

Advisory Committee on the Quality of Water Supplies Minutes of Meeting No. 8

Date: 1 April 2003 (Tuesday)
Time: 2:30 p.m.
Venue: Conference Room, 48/F, Immigration Tower, Wan Chai, Hong Kong

Members Present

Mr. FANG Hung, Kenneth	Chairman
Mr. KO Chan Gock, William	Vice-Chairman, Director of Water Supplies
Ms. CHEUNG Lai Ping, Lister	The Conservancy Association
Prof. HO Kin Chung	Open University of Hong Kong
Mr. WONG Kwok Keung	Hong Kong Plumbing and Sanitary Ware Trade Association
Mr. WU Sai Him, Hugh	The Hong Kong Institution of Engineers
Ms. CHOW Kit Bing, Jennifer	Eastern District Council
Ms. CHUI Pui Man, Wendy	Islands District Council
Dr. LAM Ching Choi	Haven of Hope Christian Service
Mr. LAW Wei Tak, Victor	The Hong Kong Federation of Electrical and Mechanical Contractors Limited
Prof. TSO Wung Wai	The Chinese University of Hong Kong
Dr. CHIU Tak Lun, Michael	Assistant Director, Environmental Protection Department
Mr. WAI Chi Sing	Principal Assistant Secretary, Environment, Transport and Works Bureau
Mr. LAU Chi Ming, Stephen	Secretary, Senior Engineer, Water Supplies Department

Members Absent with Apologies

Dr. CHEUNG Yun Hing, Richard	City University of Hong Kong
Prof. LAM Kin Che	The Chinese University of Hong Kong
Mr. CHEUNG Yan Hong	Wong Tai Sin District Council
Ms. LO Yuet Yee, Rhonda	Assistant Director, Food and Environmental Hygiene Department
Dr. TSE Lai Yin	Consultant, Department of Health
Mr. WONG Bay	Assistant Director, Housing Department

In Attendance

Mr. CHAN Pui Wah	Deputy Director, Water Supplies Department
Mr. KU Chi Chung, Damien	Assistant Director, Water Supplies Department

Mr. CHAU Chi Wai, David
Mr. CHEUNG Tze Leung

Assistant Director, Water Supplies Department
Chief Chemist, Water Supplies Department

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| 1. | The Chairman welcomed Members for attending Meeting No. 8 of the Advisory Committee on the Quality of Water Supplies (ACQWS). He then extended his welcome to the representatives from the Water Supplies Department (WSD). | |
| 2. | The Chairman advised that similar to previous meetings, a short media briefing session would be held at the conclusion of the meeting. <u>Prof. HO Kin Chung</u> and <u>Mr. WU Sai Him. Hugh</u> volunteered to join the briefing. | |
| 3. | The Chairman advised that WSD would distribute publications, including WSD Annual Report, Waterlink and Droplet, to Members from now on to enhance communication with Members. The latest issue of WSD Annual Report for 2001-2002 was distributed to Members in December 2002 whereas the current issues of the other two publications, i.e. 34 th issue of Waterlink and 44 th issue of Droplet, were tabled for their retention. | WSD |

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

The minutes were confirmed with the following amendment:-

Item 4.1.5 - After the 1st sentence, add the following two sentences:

“He suggested that as the Scheme was meant for quality maintenance recognition, the water quality acceptance limits for testing parameters might be set at a higher standard to match with the title of the Scheme. This would also avoid misunderstanding that failure to meet the limits would imply that the water was unfit for potable purpose.”

5. **Agenda Item 2 : Matters Arising**

5.1 **Quality of water in buildings**

5.1.1 *Fresh Water Plumbing Maintenance Guide*

WSD reported that WSD had published the Fresh Water Plumbing Maintenance Guide in October 2002. A copy of the guide in Chinese was tabled in the meeting for the retention of all Members. He asked Members to inform the Secretary after the meeting if they wished to have extra copies.

