

**Drinking Water Safety Advisory Committee
Fifth Meeting**

Date : 4 November 2019 (Monday)
Time : 4:00 p.m. to 6:10 p.m.
Venue : Conference Rm 3, G/F, Central Government Offices,
2 Tim Mei Avenue, Tamar, Hong Kong

Minutes of Meeting

Members Present

Ir LEUNG Kwong Ho, Edmund	Chairman
Ir Dr CHAN Hon Fai	Vice Chairman
Dr CUNLIFFE David Anthony	
Prof LAU Kar Pui, Susanna	
Ir Prof LO Man Chi, Irene	
Dr MA Yiu Wa, Anthony	
Dr WONG Siu Ming, Raymond	
Dr WONG TAAM Chi Woon, Vivian	
Ir WONG Yiu Sun, Peter	
Mr WONG Chung Leung	Director of Water Supplies
Mr CHAU Siu Hei, Francis	Deputy Secretary for Development (Works) 3
Dr HO Ka Wai, Rita	Head, Non-Communicable Disease Branch, Department of Health (“DH”)
Mr KAN Yim Fai, Fedrick	Secretary Team Leader (Water Safety), Development Bureau (“DEVB”)

Members Absent with Apology

Prof HO Kin Chung
Mr HO Kui Yip, Vincent
Prof TSE Lap Ah, Shelly

In Attendance

Ms FOK Ka Lai	Assistant Secretary (Water Safety) 1, DEVB
Mr CHAU Sai Wai	Deputy Director of Water Supplies
Mr WONG Yan Lok, Roger	Assistant Director/Development, Water Supplies Department (“WSD”)
Mr KWOK Yau Ting, Kelvin	Chief Chemist, WSD
Mr YU Chi Wing	Senior Chemist/Water Quality (Standards and Monitoring), WSD
Ms WONG Chung Yan, Yannes	Mechanical Engineer/Material Testing Laboratory, WSD
Mr YEUNG Chin Ho, Daniel	Engineer/Technical Support (4), WSD

Action by

1. The Chairman remarked the successful conclusion of the 8th IWA-ASPIRE Conference and Exhibition held from 31 October to 2 November 2019 in Hong Kong which provided a platform for sharing the best practice and latest development of various matters relating to water treatment, water quality management, water network management, etc.
2. The Secretary updated Members that the Secretary for Development had endorsed the revised Hong Kong Drinking Water Standards (“HKDWS”) and it would be promulgated at DEVB’s and WSD’s websites in due course.

Agenda Item 1: Confirmation of Minutes of the Last Meeting

3. The Secretary circulated the draft minutes of the last meeting (i.e. the fourth meeting) to Members on 9 August 2019. Taking into account Members’ comments, post-meeting notes were added in paragraphs 14, 15 and 19 to provide updates after the meeting in respect of the relevant items. The revised draft minutes were further circulated to Members on 17 October 2019 with no comment received. There being no further comments from Members at the meeting, the minutes of the last meeting were confirmed.

Agenda Item 2: Matters Arising from Last Meeting

4. In response to Members’ suggestion made in the last meeting (paragraph 13

of the minutes of the last meeting), Mr Kelvin KWOK, Chief Chemist of WSD, presented the revised water sampling rates for relevant parameters for each District Council District based on a unified population denominator under the revised water quality monitoring programme.

5. In response to a Member's concern about water quality of small water supplies (paragraph 27 of the minutes of the last meeting), Ms KL FOK, Assistant Secretary (Water Safety) 1 of DEVB, briefed Members that Food and Environmental Hygiene Department ("FEHD") had all along been monitoring the water quality of small supplies with the assistance of WSD, Government Laboratory and DH. In line with the latest revision of HKDWS and the associated monitoring programme, FEHD had started to review their water quality monitoring programme for small water supplies. DEVB would continue liaising with FEHD and other government departments to enhance the water quality monitoring programme for small water supplies as appropriate.

Agenda Item 3: Updates on Action Plan for Enhancing Drinking Water Safety in Hong Kong ("Action Plan")

6. Mr Kelvin KWOK updated Members on the latest situation of the implementation of the Action Plan.

7. Noting that some test results under the metal leaching study on plumbing products ("the Study") had failed, a Member asked about the implementation details of adopting the metal leaching test in the certification of General Acceptance ("GA") products for plumbing works in the future. Mr Kelvin KWOK explained that basically the metal leaching test would follow AS/NZS 4020. However, the exact implementation details were yet to be worked out in consultation with relevant stakeholders in 2020.

8. In response to a Member's enquiry on whether the Study would find out the correlation between the metal leaching rate and the metal content of the plumbing product, Mr Kelvin KWOK advised that there lacked sufficient testing data to draw any conclusion at this stage but WSD would continue to conduct more tests to see if the correlation could be established. He added that the relevant British Standards ("BS") for plumbing products in fact only stipulated the requirements on the chemical compositions (including the metal content) of their constituent materials but not those on metal leaching test. Mr CL WONG, Director of Water Supplies, supplemented that WSD would include metal leaching test as an

additional requirement for certification of GA products as proposed in the holistic review of Waterworks Ordinance (“WWO”) to further safeguard drinking water safety.

