立法會 Legislative Council

LC Paper No. CB(1)63/15-16(04)

Ref.: CB1/PL/HG

Panel on Housing

Meeting on 2 November 2015

Updated background brief on "Lead in drinking water incidents"

Purpose

1. This paper provides updated background information on the lead in drinking water incidents, and the major views and concerns expressed by Members of the Legislative Council ("LegCo") on the subject.

Background

Excess lead found in drinking water samples taken from public rental housing ("PRH") estates

2. Between April and June 2015, the Democratic Party ("DP") collected drinking water samples from 13 public and private buildings in Kowloon West to test their contents of heavy metals including lead. According to the test results announced by DP on 5 July 2015, four water samples taken from Kai Ching Estate in Kowloon City contained lead that exceeded the World Health Organization ("WHO")'s provisional guideline value of not more than 10 micrograms per litre for lead ("the WHO value").

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As defined under the WHO's Guidelines for Drinking-water Quality published in 2011, a health-based guideline value represents the concentration of a constituent that does not exceed tolerable risk to the health of the consumer over a lifetime of consumption. For the contaminant of lead, the guideline value is designated as provisional because calculated guideline value is below the achievable quantification level as well as the level that can be achieved through practical treatment methods, source control, etc.

- 3. Between 9 and 11 July 2015, the Government announced that the lead content of seven water samples from Kai Ching Estate exceeded the provisional guideline value, and that lead was found in two samples of solder used on water pipe joints. On 13 July 2015, water samples were then taken from four other PRH estates² where the fresh water plumbing systems were installed by the same licensed plumber. The lead content of five samples from Kwai Luen Estate (Phase 2) as well as one sample from a vacant unit of Shui Chuen O Estate were found to be above the WHO value, and lead was found in samples of solder.
- 4. To address PRH residents' concerns, the Hong Kong Housing Authority ("HA") announced on 15 July 2015 that water samples would be taken from all PRH estates completed since 2013, as well as Kwai Luen Estate (Phase 1) (which was completed in 2011), for lead testing. Among these estates, lead content in one sample from Wing Cheong Estate exceeded the WHO value, and lead was found in samples of solder.
- 5. On 20 July 2015, the scope of water sampling was further extended to all 12 PRH estates completed in 2011 and 2012. Among these estates, 36 samples from five of these estates were found to have exceeded the WHO value and lead was found in samples of solder in these estates. In view of the development, the Government extended the water sampling tests to PRH estates completed between 2005 and 2010. The Government has indicated that it will consider how the water sampling work will be conducted for PRH estates completed before 2005.

Measures to assist affected tenants

6. For PRH estates where water samples were found to have exceeded the WHO value, the Government has implemented various interim measures to tackle the quality of tap water at affected PRH estates. The Housing Department ("HD") and Water Supplies Department ("WSD") have arranged for temporary water supply, including the supply of bottled water and the installation of temporary water tanks and pipes outside each block, to facilitate access to drinking water in each affected estate. HD has also asked the main contractors concerned to take necessary actions to remedy the situation, including extension of connection pipes from the roof-top water tanks to each floor of the building, and installation of lead-reducing water filters for affected tenants.

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The four PRH estates were Lung Yat Estate in Tuen Mun, Cheung Sha Wan Estate, Shui Chuen O Estate in Shatin, and Kwai Luen Estate in Kwai Shing Circuit.

Public health measures adopted by the Administration

- 7. According to the Administration's paper provided for the special meeting of the Panel on Health Services ("the HS Panel") on 24 August 2015, if lead is absorbed into the body in excessive amount, many organs and functions in the body will be affected. Depending on the level of lead inside the body, the effects of lead exposure include neurodevelopmental effects, anaemia, high blood pressure, gastrointestinal symptoms, impaired renal function, neurological impairment, impaired fertility and adverse pregnancy outcome.
- 8. To ease residents' concerns on the health effects arising from lead found in drinking water, the Department of Health ("DH") has provided free blood tests for the more easily affected groups, namely infants, young children under six years of age (including those who were under six years old when moving into the PRH estates concerned), pregnant women and lactating women, and developed care plan for tenants whose blood lead level exceeded the reference value³. Details of the care plan are set out in **Appendix I**. On 3 August 2015, the Administration adjusted the scope of blood testing to children aged below eight, pregnant women and lactating women. DH also made special arrangements for children whose blood lead level exceeding the reference value to receive development assessment.

Investigation into the incidents

9. Following the outbreak of incidents concerning excess lead found in the drinking water samples taken from PRH estates, the Development Bureau has established a task force⁴, led by WSD, to ascertain the causes and recommend measures to prevent recurrence of similar incidents in future.

On 18 July 2015, the Secretary for Food and Health convened an inter-departmental meeting with experts of DH and the Hospital Authority to establish the reference value of lead in blood and care plan for residents of the affected PRH estates. The reference value of blood lead level for the more easily affected groups is 5µg per deciliter ("dL") and for adults aged 18 or above is 10 µg/dL.

According to the paper provided by the Administration for the special meeting of the Panel on Housing on 22 July 2015, the terms of reference ("TOR") of the Task Force on Excessive Lead Content in Drinking Water are to: (a) carry out investigation to ascertain the causes of the recent incidents leading to presence of lead in water drawn by households; (b) recommend measures to prevent recurrence of similar incidents in future; and (c) follow up on a recent case of Legionnaires' disease found at Kai Ching Estate.

In addition, HA has formed a review committee⁵ to review the quality assurance issues relating to fresh water supply of PRH estates.

