary packaging must maintain their integrity at the temperature of the refrigerant used;

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Special packing provisions

~~1)~~ Shippers of infectious substances must ensure that packages are prepared in such a manner that they arrive at their destination in good condition and present no hazard to persons or animals during transport.

The definition in Part 1, Chapter 3 and the general packing provision of Part 4, Chapter 1, apply to infectious substances packages. ~~[However, liquids must be filled into packagings, which have an appropriate resistance to the internal pressure that may develop under normal conditions of transport.]~~

An itemized list of contents must be enclosed between the secondary packaging and the outer packaging. When the infectious substances to be transported are unknown, but suspected of meeting the criteria for inclusion in Category A and assignment to UN 2814 or UN 2900, the words "suspected category A infectious substance" must be shown, in parentheses following the proper shipping name on the document inside the outer packaging.

Before an empty packaging is returned to the consignor, or sent elsewhere, it must be thoroughly disinfected or sterilized and any label or marking indicating that it had contained an infectious substance must be removed or obliterated.

	PACKING INSTRUCTION	***P650***
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[(9)	*Infectious substances assigned to UN 3373 which are packed and marked in accordance with this packing instruction are not subject to any other requirement in these Instructions.]*	
[(X)	*If dangerous goods other than diagnostic specimens are contained in the packaging or overpack, all applicable requirements of these Instructions must be met.]*	
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— END —