

APPENDIX 2 - TRANSPORT OF INFECTIOUS SUBSTANCES

1 This appendix provides an overview of the transport requirements for materials containing or contaminated with blood borne viruses. For specific and detailed information, readers are directed to other relevant publications. In particular, the Department for Transport sets out the legal requirements and provides specific detailed guidance on the classification, packaging, labelling and transport of infectious substances, in their publication '*Transport of Infectious Substances*', which can be downloaded from their website:

- 'Transport of Infectious Substances, A guidance document produced by the Department for Transport, the Civil Aviation Authority and the Maritime and Coastguard Agency' available from DfT website http://www.dft.gov.uk/426155/425453/800_300/infectioussubstances.pdf

2 In the context of this guidance, the most likely materials presenting a risk of infection from blood borne viruses, which will be subject to transport include:

- Patient specimens/samples;
- Cultures of blood borne viruses;
- Waste from spillage/treatment of workers;

3 In respect of the laboratory and healthcare related transport of infectious substances detailed guidance is provided elsewhere, in particular:

- '*Biological Agents: Managing the Risks in laboratories and healthcare premises*', Appendix 1.2 Transport of Infectious Substances, available from HSE website at <http://www.hse.gov.uk/biosafety/biologagents.pdf>
- '*Transport of infectious substances - best practice guidance for microbiology laboratories*', available from the Department of Health website at http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationPolicyAndGuidance/DH_075439

Legislation

4 The GB regulations covering the carriage of dangerous goods by road and rail are derived from European Directives (ADR (road) and RID (rail)), which in turn implement international modal agreements governing the transport of dangerous goods. The GB regulations directly reference ADR in relation to the classification,

packaging and labelling of all classes of dangerous goods, including infectious substances, and are updated every two years.

5 The requirements for air transport of dangerous goods, both within Great Britain and overseas, are contained in the International Civil Aviation Organisation (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air. They are essentially similar to those for road and rail as they mirror the same international modal agreements, but there are some minor differences (highlighted in the following text).

6 Biological agents, or materials that contain or may contain them, are allocated to UN Division 6.2 - infectious substances. Division 6.2 includes biological products, cultures, specimens, genetically modified micro-organisms (GMMs) and genetically modified organisms (GMOs) and medical/clinical waste.

Transport of infectious material

7 There are 4 steps involved in the safe transport of infectious material. These are:

- Classification;
- Packaging;
- Labelling; and
- Transporting.

Classification

8 The transportation of infectious substances is divided into the following categories:

- **Category A:** an infectious substance which is carried in a form that, when exposure to it occurs, is capable of causing permanent disability, life threatening or fatal disease in otherwise healthy humans or animals. This definition is supplemented by an indicative list of pathogens, which includes HIV and Hepatitis B viruses (but not Hepatitis C virus), when in the form of cultures but does not encompass specimens from patients suspected of having these infections.
- **Category B:** any infectious substance that does not meet the criteria for inclusion in Category A. These are assigned to UN 3373. This would include specimens from patients with known or suspected HIV, HBV or HCV infections.

10 Samples of materials such as blood, tissue, excreta, secreta etc collected from humans or animals are considered, as a minimum, Category B infectious

substances. Clinical or medical waste that contains Category B infectious substances (with the exception of cultures) or that only has a low probability of containing infectious substances is assigned to UN 3291.

Packaging

11 Transport of infectious substances requires a basic triple packaging system. It consists of three layers as follows.

- Primary receptacle. A primary watertight leak-proof receptacle containing the specimen. The receptacle is packaged with enough absorbent material to absorb all fluid in case of breakage.
- Secondary packaging. A second durable, watertight, leak-proof packaging to enclose and protect the primary receptacle(s). Several cushioned primary receptacles may be placed in one secondary packaging, but sufficient additional absorbent material shall be used to absorb all fluid in case of breakage.
- Outer packaging. Secondary packaging are placed in outer shipping packaging with suitable cushioning material. Outer packaging protect their contents from outside influences, such as physical damage, while in transit.

12 Each completed package is normally required to be marked, labelled and accompanied with appropriate shipping documents (as applicable). Specific details on the packaging requirements and specifications are available from the Department for Transport at:

<http://www.dft.gov.uk/pgr/freight/dgt1/guidance/guidancenonclass7/infectioussubstances.pdf>

Labelling

13 Packages containing infectious substances should be marked with:

- The proper shipping name, e.g. 'Infectious substance, affecting humans';
- With the appropriate UN number (e.g. for 'Infectious substances, affecting humans' this would be UN 2814); and
- The appropriate warning label.

Transport

14 In general, Category B samples that are sent using UN 3373 can normally be sent via the postal service. However, as a proportion of the post in the UK will travel by air at some point in its journey, the packaging will need to comply with the ICAO standards. Similarly, some courier companies will accept only Category B infectious samples, hence it may be necessary to use a different company for

Category A infectious samples. You should always discuss your transport requirements with your chosen Carrier.

15 Further information on transport of infectious substances can be obtained from the Department for Transport (<http://www.dft.gov.uk/contact>, Telephone Enquiries line Tel. 02079448300).