On 17 July 2015, the Chief Executive ("CE") announced his intention 10. to set up a Commission of Inquiry ("CoI") under the Commissions of Inquiry Ordinance (Cap. 86) to conduct an independent and comprehensive investigation into the matter. The CoI was subsequently set up upon the advice of the Executive Council and order by CE at the special meeting of the Executive Council on 13 August 2015. The CoI is tasked to: (a) ascertain the causes of excess lead found in drinking water in PRH developments; (b) review and evaluate the adequacy of the present regulatory and monitoring system in respect of drinking water in Hong Kong; and (c) make recommendations with regard to the safety of drinking water in Hong Kong. The Honourable Mr Justice Andrew CHAN Hing-wai, Judge of the Court of First Instance of the High Court, is appointed as the Chairman and Commissioner, while Mr Alan LAI is appointed as the Commissioner. The CoI is expected to report to CE within nine months from the date of appointment.

Major views and concerns expressed by Members

11. The views and concerns expressed by LegCo Members on the subject at the meetings of the Panel on Housing, the HS Panel and the House Committee since July 2015 are summarized in the ensuing paragraphs.

Ascertaining the source of excess lead found in tap water

12. Members in general considered it a top priority for the Administration to find out the source of excess lead in the drinking water samples taken from PRH estates concerned, and identify residential developments for which lead was used in the soldering materials of fresh water supply systems. Noting that the relevant government departments/public bodies had undertaken to investigate the incidents, some Members urged that the Administration should publish the relevant investigation reports in full. The Administration was also urged to release the findings of the

TOR of the Review Committee on Quality Assurance Issues Relating to Lead in Fresh Water of Public Housing Estates are: (a) to comprehensively review the present arrangements for quality control and monitoring in relation to the installation of fresh water supply system in public housing estates; (b) in the process of (a), to critically review various aspects of quality inspection relating to materials used (including prefabricated components), quality inspection and works supervision at different stages of construction; and (c) to report findings to HA and recommend any improvement in procedures/guidelines and follow-up actions as necessary.

investigation and review as soon as practicable. While some Members considered that CoI, chaired by a judge and empowered to compel persons to give evidence and disclose documents, would conduct the investigation independently and comprehensively, some other Members opined that LegCo should in parallel appoint a select committee to investigate the incidents.

Scope and validity of water sampling tests

- 13. In order to alleviate public concern, Members considered that the Administration should conduct water sampling tests for all public housing estates, and requested the Administration to draw up a timetable in this regard. The Panel on Housing passed a motion at the special meeting on 22 July 2015 urging the Government to, inter alia, carry out the suggested water sampling tests expeditiously. The wording of the motion is in **Appendix II**.
- 14. According to the Administration, the work of water sampling tests was constrained by the number of accredited laboratories in Hong Kong. The Administration also advised that water pipes that joined WSD's water mains to the connection point at the lot boundary were maintained by WSD, the communal service including the service pipes from the building's lot boundary to the building as well as those communal pipes inside the building were maintained by the agent (usually the property management agent or the owners' committees), and the inside service of a flat or property was maintained by the property owner. HD and HA would conduct water sampling tests for PRH developments, and other agents concerned could employ accredited laboratories to take water samples and carry out the tests.
- 15. Some Members queried the validity of the water sampling tests conducted by the Government as the water samples were collected after running the tap for a few minutes, and requested the Government to collect and test samples of stagnant water in pipes as well. The Administration explained that the water sampling means and procedures varied across countries/cities depending on their unique situations. The current practice of collecting samples after running the taps for two to five minutes complied with the WHO standard, whereas samples of stagnant water in pipes were only indicative of the quality of drinking water upon remaining in the water pipes for a period of time, and did not reflect the quality of the water to be taken by an individual daily.

Measures to assist affected tenants

Water supply for the affected PRH estates

- 16. Members stressed the need for the Administration to ensure that the quality of temporary water supply to the affected PRH estates was up to standard, and to assist the elderly, infirm and persons with disabilities to get water from the temporary water supply points. Noting that connection pipes would be extended from roof-top tanks to each floor of each block for Kai Ching Estate and Kwai Luen Estate (i.e. PRH estates where excess lead were first found in drinking water samples), Members suggested that similar measures should be put in place for other affected PRH estates.
- 17. In order to alleviate the concerns of PRH tenants about the quality of drinking water, some Members suggested the Administration to install lead-reducing water filters for affected tenants. The Administration advised that all the main contractors had submitted proposals to HA to install, for affected households, filters with U.S. National Sanitation Foundation's NSF 53 certification for lead reduction, and to replace the filter cores for them free-of-charge within two years. Members also urged the Administration to replace sub-standard water taps/pipes of the affected PRH estates as soon as practicable.

Blood tests and medical follow-up for affected tenants

- 18. Members strongly urged the Administration to expand the scope of free blood tests to ease the health concerns of the residents of those PRH estates affected by the incidents. They considered that on top of the existing three easily affected groups, consideration should be given to covering also children who were under six years old when moving into the concerned PRH estates and residents suffering from chronic diseases. Some Members further considered that blood tests should also be provided for people who belonged to the three easily affected groups and were residing in the affected PRH estates even though they were not the family members of the PRH tenants of the affected estates.
- 19. Members were deeply concerned about the long waiting time of around three to four weeks for the blood testing services provided by the Hospital Authority and DH. In Members' view, the Administration should expedite collection and testing of blood samples, such as by way of portable devices, and/or deploying additional resources in collaboration with the private healthcare sector. Some Members considered that the

Administration should co-ordinate with the private healthcare sector to enhance the overall blood lead testing capacity through public-private partnership, such as providing affected residents with "blood testing vouchers" for taking the tests in the private sector, or arranging outreach blood-taking services with a view to clearing up the waiting list as early as possible. The Administration should also enhance blood testing capacity by engaging more overseas laboratories and purchasing more equipment for blood testing.

