

Drinking Water Safety Advisory Committee
Ad hoc meeting to examine WSD's investigation report on
the water quality incident in Queen's Hill Estate and Shan Lai Court

Date : 16 July 2025 (Wednesday)
Time : 10:00 a.m. – 12:55 p.m.
Venue : Conference Room 7, G/F, Central Government Offices,
2 Tim Mei Avenue, Tamar, Hong Kong

Minutes of Meeting

Members Present

Ir Dr CHAN Hon Fai	Chairperson
Ir Prof LO Man Chi, Irene	Vice-Chairperson
Ir CHAN Chi Ming, Antonio	
Dr CHAN Chun Man, Jones	(via video conferencing)
Sr CHEUNG Man To, Arthur	(via video conferencing)
Dr CHUI Ting Fong, May	(via video conferencing)
Ir CHUNG Chi Ming	
Dr CUNLIFFE David Anthony	(via video conferencing)
Dr HO Koon Sing, Gray	(via video conferencing)
Prof LEE Wing Yan, Vivian	(via video conferencing)
Prof LIU Hong Bin	(via video conferencing)
Dr TAM Lai Fan, Gloria	
Ir TANG Ming Sum, Michelle	
Prof TO Kai Wang, Kelvin	(via video conferencing)
Mr WONG Yan Lok, Roger	Director of Water Supplies
Mr HO Ying Kit, Tony	Deputy Secretary for Development (Works) 3
Dr YU Wing Man, Joan	Principal Medical & Health Officer (Disease Prevention), Non-Communicable Disease Branch, Department of Health (“DH”) (Acting)

Mr CHAU Siu Hei, Francis

Secretary
Team Leader (Water Safety), Development Bureau
("DEVB")

In Attendance

Mr LO Tsz Lung, Warren	Assistant Secretary (Water Safety) 1, DEVB
Ms YEUNG Man Yan, Didi	Executive Manager (Water Safety), DEVB
Mr CHAN Chi Yuen, Stanley	Deputy Director of Water Supplies (Acting)
Mr LEE Kwun Chung, Johnson	Assistant Director/New Territories, Water Supplies Department ("WSD") (Acting)
Mr CHAN Shu To, Antonio	Chief Engineer/New Territories East, WSD
Mr YU Man Tat	Chief Chemist, WSD (Acting)
Mr YU Yat Hang, Alex	Senior Engineer/Legislative Review 1, WSD
Mr FUNG Wai Sin, Wilson	Senior Engineer/Legislative Review 2, WSD
Mr YU Chi Wing, Albert	Senior Chemist/Water Quality (Standards and Monitoring), WSD
Mr LEE Kar Chun, Wilson	Engineer/Technical Support 1, WSD

Action by

1. The Chairperson welcomed Members to the ad hoc meeting of the Drinking Water Safety Advisory Committee ("the Committee"), which was to examine WSD's investigation report on the water quality incident in Queen's Hill Estate and Shan Lai Court ("the Incident").
2. The Chairperson expressed his appreciation to WSD for its tremendous effort to complete the investigation and submit the report to the Committee under an extremely tight schedule, in order to address the public concern on the Incident.
3. At the request of Chairperson, Mr Johnson LEE, Assistant Director/ New Territories (Acting) and Mr MT YU, Chief Chemist (Acting) of WSD, briefed Members on the background of the Incident, the details of the investigation work, the investigation findings and the recommended way forward.

4. The Chairperson was very pleased to invite a Member, who had conducted a study on the properties, and the risks and health implications of asphalt (i.e. bitumen) detached from the internal lining of fresh water mains from the toxicological point of view, to share his findings with the Committee. In his concluding remarks, the Member said that based on the available information, accidental ingestion of small amounts of asphalt would unlikely cause clinical toxicity, and asphalt would not be absorbed by the human gastrointestinal tract and would be excreted unchanged. He added that the risk from ingestion, particularly concerning carcinogenicity in drinking water, was low according to the current assessment. The Chairperson considered that the above findings echoed with those in WSD's investigation report.

[Prof Kelvin TO left and Prof HB LIU joined at this juncture.]

5. Upon the Chairperson's request, a Member advised that he had not heard of complaints about the presence of bitumen particles in drinking water according to Australia's water quality testing programmes. Nor had he been aware of any bitumen-lined water pipes in Australia that had caused water quality issues similar to the Incident. In addition, he shared the experience in Australia that complaints on visible particles in drinking water were mainly related to rusting of cast iron pipes, which might lead to turbidity and discoloration problems in drinking water. With regard to the Incident, he considered that the investigation by WSD had been very thorough and the follow-up actions were appropriate. The level of aesthetic concern was very subjective and hence it was very difficult to comment whether one should drink such water or not, though the related health hazard was negligible. He also agreed with the recommendations made in the report.

6. Regarding the blue epoxy resin fragments mentioned in the report, a Member asked if they had been found in consumers' taps. Mr. Johnson LEE replied that they were only found in the strainers upstream of the sump tanks of the buildings, and no epoxy resin fragments had been reported and collected from consumers' taps in the Incident.

