Advisory Committee on the Quality of Water Supplies Minutes of the 5th Meeting

Date: 14 December 2001 (Friday)

Time: 2:30 p.m.

Venue: 12/F Conference Room, Murray Building, Garden Road, Central, Hong Kong

Members Present

Mr. Kenneth FANG Hung, JP	Chairman
Mr. William KO Chan Gock	Vice-Chairman, Director of Water Supplies
Dr. Richard CHEUNG Yun Hing	City University of Hong Kong
Mr. Hugh WU Sai Him	Hong Kong Institution of Engineers
Dr. SO Kai Ming	Hong Kong Medical Association
Mr. WONG Kwok Keung	Hong Kong Plumbing and Sanitary Ware Trade
	Association
Prof. David DUDGEON	University of Hong Kong
Prof. LAM Kin Che	The Chinese University of Hong Kong
Ms. Lister CHEUNG Lai Ping	The Conservancy Association
Mr. Patrick KWONG Hing Ip	Chief Assistant Secretary, Works Bureau
Dr. TSE Lai Yin	Consultant, Department of Health
Mr. WONG Bay	Assistant Director, Housing Department
Ms. Rhonda LO Yuet Yee	Assistant Director, Food and Environmental
	Hygiene Department
Dr. Michael CHIU Tak Lun	Assistant Director, Environmental Protection
	Department
Mr. Stephen LAU Chi Ming	Secretary, Senior Engineer, Water Supplies
	Department

Members Absent with Apologies

Dr. HO Kin Chung	Open University of Hong Kong
Mr. Ronnie WONG Man Chiu, JP	Southern District Council
Ms. Nancy POON Siu Ping	Kwai Tsing District Council
In Attendance	
Mr. CHAN Pui Wah	Deputy Director of Water Supplies (Atg)
Mr. Damien KU Chi Chung	Assistant Director, Water Supplies Department
Mr. CHEUNG Ping Nang	Assistant Director (Atg), Water Supplies
	Department
Mr. CHEUNG Tze Leung	Chief Chemist, Water Supplies Department

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Mr. Daniel CHAN Shu Pui	Chief Engineer (Atg), Water Supplies Department
Mr. TAM Yat Hung	Senior Engineer, Water Supplies Department
In Attendance for Agenda Item 3	
Mr. David CHAU Chi Wai	Assistant Director (Atg), Water Supplies
	Department
Mr. CHAN Tze Ho	Senior Engineer, Water Supplies Department
Mr. Augustine NG Wah Keung	Assistant Director, Planning Department
Ms. Ann WONG Oi Yee	Senior Town Planner, Planning Department

Item

Action

- 1.The Chairman congratulated the Vice-Chairman, Mr. William KO
Chan Gock on his promotion to the Director of Water Supplies.
- The Chairman advised that a short media briefing session would be held at the conclusion of the meeting. <u>Prof. LAM Kin Che</u> and <u>Mr. WONG Kwok Keung</u> volunteered to join the briefing.
- **3.** The Vice-Chairman advised members that a production team from Radio Television Hong Kong was present to film this meeting for a series of TV programme aimed to introduce the works of civil servants to the public.

4. Agenda Item 1 : Confirmation of Minutes of the Last Meeting

The minutes of meeting were confirmed without any amendment.

Agenda Item 2 : Matters Arising

5. Site Visits

5.1 The Chairman reported that 15 members and 6 officers of the Water Supplies Department (WSD) had joined the second Guangdong visit between 12-13 September 2001. This time, the delegation was able to see the results of the Guangdong side's efforts in protecting the quality of Dongjiang water and the progress of the project entitled "Dongshen Water Supply Improvement Works". WSD had completed a report on the visit and tabled for Members' reference and comments. An abridged All version would be published in the homepage of the Advisory Members Committee for the reference of the general public.

5.2 WSD reported that there had been some public concerns that upon completion of the closed aqueduct there could be a possibility for the polluted water discharged from Shima River to be sucked back into the intake of Taiyuan Pumping Station. In response to such concerns, a simple flow test was conducted during the visit to demonstrate the hydraulic conditions of Dongjiang near Taiyuan Pumping Station. It was observed that the discharge from Shima River could not be sucked into the pumping station intake. However, the most critical flow condition would occur in late December, just before the resumption of Dongjiang water supply to Hong Kong in January the following year. At that time, the flow from Shima River would be increased significantly because of the river flushing operation, while the flow in Dongjiang would be low and the pumps could be controlled to run at a high rate. Another flow test was scheduled on 27 December 2001. WSD requested those Members who would like to witness the test to inform him or All the Secretary after the meeting for making the necessary Members arrangements.