- 20. The Administration advised that as at the end of August 2015, the Hospital Authority had arranged seven public hospitals to provide blood taking service at weekends, and made arrangement with two private hospitals in providing additional blood taking service. The Hospital Authority had endeavored to enhance the throughput of blood taking and testing with the purchase of new blood testing equipment, sending of blood samples to overseas laboratories for testing, and the deployment of the Hospital Authority healthcare personnel to work overtime. The weekly quota of blood testing had been increased from 360 to 820 at the end of August 2015.
- 21. Some Members were concerned that the current blood test might not be able to detect residue of lead contamination in the body, given that the half-life of lead in blood was approximately 30 days once the source of contamination had been eliminated. They suggested that other than blood test, hair and urine tests for lead should be considered. The Administration advised that whole blood lead level was internationally recognized as the most accurate and reliable method for screening and diagnosis to assess the risk of lead on health. Hair and urine tests for lead were not suitable for screening and diagnosis.
- 22. Given the concerns about the potential health risks on PRH tenants arising from prolonged intake of drinking water with excess lead, Members considered that the Administration should explain clearly to tenants the potential health impacts associated with taking lead-contaminated water, and provide medical assistance to affected tenants with an elevated blood lead level.

Supporting services and compensation

23. Members opined that the Administration should centralize dissemination of information by various bureaux/departments about the findings of water sampling tests and progress of follow-up measures.

There was a suggestion that counselling and emotional support should be provided to affected tenants by setting up one-station service counters at the PRH estates concerned and stationing social workers thereat.

24. Some Members expressed concerns about the inconvenience caused to and expenses incurred by the affected tenants as they had to take water from temporary water supply joints and/or purchase bottled water for consumption. Besides, the tenants might use more water than the average households as they were advised by the Government to run tap water for a few minutes to flush faucets before using water for drinking or cooking. The Administration was requested to consider waiving the water charges and/or rentals of the households concerned for a certain period of time. Some Members also suggested that the Government should bear the medical expenses for the affected tenants with an elevated blood lead level.

Monitoring of waterworks

- 25. Members considered that the incidents of excess lead found in drinking water reflected inadequacies in respect of waterworks monitoring and inspection, and urged the Administration to take rectification measures to ensure that the supply of water in new housing developments would be up to standard. In this connection, some Members suggested the Administration review the Waterworks Ordinance (Cap. 102) ("WO") and the licensing requirements for Authorized Persons and licensed plumbers.
- 26. The Administration advised that subsequent to the incidents, HA had put in place measures to incorporate in all relevant HA contracts additional water sampling requirements and the checking of lead content, and to step up inspection on soldering materials used at water pipe joints of public housing estates. Depending on the findings of the ongoing investigation, the Government would initiate legislative amendments to WO if necessary.

Recent developments

27. The Administration announced on 24 September 2015 that systematic water sampling tests for PRH developments completed in and after 2005 had been completed. Water samples from 72 PRH developments were found to comply with the WHO value and 11 PRH developments were found to contain lead content that exceeded the WHO value. The 11 PRH developments included the Kai Ching Estate, Kwai Luen Estate (Phase 2), Wing Cheong Estate, Lower Ngau Tau Kok Estate (Phase 1), Shek Kip Mei

Estate (Phase 2), Hung Hom Estate (Phase 2), Tung Wui Estate, Yan On Estate, Choi Fook Estate, Un Chau Estate (Phases 2 and 4), and Ching Ho Estate (Phase 1). The test results of water samples taken from PRH estates released by HD on 24 September 2015 are in **Appendix III**. Information provided by the Administration on 8 October 2015 on the progress on implementing the measures to assist affected tenants is set out in **Appendix IV**.

- 28. According to the Administration, as of 2 October 2015, the Hospital Authority has conducted tests on blood lead levels for 4 873 citizens, of which 4 712 have normal blood lead levels and 161 citizens (including 126 children, 28 lactating women, four pregnant women and three adults) were found to exceed the reference value. Follow-up actions have been taken for these residents according to the care plan. As of 22 October 2015, the blood lead levels of 29 residents whose levels had been found to exceed the reference value were reviewed, of which 21 showed normal blood lead levels. To address the concerns of parents about the potential health risks and impact on development brought to children affected by the incidents, arrangements have been made for those children whose blood lead levels were found to exceed the reference value to receive development assessment at the Child Assessment Centres of DH.
- 29. On 25 September 2015, the task force, established by the Development Bureau and led by WSD to investigate the cause of excessive lead in drinking water in PRH estates, announced its preliminary findings⁶. It was found that leaded solder joints installed in the inside service were the cause of excessive lead in drinking water in Kai Ching Estate and Kwai Luen Estate Phase 2. Copper alloy fittings also leached lead but did not result in excessive lead in water.
- 30. On 30 September 2015, HA announced that it would not consider any new works tenders submitted by the six building contractors⁷ which were found to have been involved in the construction of the 11 PRH estates where excessive lead content was found in drinking water for seven months from 1 March to 30 September 2015. Furthermore, China State Construction Engineering (Hong Kong) Limited, Shui On Building Contractors Limited

The six building contractors included China State Construction Engineering (Hong Kong) Limited, Paul Y. General Contractors Limited, Shui On Building Contractors Limited, Yau Lee Construction Company Limited, China Overseas Building Construction Limited, and Paul Y. Construction Company, Limited.

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The press release and the preliminary report are available on the following website: http://www.info.gov.hk/gia/general/201509/25/P201509250651.htm.

and Yau Lee Construction Company Limited were removed from HA's Premier League of contractors with effect from 1 October 2015.

