1. LEGISLATIVE CONTROLS

- Under the Waste Disposal (Chemical Waste) (General) Regulation (the Regulation) made under the Waste Disposal Ordinance (Laws of Hong Kong Chapter 354), asbestos waste is classified as a chemical waste. The legislative controls include controls on the packaging, labelling, storage, collection and disposal of chemical wastes. This Code of Practice provides guidance to any person who may be involved in the handling, packaging, transportation and disposal of asbestos waste and on how they can comply with the legislation. More details of the above legislation can be found in A Guide to the Chemical Waste Control Scheme published by the Environmental Protection Department (EPD) (address shown in the Preface).

- A separate code of practice, published by the Labour Department, and entitled Control of Asbestos at Work, covers the protection of the health and safety of workers handling asbestos or involved in the production of asbestos waste. This should also be complied with. Specific requirements are also laid down on the distribution of asbestos waste under the Factories and Industrial Undertakings (Asbestos) Special Regulations 1986 and these requirements should be followed. The Notice to Shipowner, Shipbuilders, Ship Repairers and Shipbreakers issued by the Marine Department also provides advice on the health hazards of asbestos and the precautions to be taken during demolition or repair work aboard ships and floating structures.

2. FORMS OF ASBESTOS

- Asbestos is a mineral which, both in its raw form and as a constituent of composite materials, has many uses in the construction, manufacturing, services and shipping industries. It occurs in three main forms-
  - Crocidolite or blue asbestos - widely used at one time for insulation especially where chemical resistance is required.
  - Amosite or brown asbestos - used mainly in bonded asbestos products.
  - Chrysotile or white asbestos - now used for most applications.

- There are other, much less common forms, which may be encountered occasionally. Concern over health risks has led to asbestos being replaced by safer substitutes in many products. Practically all asbestos now used in Hong Kong is chrysotile, though blue and brown asbestos will continue to be produced as waste for many years from the stripping of old insulation and lagging.

3. TYPES OF WASTE

- For the purposes of this Code of Practice asbestos wastes are classified as follows -

  **Type 1**

  Bonded asbestos wastes (other than blue or brown asbestos) in good condition, and free from any material likely to release asbestos fibres. Examples of bonded asbestos materials are: asbestos cement sheets, pipes and other fittings; asbestos reinforced plastics; asbestos reinforced jointings, packings and gaskets. Any friable or crumbly material containing asbestos reinforcement, or any dust from sawing, drilling and machining bonded asbestos products are Type 2 waste.
Type 2

Any waste containing loose asbestos fibres (other than blue or brown asbestos); for example asbestos lagging, asbestos wall and ceiling insulation; asbestos wool and textile products; dust from sawing, drilling and machining bonded asbestos products; friable asbestos cement products; loose asbestos diaphragms from chloralkali cells; asbestos-containing sludges; empty sacks, bags or drums that have contained loose asbestos fibre; floor sweepings from any operation involving asbestos dust or powder.

Type 3

All blue asbestos (crocidolite) and brown asbestos (amosite), whether in good condition or not, or any articles contaminated by blue or brown asbestos.

3.1 Mixed Asbestos Wastes

The three types of asbestos waste should normally be kept separate from each other, and from other waste. In some circumstances this can be difficult, for example where intact bonded asbestos is mixed with sawdust and friable materials. In such cases, EPD as the authority under the Regulation may allow mixed loads to be delivered to the disposal sites. These loads will be subject to special conditions, the general nature of which are found in section 8 below, though further conditions may be placed on particular loads at the discretion of EPD.

Unlike many other hazardous wastes, asbestos cannot be readily detoxified or rendered harmless by waste treatment processes (Note 1). Many of the waste handling and treatment operations used in Hong Kong will have the effect of breaking up asbestos waste and releasing fibres into the atmosphere, thereby endangering employees and the general public. Thus asbestos waste must never be mixed with household or commercial wastes, nor delivered to incinerators, refuse collection points, transfer stations or public dumping area and reclamations.

Note 1: Several processes to detoxify asbestos are being developed. Asbestos vitrification is a new process developed in the UK and has been marketed worldwide.

3.2 Identification of Asbestos Waste

The positive identification of asbestos fibres requires specialist laboratory techniques. Asbestos waste produced by industrial processes is readily identified from the raw materials used, but in the case of many construction and demolition operations (involving for instance the stripping of lagging or other forms of insulation) the waste may contain either asbestos or other fibrous materials. Even where asbestos is known to be present, exposure to heat can change the characteristic blue-grey colour of crocidolite to a dirty, white colour, which may be confused with the less hazardous forms.

Waste which may contain asbestos should be treated as hazardous unless and until laboratory tests prove its absence. In the case of small amounts of waste it is more practicable to dispose of it as if it were asbestos rather than to undertake laboratory testing to determine the actual constituents. For larger quantities (above 5m³ in bulk or 100m² for sheets) samples of the waste should be taken and tested in the laboratory for asbestos. These samples should be taken before work begins in the case of demolition work and insulation stripping. Information on laboratories accredited to undertake asbestos determinations may be obtained from the Air Management Group of EPD (address shown in Appendix A).