

**For discussion on  
15 April 2005**

**Legislative Council Panel on Security**  
**Amendments to the subsidiary legislation**  
**under the Dangerous Goods Ordinance (Chapter 295)**

**Introduction**

This paper informs Members of the Administration's proposals to amend/make subsidiary legislation under the Dangerous Goods Ordinance (DGO), Cap 295.

**Background**

2. Enacted in 1956, the DGO provides for the control on land and at sea of about 400 types of dangerous goods under 10 categories in accordance with their inherent characteristics as to whether the substances are explosive, flammable, corrosive, toxic, etc.

3. Although the DGO has been updated periodically since its enactment, there have not been any fundamental changes to align the domestic control framework with the commonly adopted international system, namely, the International Maritime Dangerous Goods (IMDG) Code<sup>1</sup>. As a result, when dangerous goods are imported into, exported or re-exported from Hong Kong, they are often required to comply with two distinct sets of requirements prevailing locally and overseas. This has created practical difficulties to the local trades and users. Furthermore, evolving local circumstances have also called for changes to the local regulatory regime.

4. The Dangerous Goods (Amendment) Bill, aimed at improving the regulatory framework of dangerous goods and bringing it into line with commonly adopted international standards, was passed by the Legislative Council on 13 March 2002. The Dangerous Goods (Amendment) Ordinance [DG(A)O] has not yet commenced operation pending detailed controls to be set out in the subsidiary legislation.

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<sup>1</sup> The International Maritime Dangerous Goods (IMDG) Code is published by the International Maritime Organization, based on the practices recommended by the United Nations (UN) Committee of Experts on the Transport of Dangerous Goods. Regular revisions reflecting the technological changes and the requirements against the booming global trade have made the Code increasingly suitable as a basis for domestic adoption. Many of our major trading partners such as the United States, the European Community and Australia have gradually aligned their national regulatory regime on dangerous goods with the UN system.

## **Proposals**

5. To implement the regulatory framework set out in the DG(A)O, we propose to amend the existing Dangerous Goods (General) Regulations, Dangerous Goods (Application and Exemption) Regulations and Dangerous Goods (Shipping) Regulations, and introduce a new Dangerous Goods (Packing and Labelling) Regulation. The key elements of the legislative package are set out in the following paragraphs.

### **Dangerous Goods (Application and Exemption) Regulations [DG(AE)R]**

6. The existing DG(AE)R sets out the list of dangerous goods to which the DGO shall apply and the classification of these dangerous goods. The DG(AE)R will be repealed and replaced by a new regulation with the following features :

- (a) The classification of dangerous goods will be aligned with the IMDG Code, so that the coverage of control of dangerous goods will expand from about 400 types under ten “Categories” to over 2200 types under nine “Classes” in accordance with the IMDG scheme of classification, subject to minor local variations (a comparison of existing and proposed classification scheme is at **Annex A**);
- (b) A sub-class 3A will be introduced to maintain the existing regulatory control over diesel, furnace oil and other fuel oil which at present are not classified as dangerous goods under the IMDG Code but pose considerable fire risk given the dense population and heavy traffic flow in Hong Kong.
- (c) The existing level of exempted quantities (i.e. the maximum quantities of dangerous goods for which the licensing control shall not apply) will be updated to cater for changes in local circumstances, such as the overall improvement in fire safety standards of buildings and dangerous goods packaging technologies.
- (d) The exempted quantities will be grouped into two categories, depending on the buildings/premises where the dangerous goods are stored, i.e. industrial buildings/premises, and non-industrial buildings/premises. The exempted quantities for dangerous goods in industrial buildings/premises will be higher than that in non-industrial buildings/premises since the requirements on fire safety standards of the former are more stringent.

## **Dangerous Goods (General) Regulations [DG(G)R]**

7. The existing DG(G)R sets out the licensing regime for the manufacture, storage, use and conveyance of dangerous goods; requirements for labelling and packing of dangerous goods; safety precautions in blasting process and the discharge of fireworks; control over transshipment of dangerous goods in approved container terminals and air cargo terminal, etc.