- 31. The review committee formed by HA to review the quality assurance issues relating to fresh water supply of PRH estates released the report on its interim findings⁸ on 6 October 2015. It held the view that there had been inadequacies of HA's quality control mechanism in relation to the fresh water supply system, and agreed that certain measures need to be immediately put in place by HA to prevent the recurrence of similar incidents. These included requiring main contractors to take water samples for testing for four heavy metals, including lead, in newly installed inside service, requiring the main contractors to submit a management plan covering plumbing subcontractors' supervision and on-site monitoring of plumbing installations, and using quick test methods to check for the presence of lead in solder joints.
- 32. The House Committee received an update on the incidents at the special meeting on 8 October 2015. The Administration advised that WSD would adopt a two-step approach in conducting water sampling tests for the 143 PRH estates completed before 2005 by batches. HD and WSD would first conduct a representative screening for these estates by batches. If individual estates were found to have water samples containing excessive lead content, systematic water sampling tests would be conducted for each block within that estate. The test results of water samples released by HD on 22 October 2015 is in **Appendix V**. As of 22 October 2015, water test results of 54 PRH estates completed before 2005 have been announced, and all were found to meet the WHO's guideline limit.
- 33. At the meeting of the House Committee on 9 October 2015, Members deliberated the proposals of Hon Gary FAN Kwok-wai and 27 Members of the pan-democratic camp to seek the Council's authorization for the appointment of a select committee to inquire into lead in drinking water incidents and related issues. Hon Gary FAN Kwok-wai and Hon Cyd HO Sau-lan also gave notice to move separate motions at the Council meeting on 14 October 2015 seeking the Council's support for appointing a select committee to inquire into the incidents. The President ruled that the contents of the two motions were substantially the same and directed that only Hon Gary FAN Kwok-wai's motion should be moved and voted upon. The motion was negatived at the Council meeting on 16 October 2015.

The report is available on the website of HA (http://www.housingauthority.gov.hk/en/about-us/news-centre/press-releases/report.html).

Latest development

34. The Administration will brief members on the latest development of the incidents of excess lead in drinking water in public housing estates and the follow-up actions taken at the Panel meeting on 2 November 2015.

Relevant papers

35. A list of relevant papers is set out in **Appendix VI**.

Council Business Division 1
Legislative Council Secretariat
29 October 2015

Care plan for different blood lead levels developed by the Department of Health ("DH") and the Hospital Authority ("HA")

(I) Persons below 18-year-old, pregnant women and lactating women

Whole blood lead level (microgram/dL)	Health risks	Care plan
< 5	Normal levelNo significant health riskNo follow-up required	• DH will inform the residents concerned by phone and by mail about the results
5 - 44	 Borderline raised level Potential health risk Health evaluation and follow-up required 	 DH will perform exposure assessment HA will arrange health evaluation and follow-up Blood lead level will be monitored
> 44	 Significantly raised level Risk of lead poisoning Need medical assessment and follow-up 	 DH will perform exposure assessment HA will arrange medical assessment and follow-up Blood lead level will be monitored

(II) Adults

Whole blood lead level (microgram/dL)	Health risks	Care plan
< 10	Normal levelNo significant health riskNo follow-up required	• DH will inform the residents concerned by phone and by mail about the results
10 - 50	 Borderline raised level Potential health risk Health evaluation and follow-up required 	 DH will perform exposure assessment HA will arrange health evaluation and follow-up Blood lead level will be monitored
> 50	 Significantly raised level Risk of lead poisoning Need medical assessment and follow-up 	 DH will perform exposure assessment HA will arrange medical assessment and follow-up Blood lead level will be monitored

Source: Annex to LC Paper No. CB(2)2038/14-15(01)

房屋事務委員會

在2015年7月22日的特別會議上 就議程項目I"公共租住屋邨食水樣本被發現含鉛過量" 通過的議案

近日有公共屋邨的食水被驗出含鉛量超標,直接影響居民健康,並令市民感到非常憂慮。雖然政府當局已擴大檢驗食水範圍至由 2011 年起落成的屋邨,惟各區居民仍然擔心屋邨食水未符標準。為釋除公眾疑慮,令居民可以安心用水,本委員會要求政府當局儘快全面為本港所有公共屋邨及資助房屋屋苑,包括近年經"全方位維修計劃"更換新喉的舊屋邨,進行食水檢驗工作,並為所有曾驗出食水含鉛量超標的屋邨(包括水泉澳邨),用水車或其他有效方法提供清潔食水,直至維修正常供水系統完成為止。

原議案動議 : 郭偉强議員

原議案附議 : 王國興議員, BBS, MH

修正案動議 : 張超雄議員

(Translation)

Panel on Housing

Motion passed under agenda item I on "Excessive lead found in tap water samples from public rental housing estates" at the special meeting on 22 July 2015

Recently, tap water at some public housing estates was tested and found to contain excessive lead. Such an incident has direct impacts on the residents' health and has aroused serious public concern. Although the Administration has extended the coverage of water testing to include public housing estates completed since 2011, residents in various districts remain concerned that water at public housing estates is not up to standard. To address the public concern and enable the residents to feel at ease in using water, this Panel requests the Administration to conduct comprehensive water testing expeditiously for all the public housing estates and subsidized housing estates in the territory, including old housing estates where water pipes have been newly replaced under the "Total Maintenance Scheme" in recent years; and to use water wagons or other effective means to provide clean drinking water for housing estates where tap water has been found to contain excessive lead (including Shui Chuen O Estate), until repair works to restore the water supply system to normal have been completed.