6. Quality of Water in Buildings (Supplementary Paper No. 2) – ACQWS Paper No. 9

- 6.1 The Chairman recapped that on 15 January and 12 July 2001, having considered ACQWS Paper Nos. 7 and 8 respectively on the strategy to enhance measures for maintaining good water quality in the entire water supply system. Members generally agreed to the proposed strategy. This follow-up paper was to set out the actions under the strategy and to map out an implementation plan for Members' consideration before public consultation was carried out.
- 6.2 WSD then presented the paper and introduced the proposed two-stage implementation plan. Stage 1 would take three years and would focus on publicity and education to raise public awareness on water quality problems in buildings and on encouragement of customer participation in solving the water quality problem. In the third year, WSD would spend 1 year to

review the results of Stage 1 actions and the necessity to proceed to Stage 2, in which mandatory requirements would be established and enforced through legislation to ensure that good practice in maintenance of inside services was followed to prevent degradation of water quality in buildings.

Costs

- 6.3 The Vice-Chairman clarified that there were two parts to the costs of improvement. The first part was the recurrent cost for cleaning and testing, which would amount to about \$100 to \$124 per flat per year. The other part was an one-off expenditure in 25 years for replumbing, which would amount to \$3,700 to \$10,000 per flat, if carried out together with other building renovation work, and to \$9,700 to \$16,000 per flat, if NOT carried out together with other building renovation work.
- 6.4 The Chairman commented that the replumbing cost was not a small sum and might not be affordable by the general public under the present economic downturn.
- 6.5 A Member expressed his support to the proposed strategy and actions set out in the paper. He believed that when the proposed scheme was implemented, the number of qualified cleaning and testing services providers would increase and competition among them would eventually help reduce the price they would charge. The Vice-Chairman concurred with his view.
- 6.6 Another Member appreciated that the proposal reflected WSD's thorough thinking and determination in improving water quality in buildings. She commented that the annualised cost figures for replumbing would not be as useful as the monthly amount commonly used by building management offices, to determine the additional monthly contributions from flat owners towards a fund to be set up for carrying out building renovation work. Using the monthly contribution method, owners could plan their replumbing schedule in advance and could have a better estimate of the time frame of achieving the target of having good quality water from the tap. WSD could also have a clearer picture on the result of the scheme by counting those buildings with a definite replumbing plan.

6.7 In response to a Member's query, WSD answered that the cost estimates had not included pump replacement or water quality re-testing costs. He added that pumps were seldom replaced solely for improving water quality whereas water test needed not be repeated if internal plumbing was maintained properly and water samples were taken properly.

A Voluntary Scheme

- 6.8 The Vice-Chairman emphasised that the scheme would be implemented on a voluntary basis in the first three years. He anticipated that luxury residential buildings, high-class hotels and restaurants would participate in the proposed Water Quality Recognition Scheme (WQRS) as WSD's certification might upgrade their image and attract more business. Once some participated, he expected that more would follow suit to obtain similar status. He clarified that buildings under 5 years old should have new plumbing systems complying with WSD requirements whereas buildings over 30 years old would likely be demolished sooner or later for redevelopment. He estimated that there were about 33,000 buildings ranging from 5 to 29 years old and it was expected that 10,000 buildings in this category had proper maintenance and/or had already replaced the plumbing systems. Hence the target should be the remaining 23,000 buildings in the category.
- 6.9 The Chairman suggested that public housing and large private developments should be the priority targets. He also suggested that large developers could be encouraged to participate as the costs of plumbing and testing would be negligible in comparison with the development costs. Developers might be eager to join, as WSD's certifications could be used to enhance their images and to promote sales volume. He suggested that WSD should publicize the list of participating developments and award of WSD certifications. He also considered that all public housing estates should participate in the scheme.
- 6.10 In respect of public housing, a Member reiterated that they had commenced renewal of plumbing in public housing estates since

1995. He informed that works for over half of the 900 public housing blocks had already been completed and those for the remaining public housing blocks would be completed in the next 3 years. He also confirmed that all newly replumbed estates had complied fully with WSD's requirements. [Post Meeting Note: The Member confirmed that accordingly to the latest replumbing programme, the works for the remaining blocks would be completed in 5 to 6 years time.]

- 6.11 The Chairman suggested that WSD should test water samples in HD/WSD newly replumbed public housing blocks to confirm their compliance with water quality requirements. This would help demonstrate the commitment of the Government in improving the water quality in buildings. HD had no objection to the Chairman's proposal.
- 6.12 The Chairman reminded that joining the scheme should be entirely voluntary through encouragement, education and publicity. He added that the process might be slow but legislation should be the last resort and would be necessary only to deal with about 2-3 % of non-compliance.
- 6.13 The Vice-Chairman said that with the lead of HD to complete the replumbing works of the public housing estates in 3 years' time and the voluntary participation of the private sector, induced by the WQRS, 2004 would be a suitable time to review the success of the scheme.
- 6.14 The Vice-Chairman was aware of Members' concern that if a minority of flat owners in some older buildings refused to pay for the improvement works, the scheme might fail even if the majority of flat owners were prepared to pay. He pointed out that the review in 2004 would determine whether legislation was necessary to empower WSD to carry out the repair work at the flat owners' costs with or without their consent and should any flat owners failed to reimburse WSD, to register by memorial in the Land Registry against the premises concerned.