5.1.2 *ACQWS Briefing Paper No. 1 – Report on Opinion Survey on Quality of Water in Buildings 2002*

WSD presented the results of the Opinion Survey on Quality of Water in Buildings, the field work of which was conducted in June-July 2002. WSD reported that the survey findings indicated that: –

- (a) Most (91.6%) domestic customers considered the overall quality of tap water at home acceptable or satisfactory.
- (b) “Rusty communal pipes” and “dirty water tanks of buildings” were the most commonly cited causes attributable to the problems in domestic tap water quality. This reflected public awareness of the adverse impact of poor maintenance of pipes and water tanks.
- (c) Responses from domestic customers were highlighted below: –
 - (i) 74.4% considered that there was a need to ensure that tap water was suitable for direct drinking.
 - (ii) 99.4% of those living in buildings with water tanks considered that water tanks should be regularly cleaned.
 - (iii) 66.6% were willing to pay for the additional expenses for cleaning of water tanks and for repairing and maintaining their water supply installations / facilities.
 - (iv) 98.4% considered that deteriorated water supply installations / facilities should be replaced.
 - (v) 78.9% were willing to contribute funds for the replacement of water supply installations / facilities of buildings to ensure that tap water was suitable for direct

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drinking.

Members were satisfied with the results of the opinion survey.

5.1.3 ***Fresh Water Plumbing Quality Maintenance Recognition Scheme***

WSD reported that since the launch of the Fresh Water Plumbing Quality Maintenance Recognition Scheme (FWPQMRS) in July 2002, WSD had organized a series of publicity activities with the media, District Councils, District Offices, hotels, schools, property management offices, etc. A total of 39 certificates were presented by the Director of Water Supplies to successful applicants in a presentation ceremony on 9 December 2002. WSD advised that a homepage had been launched to introduce the details of the Scheme and to publish the names of the buildings awarded the certificate. WSD added that the number of buildings awarded the certificate had reached 193 up to 31 March 2003 and was expected to increase to well above 200 by June 2003, and WSD was planning to arrange the second presentation ceremony on 24 June 2003. WSD thanked Members for their support in promoting the Scheme and invited Members to attend the forthcoming ceremony. In view of the atypical pneumonia outbreak in Hong Kong, the Vice-Chairman suggested and the meeting agreed that the ceremony should be postponed.

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5.2 **Publication of Water Quality Data**

- 5.2.1 WSD reported that WSD had increased the frequency of updating and publishing the water quality data in Hong Kong from once a year to twice a year. The new initiative enhances the transparency on water quality data in Hong Kong. The water quality data for the twelve months from 1 October 2001 to 30 September 2002 were published in the Internet in December 2002. The data include physical parameters, chemical parameters of health significance and bacteriological quality. WSD anticipated that the next update covering the twelve months period from 1 April 2002 to 31 March 2003 would be published in June 2003. Members welcomed such

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a move.	
<p>5.2.2 <u>Prof. HO Kin Chung</u> commented that according to past experience, the media always approached some Members for comments as soon as water quality data were published, so a meeting should be arranged to discuss and seek Members' consensus before publishing the data publicly. The Vice-Chairman proposed to establish a Working Group on Publication of Water Quality Data to streamline the process. Members supported the proposal and <u>Prof. HO</u> accepted the invitation to chair the working group.</p>	Prof. HO & WSD
<p>5.3. Visit</p> <p>The Secretary reported that 11 Members of the Advisory Committee had visited the Dongjiang water supply system in October 2002. It was the third Guangdong visit of the Advisory Committee since its formation in April 2000. Members had visited Xinfengjiang (新豐江), Huizhou Meilake Water Purification Centre (惠州市梅湖水質淨化中心), construction sites of the project "Dongshen Water Supply Improvement Works (東深供水改造工程)" and Guanlan River (觀瀾河), etc. A report on the visit was prepared and distributed to Members in December 2002 for record. He looked forward to arranging another visit after completion of the project "Dongshen Water Supply Improvement Works" later in 2003.</p>	
<p>6. Commissioning of the Phase I Dongshen Water Supply Improvement Works (ACQWS Briefing Paper No. 2)</p>	
<p>6.1 WSD reported that the progress of the Dongshen Water Supply Improvement Works was very good. The Phase I works of the project (the northern section from Taiyuan to Tangxia) was commissioned on 18 January 2003 and there was a noticeable improvement in the quality of Dongjiang water since the beginning of February 2003. Commissioning of the whole project would be advanced to June 2003. By then, the quality of Dongjiang water delivered to Hong Kong should be further improved and the Guangdong Authority would focus on the protection of Dongjiang</p>	