9. A Member asked whether non-GA products had been included in the Study and if so, what the failure rates of GA products and non-GA products were. Ms Yannes WONG, Mechanical Engineer/Material Testing Laboratory of WSD, advised that both GA products and non-GA products had been sampled for metal leaching test under the Study. In respect of the failure rates of the two groups of products, she advised that the sample size was not large enough to draw any conclusion at the moment. Mr CL WONG supplemented that WSD would collect more samples for analysis under the Study, and once the metal leaching test became a requirement under WWO in future, plumbing products that failed the test would not be granted with GA certification.

10. A Member asked if there had been any targets set for the implementation of the Water Safety Plans for Buildings (“WSPB”). Mr Kelvin KWOK pointed out that whilst the implementation of WSPB was voluntary, WSD had been sparing no effort in the promotion of WSPB, and developed relevant guidelines and templates for different types of premises to assist property owners and management agents to implement WSPB. The WSPB guidelines and templates had been uploaded onto the portal jointly managed by the International Water Association and the World Health Organization for sharing with other cities in the world. Mr CL WONG added that in order to encourage wider implementation of WSPB in the community, the Government planned to launch a subsidy scheme which aimed to provide financial incentive to needy owners of residential buildings. With the increased implementation of WSPB at residential buildings, it would help promote the implementation of WSPB on other types of buildings. Regarding the implementation of WSPB at hospitals, Mr Roger WONG, Assistant Director/Development of WSD, highlighted that the relevant WSPB template had recently been developed and WSD would continue to follow up the implementation with both the public and private hospitals, particularly the two hospitals which had participated in the pilot scheme earlier on.

11. A Member raised that DH had proposed legislation of and set out requirements on, private healthcare facilities. She wondered if there would be any provisions on drinking water safety incorporated in those requirements. Dr Rita HO, Head of Non-Communicable Disease Branch of DH, explained that the Private Healthcare Facilities Ordinance mainly served to regulate premises where registered medical practitioners and registered dentists practiced. She added that

the requirements stipulated were not relevant to WSPB.

12. A Member pointed out that publicity and public education would be effective means to promote wider implementation of WSPB. He suggested that the promotion should also be made online so that the hit rate of the webpage concerned would be counted to measure the effectiveness of the publicity and public education efforts.

13. Mr Roger WONG introduced the Government's initiative to launch the Water Safety Plan Subsidy Scheme ("WSPSS") which aimed to encourage needy owners of private residential buildings to implement WSPB at their buildings as good management practice of maintaining the internal plumbing systems to further safeguard drinking water safety.

14. In response to a Member's concern on whether there were sufficient qualified persons ("QPs") available in the market to conduct relevant tasks under WSPB, Mr Roger WONG explained that the Vocational Training Council had been providing training courses for QPs including licensed plumbers, building surveyors and building services engineers on WSPB on a regular basis. About 400 QPs had already received the training so far. The list of QPs who had already received the training was available at WSD's website. Mr Roger WONG supplemented that training courses on WSPB would continue to be organised.

15. A Member suggested that the Government should assist buildings in need, particularly the "three-nil" buildings, to coordinate the establishment of owners' corporations so as to better manage their buildings including the implementation of WSPB. Mr Roger WONG highlighted that WSD would engage a social service team to offer assistance to those needy owners of buildings including the "three-nil" buildings.

16. A Member asked how the Government could ensure the participating buildings would continue to implement WSPB when the Government ceased to offer them subsidy after two cycles of implementation of WSPB. Mr Roger WONG responded that, with the launching of the subsidy scheme, the participating buildings would be subsidised for the more costly part of the implementation of WSPB including formulation of the WSPB by QPs for their buildings and rectification of the defective plumbing systems to mitigate the water safety risks. The subsequent implementation of WSPB would be much less costly and should be affordable by the building owners. Another Member suggested WSD publish the list of participating buildings at WSD's website to serve as sort of recognition.

Mr Roger WONG advised that the participating buildings would automatically join WSD's Quality Water Supply Scheme for Building – Fresh Water (Management System) which was a recognition of good management of plumbing systems and their names would be published on WSD's website.

17. Regarding the level of subsidy under WSPSS, Mr Roger WONG advised that the subsidy would be granted on a building-block basis. Mr Francis CHAU, Deputy Secretary for Development (Works) 3 of DEVB, supplemented that financial subsidies would be provided at different levels for various tasks in the first two cycles of implementation of WSPB. Details of the WSPSS had been modelled on the on-going "Operation Building Bright 2.0" and "Lift Modernization Subsidy Scheme". He also pointed out that the target number of participating buildings was about 5 000, which was about 45% of the total eligible buildings. The Government would review the implementation of the subsidy scheme and might consider injecting extra funding in future if overwhelming responses were received.