Publicity and Education

6.15 A Member proposed that WSD should set up a resources centre to distribute relevant information, to demonstrate technologies and materials adopted in water supply, to hold seminars on water quality, and to use models to demonstrate the difference in quality of drinking water coming from an aged, poorly maintained plumbing system and a new, properly maintained one. WSD supported his proposal and responded that such centre could be established in one of the water treatment works.

WSD

- 6.16 The Vice-Chairman responded that WSD had already organised a number of educational and promotional activities and would do more in the future. These activities included meetings, seminars and visits, and participants came from different spectra of the society, including representatives from building management offices, customer representatives, district councillors, academics, etc. WSD would also prepare and distribute guidelines/manuals for the reference of the general public through District Offices, estate offices, district councillors' offices, etc.
- 6.17 The Chairman questioned if WSD had sufficient resources to carry out the required inspection and laboratory tests and to liaise with the developers, etc. The Vice-Chairman answered that WSD would not be involved in laboratory tests and inspections in the buildings. Such services were intended to be provided by private laboratories. He added that WSD would work out and administer a licensing scheme to register competent persons to conduct inspection and testing to WSD standards and the Customer Relations Unit of WSD would promote the scheme to developers, building management agencies, etc.
- 6.18 A Member worried that the scheme might suddenly raise the expectation of the public on water quality in buildings. Some people might understand that it would take time to complete the improvement works while other might feel disappointed that they still had to wait 3 years or more, to have good quality water at the tap. She reminded that all related publicity and educational works should be cautiously planned to cater for such a gap and to raise the awareness of the role and responsibility of individual customers in water quality in buildings.

- 6.19 Another Member commented that the publicity work seemed to advocate drinking water direct from the tap. He warned that whether water was fit to drink depended on its chemistry and also its biology. He was worried that water in the plumbing system might degrade with time after testing. He considered that the habit of boiling water was a guarantee against harmful organisms in water.
- 6.20 The Vice-Chairman responded that as a World City, Hong Kong people should feel at ease to drink water direct from the tap like the European and American counterparts. He regretted that while Hong Kong had spent so much money to treat the water to a high standard, the water was rendered unsuitable to be consumed directly from the tap because of inadequately maintained plumbing in buildings.
- 6.21 A Member doubted Hong Kong people had the concept of maintaining their water supply system as expected in a World City and she commented that Hong Kong was different from other cities. Some areas in Hong Kong still did not have potable water supply. She was concerned that drinking water direct from the tap without boiling might not be appropriate for the old and the weak She suggested that improving the plumbing systems and the living environment was a pre-requisite and any implementation plan should be gradual, suitably phased and subjected to regular review.
- 6.22 In response to the concern of <u>the Members</u> on advocating drinking water direct from the tap, another Member questioned whether there was any statistical figures or examples which could correlate illness to drinking water direct from the tap so that Members would understand the reasons why they had such a concern or Members could get a clearer picture before working out the strategy for publicity work. A Member advised that the Department of Health did not have information which linked illness with drinking water direct from the tap since majority of Hong Kong people currently would boil the water before consumption. She added that it was difficult to estimate the size of the problem if drinking water direct from the tap was widely publicised before conditions of pipes and tanks were improved.

- 6.23 A Member supplemented that he was not aware of any advertisement to promote drinking water direct from the tap in the United States of America or countries in Europe. He believed they might advertise their good drinking water quality but would not emphasize drinking water direct from the tap.
- 6.24 The Vice-Chairman clarified that WSD wanted to encourage the public to properly maintain and/or replace their plumbing systems so that the water coming out from their taps could be consumed directly, and WSD had never asked the public to drink water direct from the tap.

Working Group

6.25 The Chairman shared the views of the Members and cautioned that the scheme should be carefully designed and implemented to achieve its objective. Members concluded that the proposed scheme was agreed in principle and concurred that a working group should be established to work out the details of implementation. The Chairman suggested that 6 to 7 members should join the All proposed working group on a voluntary basis. Member

Members/ WSD

7. Publication of Water Quality Data

The Chairman announced that annual updating of quality data for drinking water and Dongjiang water received in Hong Kong at Muk Wu Pumping Station had been completed. Water quality data for the period from April 2000 to March 2001 could be accessed through the Internet.