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	water quality at its source and tributaries. WSD assured that WSD would keep Members informed of the development.	WSD
6.2	A Member mentioned that some reporters asked her why Members of the ACQWS did not know about the opening ceremony. The Vice-Chairman explained to Members that WSD was informed of the opening ceremony at a very late stage. He himself was therefore unable to accept the invitation to attend the ceremony and <u>Mr. KU Chi Chung, Damien</u> and his colleagues attended as representatives of the Government of the Hong Kong Special Administrative Region. WSD added that they believed another opening ceremony would be arranged to celebrate the full commissioning of the project and expected that the Guangdong Authority would give ample notice this time.	
6.3	A Member pointed out that the media was very enthusiastic to know the changes in Dongjiang water quality and suggested that WSD should take the opportunity of the coming grand opening ceremony to publicize the improvement in Dongjiang water quality. Another Member suggested that the data to be released should be presented in graphical form to bring out clearly the changes in Dongjiang water quality and to win the confidence of the public and the media. Another Member further suggested that WSD should release Dongjiang water quality data prior to and after commissioning of the Phase I works for comparison by the public and media, and should also take the opportunity to package and publicize the effort of the Hong Kong and Guangdong sides in improving the quality of Dongjiang water.	
6.4	The Chairman suggested that emphasis should also be given to the difference in key parameters between raw water and drinking water, and that the drinking water supplied by WSD had always met the guidelines for drinking water of the World Health Organisation (WHO).	
6.5	The Vice-Chairman assured that WSD had been closely monitoring the changes and would publish in June 2003 the Dongjiang water quality data to demonstrate the improvement after commissioning	WSD

of the Phase I works and in end 2003 the Dongjiang water quality data to demonstrate the improvement after the full commissioning of the project.

**7. Pilot Scheme for Reclaimed Water Reuse
(ACQWS Briefing Paper No. 3)**

7.1 **WSD** recalled that in the 6th meeting of the ACQWS, WSD reported in ACQWS Paper No. 12 about strategy for long-term fresh water resource. WSD had completed 3 feasibility studies in 2002 on alternative fresh water resources and reclaimed water reuse was identified as one of the 3 possible alternative fresh water resources. **WSD** then briefed Members on the details of the pilot scheme for reclaimed water reuse in Ngong Ping .

7.2 The Vice-Chairman told Members the background of the pilot scheme. As sewage from the proposed Ngong Ping Development might pollute the Shek Pik Reservoir and its gathering grounds, the Drainage Services Department (DSD) proposed to build a tertiary sewage treatment plant to treat the sewage before discharging the effluent outside the gathering grounds and into the sea. The treated effluent, if further treated with chlorine, would become reclaimed water that was suitable for non-potable uses. From water conservation viewpoint, WSD actively participated in the pilot scheme for reuse of reclaimed water for toilet flushing, landscape irrigation and also other possible cleansing use within the Mass Transit Railway Corporation Limited (MTRCL) development. The Vice-Chairman added that fresh water back-up system would be provided to cater for demand fluctuation and contingency for emergency.

7.3 **A Member** had reservation on usage of reclaimed water in urban or other areas. **WSD** responded that the Ngong Ping Sewage Treatment Works would be the first one that provided tertiary treatment and its treated effluent would be suitable for reuse after further treatment. WSD would take the opportunity to review the possibility to extend the use of reclaimed water in other areas in the light of the experience after the commissioning of the pilot

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scheme and to explore other potential uses of reclaimed water. He added that the scheme had been carefully planned and implemented in collaboration with various government departments, including the Environmental Protection Department, Agriculture, Fisheries and Conservation Department, Department of Health (DH), DSD and WSD.

- 7.4 **A Member** commented that reclaimed water was very expensive based on the Singapore experience. The Chairman commented that the use of reclaimed water in Singapore might be a political decision and the situation in Hong Kong was different. The Vice-Chairman pointed out that in Singapore, reclaimed water was blended with their reservoir water for treatment before distributed for use instead of consumed directly.
- 7.5 **A Member** supported the pilot scheme on reuse of reclaimed water from water conservation viewpoint and was concerned about public acceptance of treated effluent as a drinking water resource. She suggested WSD to take the opportunity to make an effort on education about the concept and knowledge of the proposal. The Vice-Chairman clarified that there was no plan to use reclaimed water for drinking purpose but only for flushing and other non-potable uses, and under the pilot scheme, reclaimed water would only be supplied to pre-identified locations. **WSD** emphasised that from water resources management viewpoint, the proposal would help to cut down the demand for fresh water, and the reduction was not a small amount.
- 7.6 **A Member** commented that the pilot scheme should be carefully planned to collect useful and adequate information, for example operating costs for different uses with different quality requirements. He also expressed much concern on the hygienic condition of the reclaimed water and public acceptance taking into account the atypical pneumonia outbreak in Amoy Gardens. **WSD** responded that WSD would adopt the highest standard for the aforesaid proposed uses provided that the difference in operating costs was not excessive and could be offset by the costs to provide separate distribution systems. **WSD** added that the proposed

use of the reclaimed water for toilet flushing should be acceptable, as it would be collected into sewers. However, the impact of the proposed landscape irrigation within the water gathering ground had yet to be studied, as the reclaimed water would remain in the water gathering ground.

