4. Flow Test outside Taiyuan Pumping Station

4.1 Mr KU Chi Chung[5] explained that when the closed aqueduct from Dongjiang to Jinhu were commissioned, water from Shima River and Quanlang River would be isolated from the Dongshen Water Supply Scheme. Pollutants from these rivers would then enter Dongjiang via Shima River. Their confluence was 350m downstream of the Dongjiang water intake of the Taiyuan Pumping Station. Some people and the media in Hong Kong were concerned with the possibility that the flow from Shima River would enter the intake and pollute the Dongjiang water supplied to Hong Kong. In this connection, it was proposed to carry out a simple flow test on that day to demonstrate to the delegates the flow directions.

4.2 Mr RU Jian Hui[6] advised the delegates that when they designed the pumping station, they had already taken this into account and had carefully tested the intake design through hydraulic modelling in 1997. The tests covered different tidal effects, flow rates, riverbed profiles, consumption requirements of the Dongshen Water Supply Scheme, etc. Test results indicated that the flow from Shima River would not backup to reach the intake under any conditions. He distributed several copies of the relevant report (**Annex 8**) for the reference of the delegates. Notwithstanding this, he welcomed the delegates to carry out an in situ flow test on that day.

4.3 Mr Ku added that the most critical flow condition would occur in December just before the resumption[7] of Dongjiang water supply to Hong Kong in January each year. At that time, flow from Shima River would be increased by the flushing operation, the flow in Dongjiang would be low and the pumping rate could be at a high level. It was planned to carry out another flow test at that critical moment in December this year.

4.4 The delegates then discussed on the testing arrangement around a model of the pumping station (**Photo 6**) and proceeded to carry out the test. Buoys comprising hollow plastic balls were placed at the following locations of Shima River and Dongjiang as indicated in the schematic diagram in **Figure 2** and observations were recorded below.

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[5] Assistant Director of Water Supplies Department of Hong Kong Special Administrative Region

[6] Chief Engineer of Water Resources Department of Guangdong Province

[7] Dongjiang water supply to Hong Kong will be shutdown in December each year for annual inspection and maintenance on both sides.

i. Shima River near its confluence with Dongjiang (**Photo 7**):-
   River flow was almost not apparent.

ii. Dongjiang between the intake and its confluence with Shima River (**Photo 8**):-
   Water flowed rapidly downstream at the middle of the river but at the riverbank of Taiyuan Pumping Station, flow was not noticeable.

iii. Dongjiang right outside the intake (**Photo 9**):-
   Water flowed rapidly downstream.

Based on the above observations, it was very unlikely that water from Shima River would flow upstream along Dongjiang to the intake of Taiyuan Pumping Station .