8. Agenda Item 3 : Possible Use of Reservoirs for Recreation – ACQWS Paper No. 10

8.1 The Chairman advised that this paper was prepared by the Planning Department (Plan D). The purpose of the paper was to seek Members' views on the possible use of reservoirs for non-motorised, well-managed and modest scale recreational activities.

- 8.2 After presentation of the paper by Plan D, the Vice-Chairman commented that due to different geographical terrain and climate, US or Canada experience might not be directly applicable to Hong Kong. He explained that the flow in rivers/streams in Hong Kong was flashy and hence inflow into reservoirs was very irregular. As the reservoirs in Hong Kong were small when compared with the catchment areas and the consumption rate, the water level of reservoirs fluctuated abruptly. Therefore, the self-purification ability of reservoirs in Hong Kong was very low. The presence of spillways and overflow facilities would also pose a threat to the safety of the recreational activities, which should not be under-estimated.
- 8.3 WSD commented on paragraph 7.1(b) of the Paper concerning fuel spills from motorboats that although petrol or other fuel spill might evaporate rapidly, the pollution risk could not be overlooked. He cited the example of benzene, which was a well-known carcinogen present in most unleaded petrol formulations amongst numerous other additives. It did have certain solubility in water. He pointed out that the water industry worldwide advocated preserving and making use of the best available water resources rather than tolerating avoidable pollution in pristine water resources and relying on water treatment technologies to remove pollutants. He was also concerned that opening up of reservoirs might intensify the problems of littering, rubbish dumping, overfishing, fish feeding and "FongSang" (放生), a Chinese custom to set free live fish or reptiles in water bodies. The death of such large organisms arising from failure to acclimatize in the water would lead to water quality concern. Furthermore, illegal overfishing and/or feeding, would affect the fish population, ecology and water quality. He also cautioned Members of the risk of contamination by micro-biological disease vectors arising from body contact sports in the water after opening up reservoirs to recreational activities.
- 8.4 In response, Plan D cited the Singapore example and stated that the recent study by the Singapore government recommended the opening up of some reservoirs for recreation. He emphasised that the present proposal was to conduct public consultation on the possible use of reservoirs for recreation on the condition that water quality would not in anyway be affected or be put under

unacceptable risk. He stressed that this should not be misinterpreted as a proposal to pollute the reservoirs or a proposal to rectify the avoidable pollution problem through water treatment He noted that our reservoirs were always open to public access and doubted the impact of opening up of reservoirs for recreation and of the "FongSang" problem. He also opined that rubbish dumping was a management problem.

- 8.5 The Vice-Chairman commented that compared with Hong Kong people, public behaviour of Singaporean was quite different. Singaporeans were notably more disciplined whereas people of Hong Kong were more liberal. He then quoted a counter example in Xinfengjiang, where Members visited in August 2000. The Heyuan Municipal People's Government had banned almost all recreational activities in the reservoir to protect the quality of Dongjiang water supplied to Hong Kong, Shenzhen and other cities downstream of Heyuan. While we openly stressed the protection of Dongjiang water, it would look unreasonable to relax on the protection of our own water resources. He noted the "FongSang" problem existed in some smaller reservoirs with convenient access such as the Tai Tam and Aberdeen group of reservoirs. However, public transport to most reservoirs in Hong Kong was inconvenient He cautioned that with improved vehicular access after opening up, the impact of large scale "FongSang" activities on the larger water bodies such as High Island Reservoir would be very difficult to manage.
- 8.6 The Chairman acknowledged the need to provide more recreational facilities but because of limited water resources in Hong Kong, the impact of the proposal to water quality should not be ignored. He therefore requested WSD to consider identifying 1 or 2 reservoirs, which were not being used for water supply, for a pilot scheme so that there was no risk of polluting the water supply.
- 8.7 A Member concurred with the Chairman's view and supported the pilot scheme to assess the impact on water quality. He commented that if the result was positive, the proposal could add value to the reservoirs, and if negative, a review should be undertaken to investigate how to ensure water quality would not be affected.

- 8.8 The Vice-Chairman responded that the Pokfulam Reservoir might be considered for the proposed pilot scheme. The reservoir was at present used for flushing water supply and the use of it for recreation should have no major impact on flushing water quality.
- 8.9 Plan D agreed to the pilot scheme proposal. As water quality was WSD/ an important issue, the Chairman requested Plan D and WSD to wait Plan D for the result of the Second Stage Public Consultation of the HK2030 Study and, if public opinion supported the proposal, to proceed with the pilot scheme and to review the proposal based on the results of the pilot scheme.
- **9.** There being no other business, the meeting was adjourned at 5:00 p.m.