8. The DG(G)R will be repealed and replaced by a new regulation based on the existing provisions with improvements and new provisions, including-

- (a) introduction of a registration system to require all dangerous goods in Class 1 (i.e. explosives), except those for transshipment purpose, be registered with the Commissioner of Mines before they can be manufactured, stored, conveyed or used;
- (b) introduction of provisions, in view of improvement in fire safety standards in buildings in general, to allow more flexibility for the trades or users in the storage of dangerous goods. For example, mixed storage of dangerous goods in the proposed Class 4 to 9, subject to their compatibility, will be allowed. Furthermore, subject to specific safety requirements being complied with, certain activities, such as the use and storage of dangerous goods in laboratories, hospitals and clinics, will be exempted from licensing control to cater for the operational needs of these establishments;
- (c) extension of the licensing control over the conveyance of dangerous goods to all classes<sup>2</sup>;
- (d) introduction of requirements for drivers of dangerous goods vehicles to undergo training and obtain a dangerous goods vehicle driver's permit, so as to enhance safety in the conveyance of dangerous goods;
- (e) introduction of requirements on the transmission of adequate information on dangerous goods across the conveyance chain;

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<sup>2</sup> At present, only the conveyance of dangerous goods in Category 1 (explosives), Category 2 (compressed gases) and Category 5 (substances giving off inflammable vapours) by vehicle is subject to licensing control.

- (f) introduction of a regulatory regime tailored for the needs of retail operators, given the relatively small risk of dangerous goods in consumer packs, so as to allow more flexibility in the storage and conveyance of dangerous goods in consumer packs (details of the three-tier regulatory regime are at **Annex B**); and
- (g) change of the authority, from the Director of Marine to the Director of Fire Services (DFS), over control of the storage of freight containers containing dangerous goods in the approved container terminals, with a view to streamlining the regulatory regime of dangerous goods on land and at sea.

### **Dangerous Goods (Packing and Labelling) Regulation [DG(PL)R]**

9. We propose to remove the existing provisions related to requirements on the packing and labelling of dangerous goods from the DG(G)R to the new DG(PL)R, with improvements and new provisions to require that –

- (a) all dangerous goods should be packed and labelled in accordance with the IMDG Code, including the specific requirements on the inner/main packaging and outer packaging, except otherwise stipulated in the regulation;
- (b) cylinders for storing dangerous goods shall comply with the requirements on stamp marking, precautionary labels, colour coding, examination and testing in accordance with the IMDG Code, and other national or international standards;
- (c) the owner of containment device for dangerous goods should furnish relevant certificate and test report of the containment device to the Authority (i.e. DFS) upon request;
- (d) if the owner of dangerous goods does not have a place of business in Hong Kong, any other person representing him/her and takes possession of such dangerous goods in Hong Kong shall assume the duty of complying with the relevant packing and labelling requirements under DG(PL)R; and
- (e) the Director of Fire Services should be empowered to exempt certain less hazardous dangerous goods which are contained in a small receptacle from the packing and labelling requirements of the regulation.

## **Dangerous Goods (Shipping) Regulations [DG(S)R]**

10. The existing DG(S)R sets out the regulatory control over conveyance of dangerous goods in Hong Kong waters. The main objective of the proposed amendments to the DG(S)R is to align the regulatory regime with the IMDG Code as far as possible. Main features of the proposed amendments include:

- (a) Classification, packing and labelling requirements of dangerous goods in Hong Kong waters will follow the IMDG Code, subject to minor refinements to suit local circumstances.
- (b) Express provisions will be introduced to codify some administrative measures currently in use to regulate the conveyance of dangerous goods by vessels.
- (c) The control systems of dangerous goods on land and at sea will be more clearly demarcated. All provisions related to control of dangerous goods in Hong Kong waters under various ordinances will be incorporated into the DG(S)R.

## **Codes of Practice**

11. The Administration will draw up a number of Codes of Practice to provide practical guidelines on the new legislation to facilitate compliance by the local trades and users.

## **Legislative Timetable**

12. We plan to introduce the proposed legislative package in the 2005-06 legislative session. In view that the subsidiary legislation is voluminous and highly technical in nature, we plan to roll them out in batches.

## **Public Consultation**

13. Since mid-2004, the Administration has conducted a series of consultations with District Councils and relevant trades on the proposed provisions under the four regulations during the drafting process. They are in general supportive of the proposed provisions.

