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2 December 2015

Public Accounts Committee
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

(Attn: Mr. Anthony CHU)

Dear Mr. CHU,

Public Account Committee
Consideration of Chapter 2 of the Director of Audit's Report No. 65

Reduction and recycling of food waste

In response to your letter dated 25 November 2015, the Administration would like to provide the requested information with regard to the treatment capacity of the Kowloon Bay Pilot Composting Plant and the Organic Waste Treatment Facilities Phase 1 and 2.

Please find enclosed our submission (in English and Chinese) for Members' reference.

Yours sincerely,

(Elvis Au)
Assistant Director (Nature Conservation & Infrastructure Planning)
for Director of Environmental Protection

Encl.

c.c. Secretary for the Environment (fax no. 2537 7278)
Secretary for Education (fax no. 2810 7235)
Chief Executive, Hospital Authority (fax no. 2576 5050)
Commissioner of Correctional Services (fax no. 2583 9307)
Director of Housing (fax no. 2761 6700)
Secretary for Financial Services and the Treasury (fax no. 2147 5239)
Director of Audit (fax no. 2583 9063)

Legislative Council
Public Accounts Committee

Response from the Administration

The Administration to provide information on –

(a) For the Kowloon Bay Pilot Composting Plant - how the 4 tpd food waste figure should be interpreted, i.e. whether it represents the net food waste quantity or includes other types of non-food-waste materials; and

(b) For the Organic Waste Treatment Facilities (OWTF) Phase 1 and 2 - the daily capacities represents the net food waste quantity or includes other types of non-food-waste materials

(a) The Kowloon Bay Pilot Composting Plant (Pilot Plant) was the first pilot facility that the Environmental Protection Department set up to work jointly with the Commerce and Industry (C&I) sector on promoting food waste reduction and source separation. The deliverables aimed at gathering experience and information on the collection and treatment of organic waste thus facilitating future food waste recycling when the large scale organic waste treatment facilities for the C&I sector were ready for commissioning in accordance with the plan in the 2005 Policy Framework in December 2005. These objectives were presented to the Environmental Affairs Panel of Legislative Council (the EA Panel) in its paper CB(1) 1357/08-09 (03) on 27 April 2009 and CB(1) 1443/09-10(04) on 29 March 2010. As an educational and trial facility, the Pilot Plant was of a modest scale and adopted the aerobic composting technology that does not require complex engineering work. Furthermore, the quantity of source separated food waste sent to the Pilot Plant from the participating restaurants, markets and food manufacturers fluctuates depending on the daily operations and resources for practicing source separation. The 4-tpd of source-separated food waste figure as stated in the EA Panel papers referred to the total capacity of organic waste (including food waste, bulking agents (e.g. bark chips and saw dust) and premature compost) that the Pilot Plant could handle. The addition of bulking agents and premature compost was required to achieve composting of food waste though the exact proportion of them to food waste was subject to trial. Given the focus of the Pilot Plant is to deal with "food waste', the paper referred to "food waste" instead of making differentiation between food waste and organic waste, the latter includes food waste, bulking agents and premature compost. The contract between the

Electrical and Mechanical Services Trading Fund (EMSTF) and its contractor specified that the total treatment capacity of the Pilot Plant was 4 tpd (including bulking agents).

(b) For the OWTF Phase 1 and 2, the daily capacities are 200tpd and 300 tpd respectively. It should be noted that the food waste treatment processes adopted for OWTF-1 and 2 are different from the one adopted for the Pilot Pant. The latter adopts a one stage aerobic composting process to turn food waste into compost. On the other hand, OWTF-1 and 2 are designed for a 2-stages process, with stage 1 using anaerobic digestion (AD) as the core technology to produce energy; and stage 2 using composting to further process the residue to become compost as side products.

During the AD process, no bulking or other agent is required. Methane gas is generated by the microorganism for power generation. The digestate (or sludge) will be dewatered and sent to the composting building for composting. As composting is an aerobic process, bulking agent (saw dust and bark chips) will need to be added to increase the porosity of the mixture and allow air to pass through the mixture during the composting process.

The design of the OWTF-1 and OWTF-2 is/ will be for treating food waste of 200tpd and 300 tpd respectively in the AD system.