Original motion moved by : Hon KWOK Wai-keung

Original motion seconded by : Hon WONG Kwok-hing, BBS, MH Amendments moved by : Dr Hon Fernando CHEUNG Chiu-hung

Test results of water samples taken from public rental housing estates

The Housing Department (HD) and the Water Supplies Department (WSD) are systematically taking water samples from public rental housing (PRH) developments in which the fresh water supply systems were installed by the Hong Kong Housing Authority's main contractors, to determine whether the lead content in drinking water exceeds the World Health Organisation (WHO)'s provisional guideline value of not more than 10 micrograms per litre. In general, HD and WSD are taking water samples for testing by batches in accordance with the completion year of the PRH developments, starting with newly completed developments and working back to the older ones. Some estates involve more than one development, and the sampling tests for each development may be completed at different times. Once a batch of water sample tests are completed, HD will immediately announce the testing results.

(Results announced for 46 PRH estates involving 83 PRH developments up to 24 September 2015)

PRH developments with lead in water samples exceeding WHO's provisional guideline value

	Name of PRH development	Year of completion	No. of flats	Main contractor	No. of samples taken	No. of samples with excess lead
1	Kwai Luen Estate Phase 2 (Luen Yat House, Luen Yuet House)	2014	1,507	Shui On Building Contractors Limited	44	5
2	Kai Ching Estate	2013	5,204	China State Construction Engineering (Hong Kong) Limited	115	7
3	Wing Cheong Estate	2013	1,488	Paul Y. General Contractors Limited	46	1
4	Lower Ngau Tau Kok Estate Phase 1 (Kwai Leung House, Kwai Yuet House, Kwai Hin House, Kwai Sun House, Kwai Fai House)	2012	4,238	Yau Lee Construction Company Limited	130	6
5	Shek Kip Mei Estate Phase 2 (Mei Wui House, Mei Leong House)	2012	1,558	Yau Lee Construction Company Limited	59	5
6	Tung Wui Estate (Wui Sum House, Wui Yan House)	2012	1,333	Paul Y. General Contractors Limited	52	4
7	Hung Hom Estate Phase 2 (Hung Yat House, Hung Yan House, Hung Yiu House)	2011	1,938	China State Construction Engineering (Hong Kong) Limited	74	16
8	Yan On Estate (Yan Hei House, Yan Yuet House, Yan Chung House)	2011	2,587	Yau Lee Construction Company Limited	69	5
9	Choi Fook Estate (Choi Lok House, Choi Sin House, Choi Hay House)	2010	2,524	Yau Lee Construction Company Limited	90	13
10	Un Chau Estate Phase 2 and 4 (Un Lok House, Un Nga House, Un Chi House, Un Hei House, Un Kin House)	2008	3,533	Yau Lee Construction Company Limited	135	19
11	Ching Ho Estate Phase 1 (Ching Chung House, Ching Yu House, Ching Hin House)	2008	3,167	Yau Lee Construction Company Limited	145	10

PRH developments with lead in water samples complying with WHO's provisional guideline value

	Name of PRH development	Year of completion	No. of flats	Main contractor	No. of samples taken	No. of samples with excess lead
1	Cheung Lung Wai Estate, Cheung Lung Lane and Cheung Lung Wai Estate Ancillary Facilities Block	2015	1,358	Yau Lee Construction Company Limited	45	0
2	Hung Fuk Estate Phase 1 and 2 (Hung Foon House, Hung Yan House, Hung Hei House, Hung Lok House, Hung Fuk Shopping Centre and Ancillary Facilities Block)	2015	2,097	Hsin Chong Construction Company Limited	150	0
3	Hung Fuk Estate Phase 3 (Hung Long House, Hung Yat House, Hung Yuet House, Hung Cheong House, Hung Shing House)	Jung Yat House, Hung Yuet House, 2015 2,808 Yau Lee Construction Company				
4	Shui Chuen O Estate Phase 1 (Ching Chuen House, Long Chuen House, Yan Chuen House, Hei Chuen House)	2015	3,039	China State Construction Engineering (Hong Kong) Limited	53	0 (Note)
5	Mei Tung Estate (Mei Tak House)	2014	990	Able Engineering Company Limited	24	0
6	Yee Ming Estate	2014	2,059	Hanison Construction Company Limited	102	0
7	Tak Long Estate, carpark block and kindergarten	2014	8,164	Yau Lee - Hsin Chong Joint Venture	198	0
8	Fung Wo Estate	2013	1,607	Hsin Chong Construction Company Limited	50	0
9	Cheung Sha Wan Estate and Cheung Sha Wan Estate Ancillary Facilities Block	2013	1,390	China State Construction Engineering (Hong Kong) Limited	47	0
10	Lung Yat Estate and Lung Yat Community Hall	2013	990	Shui On Building Contractors Limited	35	0
11	Mei Tin Estate (Mei Chuen House) and free standing block	2013	1,216	Hsin Chong Construction Company Limited	35	0

