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運輸及房屋局

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24 October 2007

Legislative Council Secretariat  
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Hong Kong  
(Attn: Ms Connie Szeto)

By Fax (2521 7518) and  
Email ([cpnien@legco.gov.hk](mailto:cpnien@legco.gov.hk))  
(Total 5 pages)

Dear Ms Szeto,

Subcommittee on Merchant Shipping (Prevention of Air Pollution) Regulation  
Second Meeting on 27 October 2007

Thank you for your letter of 16 October 2007. I would set out below the supplementary information related to the Merchant Shipping (Prevention of Air Pollution) Regulation (the "Regulation") as the follow-up to the first meeting on 16 October 2007.

- (i) The sulphur content of fuel oil currently used on board specified ships.

According to the local fuel suppliers, the average sulphur content of heavy fuel supplied/used in Hong Kong is 3.8% m/m while that for industrial diesel (duty free) is 0.5% m/m. Vessels fitted with necessary fuel oil treatment system may use heavy fuel oil. Such treatment system is fitted on most ocean-going vessels installed with slow-speed diesel engines.

- (ii) The sulphur content of fuel oil provided by oil suppliers in the vicinity of Hong Kong to be used on board.

According to a worldwide survey conducted by the International Maritime

Organization (IMO), the calculated average sulphur content of fuel oil used on board ships in 2006 is 2.59% m/m. About 0.03% of samples in this survey exceeded 4.5% m/m. This study was conducted after the implementation of MARPOL Annex VI with a view to monitoring the worldwide average sulphur content of residual fuel oils supplied for use onboard ships.

Shipping is an international business. The IMO survey shows that there is a ready supply of fuel that meets MARPOL Annex VI standard around the world to facilitate the smooth implementation of the current IMO emission standard. On the other hand, as fuel oil whose sulphur content exceeds 4.5% m/m is also available on the market, there is a genuine need to legislate against the use of such fuel oil on board.

Meanwhile, IMO is reviewing Annex VI to tighten the emissions standards. One of the proposals is to gradually lower the global cap on sulphur content to 3% m/m in 2012 and 1.5% m/m in 2016.

- (iii) The highest emission standards of sulphur oxide and nitrogen oxide that could be supported by the relevant diesel engine commonly used by local vessels.

As there is no registration system to take stock of existing marine diesel engines, the Administration has no concrete information on the highest emission standards that could be supported by the engines commonly used by local vessels. Marine Department has also tried to gather information from the industry, but the Joint Conference of Hong Kong Marine Sectors has indicated that they did not have such information, either.

Nonetheless, the standard provides in MARPOL Annex VI is at present the international standard for the emission of nitrogen oxide from marine diesel engines adopted and accepted in the world. New engines available after 1 January 2000 on the market for local vessels are usually made for fulfilling the MARPOL Annex VI standard. Technically, simply reducing NO<sub>x</sub> emission will seriously affect other engines parameters, which will lead to a reduction of efficiency and thus emission of more carbon dioxide. While IMO is still discussing the new emission standards, it is not likely that engines with higher emission standard for marine applications will be available on the market.

Moreover, provided the engine is designed to burn distillate oil (including

light diesel oil), the sulphur content of the distillate fuel oil will have little effect on the performance of the diesel engine.

- (iv) The anticipated improvement to air pollution in respect of the emission of the ozone depleting substances, nitrogen oxide, volatile organic compound and sulphur oxide after the implementation of the Regulation.

The anticipated improvement to the emission of various pollutants under the provisions of the Regulation is listed below:-

<b>Emissions</b>	<b>Current situation</b>	<b>After the implementation of the Regulation</b>
NO <sub>x</sub>	No requirements	New diesel engines complying with the requirements will reduce NO <sub>x</sub> emissions by about 30% compared with existing engines.
SO <sub>x</sub>	No requirements	Setting limits on the sulphur content 4.5% m/m for fuel oil used on board ships will make the standard of Hong Kong to be tallied with our worldwide counterpart. It will also empower the Government to control the sulphur content of fuel (including non-Hong Kong ships in Hong Kong waters).
Ozone Depleting Substances (ODS)	No requirements	Deliberately release of ODS is prohibited under the Regulation. This is in line with the Phase-out Schedule of ODS provided by the Environmental Protection Department, which gradually bans the import for local consumption of ODS.
Volatile Organic Compounds (VOCs)	No requirements	Emission of volatile organic compounds from tankers has negligible effect in Hong Kong because Hong Kong is not an oil loading port. Nevertheless, the requirement would reduce the emission of VOCs from Hong Kong registered ships when loading cargoes of crude oil, petroleum products and chemical in other parts of the world.