7. A Member said that the report was very comprehensive and the findings were well supported by scientific tests and analysis. On the risks and health implications of bitumen, she opined that it would be more prudent to say that there had been no evidence to suggest that the material would be harmful to human body insofar as ingestion from drinking water was concerned. She also enquired if WSD's investigation had included testing of sediment samples collected by consumers in their premises, which could be valuable to the investigation work.

Mr MT YU explained that the collection and storage of samples should follow the established protocol to ensure that they were representative. The Member further asked if WSD had conducted any test on bisphenol A which could be released from resins at high temperature. In response, Mr. MT YU advised that since only very small amount of resin fragments had been found up to the strainer installed before the sump tanks but not in the consumers' taps, the drinking water samples collected at the estates had not been tested for bisphenol A. He went on to elaborate that while guideline values for bisphenol A in drinking water had not yet been established by the WHO, it had been in the Watch List and kept under review. In fact, bisphenol A was not detected in drinking water under WSD's previous snapshot monitoring. Mr Johnson LEE supplemented that all non-metal materials for use in plumbing systems that would be in direct contact with water for human consumption had to comply with BS 6920 to ensure water safety. After some deliberations, Members considered it useful for WSD to carry out tests on the level of bisphenol A in drinking water samples collected from the estates.

[Post-meeting note: WSD carried out tests on a set of drinking water samples collected from the sump tank and consumers' tap of the estates. WSD also studied the effects of acidity and temperature on the possible leaching of bisphenol A by (i) bringing the pH level of a mixture of tap water and resin fragments to 2 similar to that of the gastric juice and (ii) boiling another such mixture. None of the tests could detect the presence of bisphenol A.]

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8. On the inspection of the outstanding 160 valves within the two estates, a Member opined that while the fresh water supply to the residents might be affected during the process, the inspection should be completed in a more timely manner in order to ease the mind of the residents as early as possible. WSD agreed to liaise with the Housing Department (HD) on this matter.

[Post-meeting note: WSD held a meeting with HD on 18 July 2025 to discuss the plan for the inspection of valves within the estates.]

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9. A Member noted that different methods (viz. solubility test, thin layer chromatography, Fourier-transform infrared spectroscopy and scanning electron microscopy-energy dispersive X-ray spectroscopy analysis) had been used to prove that the black particles were bitumen but wondered how WSD could confirm such black particles were originated from the bitumen-lined steel water pipe at Ping Che Road. Mr Johnson LEE replied that only the steel water pipe at Ping Che Road, upstream of the estates, was bitumen-lined, and coupled with the fact that the water supply network was a closed system that would prohibit foreign substances from entering the system, WSD could deduce with confidence that the bitumen-lined steel water pipe was the source.

10. Members noted that there were quite a number of bitumen-lined water mains in the territory and wondered if WSD had proper records to facilitate the department to prioritise necessary medium and long term measures to prevent recurrence of the incident. In response, Mr Roger Wong, Director of Water Supplies, advised that WSD had maintained comprehensive records for all waterworks installations and adopted a risk-based approach for their maintenance as well as replacement. He added that the installation of strainers together with adequate flushing of water mains had proved to be an effective medium-term measure to tackle the bitumen peeling-off issue, while the replacement of bitumen-lined water mains would be the long-term solution. As regards the maintenance of large-diameter communal water mains in new residential developments, WSD would provide technical advice to the property management agents.

[Dr David CUNLIFFE and Dr May CHUI left at this juncture.]

11. A Member asked about the cause of coating detachment in water valves and if it was a common problem. Mr Johnson LEE replied that the valve with the coating found detached was likely caused by accidental scratching during the installation process. Such problem was in fact quite rare as revealed from WSD's day-to-day maintenance work. He added that WSD had also inspected two HD's water valves and found their coatings intact.

12. The Chairperson asked if the installation of strainers in the sump tanks of new building developments would be a mandatory requirement in WSD's approval process. Mr Johnson LEE replied that installation of strainers for further reassurance of aesthetic quality are optional for developers/owners to consider, and WSD would issue relevant guidelines shortly. Mr Stanley CHAN, acting Deputy Director of Water Supplies, supplemented that WSD had already installed over 1 000 strainers in the water supply network that could help address the aesthetic quality concerns in drinking water.

13. After some deliberations, WSD thanked the valuable comments from the Committee, based on which WSD would refine some wording of the investigation report after the meeting.

14. The Chairperson concluded that the Committee had agreed to endorse WSD's investigation report, subject to incorporation of the refinements as suggested by the Committee. The Chairperson further suggested and Members agreed that the Committee should issue a press release to signify the Committee's

endorsement of the findings and recommendations in the report as well as request for WSD to implement all the recommendations in a timely manner and report the related progress in the next meeting.

15. Mr Tony HO, Deputy Secretary for Development (Works) 3, thanked all Members for their support and guidance rendered to WSD's investigation work. In particular, he expressed his heartfelt gratitude to the expert group, which had been set up under a short notice and thereafter devoted much precious time and effort throughout the investigation.

16. There being no other business, the meeting adjourned at 12:55 p.m.