12	Shek Lei (II) Estate (Shek Foon House)	2013	839	Hip Hing Construction Company Limited	26	0
13	Ching Long Shopping Mall	2013	-	Zone A: China State Construction Engineering (Hong Kong) Limited Zone B: Yau Lee - Hsin Chong Joint Venture	20	0
14	Shek Kip Mei Estate Phase 5 (Mei Yick House, Mei Yin House, Mei Sang House, Mei Shing House)	2012	2,496	Shui On Building Contractors Limited	73	0
15	Un Chau Estate Phase 5 (Un Mun House, Un Wai House, Un Yat House) and Un Him House (i.e. Ancillary Facilities Block)	2012	1,486	China State Construction Engineering (Hong Kong) Limited	56	0
16	Domain and Yau Tong Community Hall	2012	-	China State Construction Engineering (Hong Kong) Limited	8	0
17	Choi Fook Estate (Choi Foon House)	2011	915	Hsin Chong Construction Company Limited	27	0
18	Choi Tak Estate (Choi Yan House, Choi Yee House)	2011	1,586	Hsin Chong Construction Company Limited	40	0
19	Kwai Luen Estate Phase 1 (Luen Yan House, Luen Hei House)	2011	1,470	Shui On Building Contractors Limited	41	0
20	Mei Tung Estate (Mei Yan House)	2010	799	China State Construction Engineering (Hong Kong) Limited	27	0
21	Choi Tak Estate (Choi Chun House, Choi King House, Choi Leung House, Choi Yin House) and Choi Tak Shopping Centre	2011	2,704	China State Construction Engineering (Hong Kong) Limited	82	0
22	Shatin Pass Estate (Wo Tin House, Shun Tin House)	2011	1,278	Chevalier (Construction) Company Limited	53	0
23	Yau Lai Estate Phase 5 (Cheuk Lai House, Yung Lai House) and carpark block	2011	2,002	Shui On Building Contractors Limited	36	0
	Yau Lai Estate Phase 6 (i.e. Yau Lai Shopping Centre)	2011 2011	1.074	Shui On Building Contractors Limited	4 49	0
26	Shin Ming Estate (Shin Chi House, Shin Lai House) Tin Ching Estate Tin Ching Amenity and Community		1,974	Shui On Building Contractors Limited		-
	Building	2011	1.000	Paul Y. General Contractors Limited	24	0
	Chai Wan Estate (Wan Poon House, Wan Ying House)	2010	1,600	Nishimatsu Construction Co., Limited Hanison Construction Company	46	0
28	Choi Tak Estate (Choi Shing House, Choi Shun House)	2010	1,462	Limited	69	0
29	Upper Ngau Tau Kok Estate Phase 2 and 3 (Sheung Hing House, Sheung Shing House, Sheung Fu House, Sheung Wing House, Sheung Hong House, Sheung Tai House), Upper Ngau Tau Kok Shopping Centre and Integrated Service Centre	2009	4,584	Paul Y. General Contractors Limited	124	0
30	Tin Ching Estate Phase 3 (Ching Moon House, Ching Hei House, Ching Yuet House)	2009	2,365	Paul Y. General Contractors Limited	65	0
31	Shek Kip Mei Estate Phase 1 (Mei Yue House, Mei Ying House)	2006	2,033	Paul Y. General Contractors Limited	55	0
32	Sau Mau Ping (South) Estate (Sau Ho House, Sau Wong House)	2009	1,598	Chatwin Engineering Limited	130	0
33	Sau Mau Ping (South) Estate (Sau Mei House, Sau Tak House, Sau Sin House)	2009	2,397	Hanison Construction Company Limited	130	U
34	Upper Wong Tai Sin Estate (Wing Sin House)	2009	714	Chun Wo Construction and Engineering Company Limited	22	0
35	Yau Lai Estate Phase 4 (Tsui Lai House, Hong Lai House, Yan Lai House)	2009	2,369	Shui On Building Contractors Limited	121	0
36	Yau Lai Estate Phase 3 (Ying Lai House, Fung Lai House)	2008	1,598	China State Construction Engineering (Hong Kong) Limited	121	0
37	Shek Mun Estate Phase 1 (Kin Shek House, Mei Shek House) and supermarket	2009	1,958	Paul Y. General Contractors Limited	45	0
38	Lam Tin Estate (Lam Fai House, Lam Tai House, Lam Bik House, Lam Wai House)	2009	3,036	Shui On Building Contractors Limited	102	0
39	Mei Tin Estate Phase 3 (Mei Lok House, Mei Mun House, Mei Ting House) and Mei Tin Community Hall	2008	2,333	Hanison Construction Company Limited	71	0
40	Tin Ching Estate Phase 1 (Ching Pik House, Ching Hoi House) and Tin Ching Community Hall	2008	1,918	China State Construction Engineering (Hong Kong) Limited		0
41	Tin Ching Estate Phase 2 (Ching Choi House, Ching Wan House), Tin Ching Shopping Centre and Tin Ching Ancillary Facilities Block	2008	1,918	Nishimatsu Construction Co., Limited	98	0
42	Choi Ying Estate Phase 1 (Ying Fu House, Ying On House)	2008	1,598	China State Construction Engineering (Hong Kong) Limited		0
43	Choi Ying Estate Phase 2 (Ying Hong House, Ying Lok House, Ying Shun House)	2008	2,397	China State Construction Engineering (Hong Kong) Limited	137	0
44	Choi Ying Estate Phase 3 (i.e. Choi Ying Place)	2008	-	Shui On Building Contractors Limited		0
45	Ching Ho Estate Phase 1 Ching Ho Shopping Centre	2008	-	Yau Lee Construction Company Limited	3	0
46	Ching Ho Estate Phase 2 (Ching Ping House, Ching Yun House)	2008	1,598	China State Construction Engineering (Hong Kong) Limited	54	0
47	Tung Wui Estate Tung Tau Community Centre	2012	-	Paul Y. General Contractors Limited	1	0