- (v) The outcome of discussion of the meeting with the Joint Conference of Hong Kong Marine Sectors.

Marine Department (MD) met with 16 representatives of the Joint Conference of Hong Kong Marine Sectors (the Joint Conference) on 22 October 2007. At the meeting, MD has briefed these representatives of the Joint Conference on the latest proposal for implementing the Regulation and the details of the proposed registration system for existing diesel engines. All the representatives unanimously lent support to the implementation of the Regulation, and welcomed the registration system. MD and the Joint Conference has reached a consensus on the following details of the registration system :-

- a) Marine diesel engines of more than 130 kW installed on board vessels or used as spare engines before the commencement of the Regulation will be exempted from the emission requirements of Regulation, provided that the engines have been registered with MD on or before the commencement date of the Regulation;
- b) Under the registration system, shipowners are required to provide the particulars of the engines installed on board vessels and their corresponding spare engines by completing a declaration form. The completed declaration form shall be submitted together with the supporting documents (e.g. engine certificate, receipts/invoices, photos of the marking, etc.) to MD for registration on or before the commencement date of the Regulation;
- c) The maximum number of registered spare engines for each vessel is one spare engine for each engine fitted on board the vessel. The registered spare engine of the vessel should be identical in terms of type/model and power output to the engine fixed on board the same vessel;
- d) After the commencement date of the Regulation, MD staff will, as a monitoring measure, carry out random checks to verify the accuracy of the declaration made for the registered spare engines; and
- e) The registered engines of one vessel could be used for other vessel which is owned by the same shipowner, given that the vessel or the engine has not undergone a major modification.

Prior to the commencement of the Regulation, MD would meet the Joint Conference on a regular basis to facilitate more effective communication with the local marine sectors and to exchange views on the detailed arrangements for smooth implementation of the Regulation. Meanwhile, the Joint Conference agreed to provide necessary assistance to MD in disseminating all relevant information to the industry.

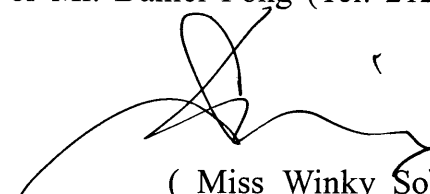
Supplementary information

The objective of the Regulation is to fulfil our international convention obligation to bring the vessels emission standards in Hong Kong on par with the standards of IMO. The standards adopted in the Regulation mirror the latest IMO standards that have come into force in 2005 and 2006.

Moreover, maritime transport is an international business. We have to be extremely cautious about the significant implications on Hong Kong as an international ports and maritime centre, as well as our overall economy, if we endeavour to impose emission standards on ships using the Hong Kong Port that are more stringent than the international standards applicable around the world. International vessels might be diverted to nearby ports in order to avoid the stringent requirements and the increase in operating costs.

As an associate member of the IMO, the HKSARG has the obligation to apply the IMO standards on vessels flying its flag and vessels in the waters under its jurisdiction. MARPOL Annex VI also allows the local administration to exempt its vessels solely engaged in voyages within domestic waters from complying with some of the requirements of the Annex. On the other hand, the Chief Executive has committed in the Policy Address that the Administration will study the feasibility of requiring all vessels plying the harbour to use high-quality fuel.

Any enquiries can be addressed to Mr. Patrick Chun (Tel: 2852 4408), Assistant Director of the Marine Department or Mr. Daniel Fong (Tel: 2121 2340), Assistant Secretary for Transport and Housing.

  
( Miss Winky So )  
for Secretary for Transport and Housing

c.c.

Director of Marine (Attn.: Mr. Patrick Chun)