**Comparison of the Proposed and Existing Classification System**

<b>Properties</b>	<b>Examples</b>	<b>Proposed Classification</b>	<b>Existing Classification under DGO</b>
Explosives	(i) Ammunition (ii) Firework	Class 1	Category 1
Flammable gases	(i) Hydrogen (ii) Acetylene (iii) Aerosols	Class 2.1	Category 2
Non-flammable, non-toxic gases	(i) Oxygen (ii) Compressed Air (iii) Nitrogen (iv) Aerosols (v) Carbon dioxide	Class 2.2	
Toxic gases	(i) Chlorine (ii) Anhydrous ammonia (iii) Carbon Monoxide	Class 2.3	
Flammable liquids having a flash point below 23°C (73°F) closed cup test	(i) Petrol (ii) Printing Ink	Class 3	Category 5 Class 1
Flammable liquids having a flash point of 23°C (73°F) up to and including 61°C (141°F) closed cup test	(iii) Adhesives (iv) Alcohol (v) Paints		Category 5 Class 2
Flammable liquids having a flash point exceeding 61°C (141°F) closed cup test	(i) Diesel (ii) Furnace Oil (iii) Fuel Oil	Class 3A	Category 5 Class 3
Flammable solids, self-reactive substances and solid desensitized explosives	(i) Naphthalene balls (ii) Celluloid (such as Film)	Class 4.1	Category 8
Substances liable to spontaneous combustion	White or Yellow Phosphorus	Class 4.2	Category 9
Substances which, in contact with water, emit flammable gases	(i) Potassium (ii) Sodium	Class 4.3	Category 6
Oxidizing substances	(i) Hydrogen peroxide (ii) Hydrogen peroxide-based hair bleach (iii) Sodium Nitrate	Class 5.1	Category 7

<b>Properties</b>	<b>Examples</b>	<b>Proposed Classification</b>	<b>Existing Classification under DGO</b>
Organic peroxide	(i) Organic Peroxide in polyester resin kit (ii) Peroxide based hardeners for fibre glass	Class 5.2	Category 10
Toxic substances	(i) Pesticides (ii) Chloroform (iii) Metal cyanides	Class 6.1	Category 4
Infectious substances	Pathogens*	Class 6.2	-
Radioactive material	Uranium-230, Carbon-14	Class 7	-
Corrosives substances	(i) Alkalis such as sodium hydroxide or potassium hydroxide as solid or solution ( $\geq 2\%$ ) (ii) Acids such as sulphuric, nitric or hydrochloric acid	Class 8	Category 3
Miscellaneous dangerous substances and articles	Air Bag Inflators or Air Bag Modules or Seat-belt Pretensioners	Class 9	-
Combustible goods exempted from Section 6 to 11 of the Ordinance	(i) Rubber tyres (ii) Polyethylene	Class 9A	Category 9A

Note :

- (i) "Closed Cup Test" means a testing method conforming to British Standard BS2000 Part 170 or equivalent where a closed receptacle apparatus is utilized to determine the flash point of a flammable liquid.
- (ii) \* Pathogens are defined as micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) or recombinant micro-organisms (hybrid or mutant) that are known or reasonably expected to cause infectious disease in animals or humans.
- (iii) Dangerous Goods in Class 6.2 and Class 7 are not under the jurisdiction of DGO.

**Tailored Regulatory Regime for the Storage  
of Dangerous Goods in Consumer Packs**

<b>Tier</b>	<b>Storage Quantity</b>	<b>Requirements</b>
0	Not exceeding “exempted quantity”	Operators of retail outlets or warehouses will be exempted from licensing control.
1	Over “exempted quantity” but not exceeding “notifiable quantity”	Operators of retail outlets or warehouses will be required to exercise a general duty of care and observe some basic safety requirements
2	Over “notifiable quantity” but not exceeding “licensing quantity”	Operators of retail outlets or warehouses will be further required to notify FSD of the use of the premises for such storage to enable FSD officers to undertake inspections and render specific advice.
3	Exceeding “licensing quantity”	Operators of warehouses will be required to obtain a storage licence