48	Shek Kip Mei Estate Phase 2 Ancillary Facilities Block	2012	-	Yau Lee Construction Company Limited	6	0
49	Lower Ngau Tau Kok Estate Phase 1 Lower Ngau Tau Kok Estate Plaza	2012	-	Yau Lee Construction Company Limited	3	0
50	Yan On Estate Yan On Shopping Centre	2011	-	Yau Lee Construction Company Limited	2	0
51	Oi Tung Estate (Oi Yat House)	2008	716	Nishimatsu Construction Co., Limited	23	0
52	Shek Pai Wan Estate Phase 2 (Pik Shan House, Pik Yuen House, Pik Wai House, Pik Luk House)	2007	2,398	Hanison Construction Company Limited	95	0
53	Lei Yue Mun Estate Phase 2 (Lei Lung House)	2007	799	Paul Y. General Contractors Limited	27	0
54	Shek Lei (II) Estate (Shek Wai House, Shek Yi House)	2007	1,598	Nishimatsu Construction Co., Limited	48	0
55	Ching Ho Estate Phase 3 (Ching Chak House, Ching Long House, Ching Chiu House)	2006	2,397	Shui On Building Contractors Limited	81	0
56	Kwai Chung Estate (Pak Kwai House, Hop Kwai House)	2008	1,983	Yau Lee Construction Company Limited	81	0
57	Mei Tin Estate Phase 1 and 2 (Mei Sau House, Mei Lai House, Mei King House, Mei Chi House) and Mei Tin Shopping Centre	2005	3,164	Nishimatsu Construction Co., Limited	95	0
58	Hoi Lai Estate Phase 3 (i.e. Hoi Lai Shopping Centre) and Phase 4 (Hoi Shui House)	2005	558	China State Construction Engineering (Hong Kong) Limited	29	0
59	Kwai Chung Estate Phase 3 (Chui Kwai House, Pik Kwai House, Luk Kwai House)	2005	2,742	Yau Lee Construction Company Limited	84	0
60	Hin Yiu Estate (Hin Yiu House)	2005	799	Shui On Building Contractors Limited	26	0
61	Shek Yam Estate Phase 5 (Lai Shek House)	2005	340	Hanison Construction Company Limited	9	0
62	Kwai Shing (East) Estate (Shing Wo House)	2003	362	Hsin Chong Construction Company Limited	59	0
63	Tsz Lok Estate (Lok Foon House)	2003	265	China State Construction Engineering (Hong Kong) Limited	23	0
64	Lok Fu Estate (Lok Tsui House)	1994	360	Hung Wan Construction Co Ltd	16	0
65	Yat Tung (II) Estate (Mei Yat House, Mun Yat House, Kui Yat House)	2005	2,782	Yau Lee Construction Company Limited	108	0
66	Lei Muk Shue Estate Phase 3 (Chui Shue House, Wing Shue House) and Lei Muk Shue Shopping Centre	2005	1,983	Hip Hing Construction Company Limited	66	0
67	Lei Muk Shue Estate Phase 4 (Hong Shue House, Lok Shue House, Kin Shue House)	2005	1,918	China State Construction Engineering (Hong Kong) Limited	54	0
68	Yau Lai Estate Phase 1 (Bik Lai House, Sau Lai House, Yi Lai House, Nga Lai House, Chi Lai House, Yat Lai House)	2005	2,550	Leighton Contractors (Asia) Limited	78	0
69	Shek Pai Wan Estate Phase 1 (Pik Long House, Pik Yuet House, Pik Ngan House, Pik Fai House) and Shek Pai Wan Shopping Centre	2005	2,877	Shui On Building Contractors Limited	92	0
70	Kwai Chung Estate Phase 3 Kwai Chung Shopping Centre	2005	-	Yau Lee Construction Company Limited	6	0
71	Kwai Chung Estate Phase 4 (Chin Kwai House, Tsz Kwai House)	2005	1,983	China State Construction Engineering (Hong Kong) Limited	70	0
72	Kwai Chung Estate Phase 5 (Hiu Kwai House, Ying Kwai House, Yuk Kwai House, Nga Kwai House, Yat Kwai House)	2005	4,515	Hip Hing Construction Company Limited	152	0

(Note) One sample taken from a vacant unit at Hei Chuen House of Shui Chuen O Estate was found to have a lead level of 14 micrograms per litre, which slightly exceeded WHO's provisional guideline value. The water samples taken from the rest of the three domestic blocks did not exceed the value. WSD took more water samples from Hei Chuen House for testing to ascertain the situation. After analysis, it was concluded that the water sample which exceeded the value might have been affected by the environment.

Source: Annex I to the Government press release issued on 24 September 2015 entitled "Test results of water samples taken from three public rental housing developments within standard limit"

Appendix IV

Latest progress of measures to assist affected tenants

	Name of PRH	No. of	Main		Installation of temporary water points		on of filters
	development	units	Contractor	Works start date	Expected commission date	Installation start date	Installation progress
1	Kai Ching Estate	5 204	China State Construction Engineering (Hong Kong) Limited	Put into use or	16 August	26 August	93%
2	Kwai Luen Estate Phase 2 (Luen Yat House, Luen Yuet House)	1 507	Shui On Building Contractors Limited	Put into use or	Put into use on 21 August		99%
3	Wing Cheong Estate	1 488	Paul Y. General Contractors Limited	Put into use on 1 September		31 August	97%
4	Lower Ngau Tau Kok Estate Phase 1 (Kwai Leung House, Kwai Yuet House, Kwai Hin House, Kwai Sun House, Kwai Fai House)	4 238	Yau Lee Construction Company Limited	Started on 11 August	Within October	20 August	96%
5	Shek Kip Mei Estate Phase 2 (Mei Wui House, Mei Leong House)	1 558	Yau Lee Construction Company Limited	Started on 27 August		29 August	96%
6	Yan On Estate (Yan Hei House, Yan Yuet House, Yan Chung House)	2 587	Yau Lee Construction Company Limited	Started on 1 September		29 August	98%
7	Hung Hom Estate Phase 2 (Hung Yat House, Hung Yan House, Hung Yiu House)	1 938	China State Construction Engineering (Hong Kong) Limited	Started on 14 September		26 August	97%