- 7.7 [A Member](#) advised that the public should be warned that the reclaimed water was unsuitable for drinking. [Another Member](#) also expressed her concern on the possible misuse of the reclaimed water. She recalled that there were reports that salt water from the flushing system was used to fill fish tanks in seafood stalls. She considered that warnings would therefore be necessary. The Vice-Chairman responded that people in Hong Kong should be aware that flushing water was unsuitable for drinking and in Ngong Ping, the public would have no direct access to the reclaimed water supply in the toilets and other locations. He emphasised that the MTRCL staff would be trained to restrict the use of reclaimed water for cleansing only, and iterated that reclaimed water would only be supplied to pre-identified locations.

**8. Pilot Desalination Plant Study
(ACQWS Briefing Paper No. 4)**

- 8.1 [WSD](#) advised that apart from reclaimed water reuse, desalination was identified as another option of the 3 possible alternative fresh water resources. [WSD](#) then briefed Members on the details of the pilot study for desalination plant.
- 8.2 In reply to [a Member](#)'s query about site selection, the Vice-Chairman advised that the study would test the performance of the pilot plant at different locations in Hong Kong. He explained that seawater in the western coast of Hong Kong was of lower salinity but more polluted in comparison with the eastern coast. In the 1-year trial period, WSD would study the effectiveness of different membrane and backwash technologies to remove salt, bacteria and other impurities under different seawater environment in Hong Kong.

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8.3	<p>The Vice-Chairman explained to a Member that the multi-stage flash distillation technology adopted in the demolished Lok On Pai Desalination Plant was outdated and its efficiency was low and operating cost high. He explained that the proposed pilot plant would adopt a membrane technology through which drinking water would be produced by filtering seawater through a membrane.</p>
8.4	<p>A Member reminded that the turbidity of seawater would be more important than salinity in the selection of desalination plant and should be tested accordingly. WSD advised that WSD had already collected a lot of seawater quality data in Hong Kong. WSD emphasised that the study would also make reference to overseas experience in selecting the most cost-effective option in Hong Kong.</p>
8.5	<p>A Member reminded WSD to carefully plan the pilot study to avoid recurrence of the case of the Lok On Pai Desalination Plant, which was operated for a few short periods of time because of high fuel cost and was subsequently demolished. He suggested that WSD should carry out the study jointly with the neighbouring cities, e.g. Shenzhen, so as to identify suitable desalination technologies as an alternative sustainable source of raw water supply for the region. WSD advised that WSD had good contact with the Shenzhen Authority to exchange and share experience on the subject. WSD also understood that the Shenzhen Authority was planning to build a desalination plant in Daya Bay</p>
9.	<p>Any Other Business</p>
9.1	<p><i>Publicity in International Fresh Water Year</i></p>
	<p><u>Ms. CHEUNG Lai Ping, Lister</u> suggested that in this International Fresh Water Year, the ACQWS should take the opportunity to promote education on fresh water supply and also raw water resources management. The Vice-Chairman welcomed her suggestion and proposed to form a Working Group on Publicity for Water Supply to follow up in collaboration with the Customer Ms. Lister Relations Unit of WSD. Members supported the proposal and <u>Ms. CHEUNG</u></p>

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9.2 <i>Atypical Pneumonia</i>	
<p>WSD reported that WSD had assisted DH in the investigation of the cause of the outbreak of atypical pneumonia in Amoy Gardens by collecting water samples from the roof tanks, water taps and reception tanks of Block E and other blocks for testing by DH. WSD advised that DH would carry out the laboratory tests and would notify WSD the test results before publication. The Vice-Chairman emphasised that there was so far no evidence that the outbreak was related to water supply.</p>	
10. There being no other business, the meeting was adjourned at 4:35 p.m.	