18. A Member raised concern on possible financial burden to the building owners joining the subsidy scheme in case substantial rectification works were required for their plumbing system. Mr Francis CHAU responded that it was anticipated that only a small portion of the buildings participating in WSPSS would require rectification of their plumbing system. In case the buildings were in a dilapidated condition, they would likely be eligible for applying subsidies under other subsidy schemes such as the "Operation Building Bright 2.0" for necessary repair.

Agenda Item 4: Updates on Drinking Water Standards in Overseas Jurisdictions

19. Mr Kelvin KWOK updated Members on the latest development in overseas jurisdictions regarding the drinking water standards for five parameters, namely 1,4-dioxane, Lead, Arsenic and PFOS and PFOA. He also sought Members' views on whether there was a need to conduct a comprehensive review on those parameters.

20. Mr Kelvin KWOK shared with Members about recent stipulation of the new maximum contaminant level ("MCL") of 1 µg/L for 1,4-dioxane in the New York State of the United States ("US"). A Member suggested that, as far as the US was concerned, it would be more appropriate to make reference to its national standards, i.e. the standards set by the US Environmental Protection Agency,

instead of those set by individual states according to their local situations. Another Member added that lowering the standard value of certain parameter to make it in line with the achievable quantification limit was not appropriate, as such a limit would be adopted as the standard value for that parameter only when the capability of the analytical testing method was unable to reach the corresponding health-based standard value. In general, Members agreed that the standard value of 1,4-dioxane in the HKDWS should remain unchanged whilst the international development should be kept in view.

21. Mr Kelvin KWOK updated Members that Health Canada had lowered the maximum acceptable concentration (“MAC”) for lead in drinking water from 10 µg/L to 5 µg/L. Such a more stringent standard value had been based on the practical quantitative limit of the test method. In response, a Member recalled that in 2017, the International Expert Panel on Drinking Water Safety (“IEP”) had recommended, amongst other things, that the Government should collect local data in three to five years so as to review the standard values of six metals including lead. After some deliberation, Members recommended that WSD should keep the international development in view and continue collecting local data according to IEP’s recommendations.

22. In respect of a Member’s enquiry on the timetable for the review mentioned in paragraph 21 above, Mr Kelvin KWOK advised that WSD’s water quality monitoring had been extended to cover the six metals, including lead, at consumers’ taps since December 2017, and WSD would conduct an interim review in 2021 after obtaining 3 years’ monitoring data. Depending on the outcome of the interim review, such as statistical coherence of results, the Government would decide if additional data are needed to be collected for two more years before reviewing the standard values of the six metals. Another Member expressed that the blood lead level of a person might be affected by a number of factors such as environmental exposure and suggested that the contribution to human’s blood lead level by various sources based on scientific modelling should be explored so as to provide useful information for setting an appropriate standard value for lead in drinking water. After deliberation, Members agreed that WSD should continue with the monitoring of the six metals at consumers’ taps and conduct the interim review in 2021.

23. Mr Kelvin KWOK updated Members that New Hampshire of the US had set a new MAC of 5 µg/L for arsenic. However, he pointed out that since groundwater was not a major source of drinking water in Hong Kong, arsenic should not be a concern to the drinking water quality of Hong Kong. As the new

MAC was only a standard of an individual state of the US, Members agreed to adopt the same approach as for 1,4-dioxane above, i.e. maintaining the current standard value in HKDWS for arsenic whilst keeping in view the international development.

24. Mr Kelvin KWOK highlighted that PFOS and PFOA had not been included in HKDWS, but the Watch List. WSD had been conducting snapshot monitoring of the two parameters for both raw and treated water samples regularly and their levels had been found to be around 10 ng/L. Although a new MCL was set by the New York State of the US, Members agreed that, in view of their low concentration in the drinking water of Hong Kong, WSD should keep PFOS and PFOA in the Watch List and continue the snapshot monitoring.

25. Regarding microplastics, Mr Kelvin KWOK remarked that the parameter had been included in the Watch List. However, there had not been snapshot monitoring conducted for that parameter due to the absence of standardised sampling and testing methods. According to WHO's recent publication on microplastics in drinking water, there had been limited data on its occurrence in drinking water as well as very few fully reliable studies which had used different sampling and analysis methods. Therefore, WHO recommended that routine monitoring of microplastics in drinking water was not necessary. A Member added that microplastics would give rise to an environmental problem rather than a drinking water quality issue. In view of the above, WSD would maintain microplastics in the Watch List and keep in view the international development.

Agenda Item 5: Summary on International Water Quality Incidents

26. Mr Kelvin KWOK briefly reported on WSD's review on major international water quality incidents during the period from March to June 2019. A Member emphasised that WSD should ensure proper preventive actions as recommended in the review be taken to avoid occurrence of similar incidents in Hong Kong. Mr Kelvin KWOK explained that the Steering Group of WSD's Drinking Water Quality Management System ("DWQMS") would adopted a risk-based approach to evaluate from time to time if the procedures stipulated in WSD's DWQMS documents would need to be revised in response to those major water quality incidents happened in other parts of the world. WSD would share with Members the corresponding follow-up actions taken or to be taken by the department in due course.

WSD

Agenda Item 6: Any Other Business

27. There being no other business, the meeting adjourned at 6:10 p.m.