	Name of PRH	No. of	Main	Installation (Installati	on of filters
	development	units	Contractor	Works start date	Expected commission date	Installation start date	Installation start date
8	Tung Wui Estate (Wui Sum House, Wui Yan House)	1 333	Paul Y. General Contractors Limited	Started on 15 September	Within October	31 August	98%
9	Un Chau Estate Phase 2 and 4 (Un Lok House, Un Nga House, Un Chi House, Un Hei House, Un Kin House)	3 533	Yau Lee Construction Company Limited	Started on 29 September		29 August	98%
10	Choi Fook Estate (Choi Lok House, Choi Sin House, Choi Hay House)	2 524	Yau Lee Construction Company Limited	Started on 19 September		29 August	98%
11	Ching Ho Estate Phase 1 (Ching Chung House, Ching Yu House, Ching Hin House)	3 167	Yau Lee Construction Company Limited	October		25 September	42%

Source: Annex 3 to LC Paper No. CB(2)2195/14-15(01)

Test results of water samples taken from public rental housing estates completed before 2005

The Housing Department (HD) and the Water Supplies Department (WSD) are conducting a representative screening for public rental housing (PRH) estates completed before 2005 in which the fresh water supply systems were installed by the Hong Kong Housing Authority, to determine whether the lead content in drinking water exceeds the World Health Organisation (WHO)'s provisional guideline value of not more than 10 micrograms per litre. In general, HD and WSD are taking water samples for testing by batches in accordance with the completion year of the PRH estates, starting with newly completed estates and working back to the older ones. Once a batch of water sample tests is completed, HD will immediately announce the testing results.

(Results announced for 54 PRH estates involving 1195 water samples up to 22 October 2015)

Lead content in water samples complying with WHO's provisional guideline value

Tsui Ping (South) Estate	Lee On Estate	Butterfly Estate	Choi Fai Estate	Sai Wan Estate	Choi Yuen Estate	Tin Yan Estate	Tsz Lok Estate	Oi Tung Estate
Kwai Shing (East) Estate	Kin Ming Estate	Tin Yuet Estate	Po Tat Estate	Lei Yue Mun Estate	Tin Heng Estate	Tin Chak Estate	Sau Mau Ping Estate	Fu Tai Estate
Wang Tau Hom Estate	Ap Lei Chau Estate	Lei Muk Shue (I) Estate	Chun Shek Estate	Pak Tin Estate	Ka Fuk Estate	On Yam Estate	Sheung Tak Estate	Cheung Hang Estate
Yiu Tung Estate	Tsz Man Estate	Wah Sum Estate	Shek Lei (I) Estate	Tin Wan Estate	Ko Yee Estate	Wan Hon Estate	Sheung Lok Estate	Tsz Ching Estate
Kwai Fong Estate	Chung On Estate		Ko Cheung Court (the PRH portion)	Upper Wong Tai Sin Estate	*Tin Shui (II) Estate	*Tai Wo Hau Estate	*Cheung Hong Estate	*Hau Tak Estate
*Shun Tin Estate	*Wan Tsui Estate	*Sun Chui Estate	*Mei Lam Estate	*Kwong Fuk Estate	*Shek Kip Mei Estate	*Lung Hang Estate	*Lei Muk Shue (II) Estate	*Hing Wah (I) Estate

^{*13} estates announced on 22 October

Source: Annex to the Government press release issued on 22 October 2015 entitled "Test results of water samples taken from 13 public rental housing estates completed before 2005 within WHO limit"

Lead in drinking water incidents

List of relevant papers

Papers issued for Committee meetings

Committee/	Relevant papers
Date of meeting	Keievant papers
Panel on Housing (Special meeting on 22 July 2015)	Paper provided by the Administration entitled "Excessive Lead in Fresh Water Supply in Public Housing Estates"
	Background brief prepared by the Legislative Council ("LegCo") Secretariat entitled "Excessive Lead found in Tap Water Samples from Public Rental Housing Estates"
	Speaking note of the Secretary for Transport and Housing (Chinese version only)
	Speaking note of the Acting Secretary for Development (Chinese version only)
	Speaking note of the Secretary for Food and Health ("SFH") (Chinese version only)
	Motion on "Excessive lead found in tap water samples from public rental housing estates" passed at the special meeting
	The Administration's response to the concerns and suggestions raised by Members at the special meeting
Panel on Health Services (Special meeting	Paper provided by the Administration entitled "Public health measures for the lead in drinking water incidents"
on 24 August 2015)	Background brief prepared by the LegCo Secretariat entitled "Public health measures for the lead in drinking water incidents"
House Committee (Special meeting	Paper provided by the Administration entitled "Lead in drinking water incidents"
on 1 September 2015)	Background brief prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"

Committee/ Date of meeting	Relevant papers
	Information on the test results of blood lead level of public estate residents affected by lead in drinking water incidents (as at 1700 hours on 27 August 2015) provided by the Administration Speaking note of the Chief Secretary for Administration
	(Chinese version only)
House Committee (Special meeting on 8 October 2015)	Paper provided by the Administration entitled "Lead in drinking water incidents"
	<u>Updated background brief</u> prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"
	Speaking note of the Chief Secretary for Administration (Chinese version only)
	Speaking note of the Acting Secretary for Transport and Housing (Chinese version only)
House Committee (Meeting on 9 October 2015)	Joint letter dated 14 August 2015 from 27 Members seeking the Council's authorization for the appointment of a select committee to inquire into lead in drinking water incidents and related issues (Chinese version only) (for discussion at the House Committee meeting)
Legislative Council (Meeting on 14 October 2015)	Two motions moved by Hon Gary FAN Kwok-wai and Hon Cyd HO Sau-lan under the Legislative Council (Powers and Privileges) Ordinance (Cap. 382)

Government press releases

Press releases issued by the Government on the incidents of excess lead in drinking water are available on the following website: http://www.isd.gov.hk/drinkingwater/eng/press.html.

Council Business Division 1
<u>Legislative Council Secretariat</u>
29 October 2015