2016年2月24日

上午10時02分恢復聆訊

出席人士： 石永泰資深大律師、許偉強大律師及鄭欣琪大律師，為外聘律師，代表食水含鉛超標調查委員會

王鳴峰資深大律師及陳樂信大律師，由律政司延聘，代表水務署署長

李柱銘資深大律師、吳思諾大律師及吳宗鑾大律師，由何謝韋、李偉業律師事務所延聘，代表啟晴邨及葵聯二邨公屋居民代表 Lee Pui Yi、Chong So Nga 及 Lui Hui Ping

何沛謙資深大律師及殷志明大律師，由羅夏信律師事務所延聘，代表香港房屋委員會

林定韻大律師，由孖士打律師行延聘，代表中國建築工程（香港）有限公司

李頌然大律師，由顧增海律師行延聘，代表有利建築有限公司、明合有限公司及伍克明

許佐賓大律師，由的近律師行延聘，代表保華建築營造有限公司

孖士打律師行陳宇文律師，代表瑞安承建有限公司

李柱銘先生：早晨。

主席：係。

水務署第四證人：黃仲良（水務署副署長）宣誓繼續作供
李柱銘先生繼續盤問

問：我哋繼續問題。其實你哋水務署之中有好多唔同嘅部門嘅，係咪？

答：係，啱。

問：咁喺呢個水鉛事件發現咗之後，直到而家為止，你哋啲部門會唔會即係關於呢件事，係大家會好好嘅溝通，不時會坐埋傾下，故意--即係由你領導下，故意坐埋傾下啲水鉛嘅事嘅--係鉛水嘅事？

答：我諗唔係不時嘞，差唔多日日都有。

問：差唔多日日都有嘅？

答：因為署長又有，大家即係都好緊密，即係幾個部門一齊傾。

問：咁啲部門傾嘅時候--你話日日都有，咁即係而家因為...

答：即係我唔係--日日就誇張咗，即係其實係好--都幾經常要坐埋一齊傾嘅。

問：咁譬如因為我哋有呢個 enquiry，咁你哋都因為 enquiry，都會成日開會㗎，係咪？

答：都會傾嘅。

問：因為有好多嘢發展緊㗎嘛，係咪？

答：係，係，係，都會傾。

問：咁樣就呢啲咁嘅會係你主持定係署長主持？

答：我諗即係睇個 topic，即係講啲乜嘢。如果即係嗰啲 involve 到幾個 branch 嗰啲，咁有陣時署長。咁因為署長有時唔喺度嘅話，我；不過署長都會--主要都係署長同即係幾個 branch。咁有啲--有陣時個 branch 自己有好多嘢要跟進嘅，咪個 branch 自己去做囉。即係好難一概而論嘅。

問：你有冇一個特別一個 branch 呀？

答：我冇嘅，我直接跟署長，咁然後...

問：即係你喺上面，你同署長喺上面，咁然後底下就分叉咁。

答：署長喺我上面，我喺下面跟住佢。

問：咁即係所有呢啲會你都會喺度㗎喇？署長嚟，你冇理由唔喺度㗎？

答：真係要睇時間，唔敢講話一定會喺度，即係...

問：但係多數應該喺度？

答：可以咁講，因為要分工，有陣時需要，因為個工作量都大。

問：係，係，okay。咁但係你主持嗰啲就梗係你 chair 添喇，...

答：其實...

問：...如果係你有份嘅就？

答：會嘅。即係其實都冇乜話 chai 唔 chair 嘅，即係大家坐埋要傾啲嘢咁喇。

問：好嘞，咁邊一個 branch，你哋邊一個部門係特別處理水，即係食水嘅優質嘅問題？

答：其實主要就兩個我哋叫做科喇，branch，就最主要 involve 嘅，第一就係我哋水質科學部嗰個，即係而家...

問：水質...

答：Water Science Division。

問：哦，Water Science Division。

答：Division，就係我哋 Chief Chemist，即係以前係陳健民先生，而家郭有定先生負責。咁...

問：係。咁嗰個係屬於邊個 branch㗎，邊個 division？

答：嗰個係屬於 Development，發展科。

問：Development Branch？

答：係。

問：發展科。咁發展科係邊個係負責㗎？

答：你嘅意思由邊位同事？

問：係嘞。

答：我哋有個 assistant director，咁就發展科。之前應該係由周世

威先生，咁最近就由梁中立先生做番 AD/Development。

問：梁中立，「中立」就即係中立嗰個「中立」？

答：「中立」就係中立嗰個「中立」。

問：Okay，okay。梁中立，okay。我哋呢度係今朝要上網攞到嘅，我睇下你同唔同意。

答：係。

問：有兩個 charts 嘅，係。網上搵番嚟，okay。

答：好呀。

問：因為你就慣咗，因為你個部門好多時上網，係咪？即係...

答：係，盡量將啲...

問：即係跟上潮流？

答：都唔算嘅。

問：我就畀兩個你睇，一個就 organization chart 先，我哋睇嗰個先。你望一望，大致上呢個冇理由錯，我哋喺網上攞出嚟。

答：係。

問：你睇下右手面個--最頂就--最頂左手面就 Water Supplies Department。

答：唔。

問：跟住低啲右手面，就 organization chart。跟住就有 Director of Water Supplies。

答：係。

問：Mr Enoch Lam。

答：係。

問：跟住就到你。

答：係。

問：跟住左手面就有 Customer Services Branch，跟住 Development Branch。

答：係。

問：頭先你講呢個。右手面，去到最低有個 Task Force。

答：係。

問：就係你...

答：我...

問：...以前 chair 開嗰個 task force。

答：係，嗄，嗄，嗄。

問：如果你揭去後面，就係後面嗰頁。

答：唔。

問：即係第一頁後面嗰度，你睇到 "Development Branch"呀？

答：係。

問：Officer in charge，Assistant Director，就係梁中立。

答：唔，唔。

問：係嘞。你睇佢嗰啲 "Principal Functions and Duties"嗰度，就第三個，就 "Control of the quality of water supplies to ensure compliance with approved standards"，所以呢位先生其實就係處理--正正處理呢啲食水嘅問題？

答：即係因為頭先我講過，Development Branch 旗下有個 Water Science Division。

問：係，係。

答：即係佢需要...

問：就係呢度嘅？

答：...--佢係要負責嗰個 Water Science Division。

問：Okay。跟住我哋再揭，再揭一版，後面嗰度，你睇到上面，就寫住 "Task Force"，見唔見到？

答：諗...

問：揭一版。

答：睇到，係。

問：Task Force，officer in charge 就梁中立。

答：係。

問："Principal functions and Duties：To carry out investigation to ascertain the causes of the recent incidents leading to presence of lead in water drawn by households."

答：唔，唔。

問：所以而家我哋研究嘅嘢，佢哋仲繼續研究緊。

答：其實都唔算㗎嘞，其實個 task force 出咗個 final report，而家即係叫執埋啲嘢，完㗎嘞呢個 task force 基本上都。

問：但係個 principal functions and duties，仲係 to carry out investigation？

答：唔係，因為當--即係呢個佢當日個 task Force 個 terms and reference 嚟，其實呢三個。

問：好嘞，譬如而家仲要攞水辦嘅，譬如吓，咁你--係咪佢哋做呢？

答：我相信唔係，如果要--即係你任何其他嘅工作--呢個 task force 其實基本上當日就由發展局長委任，就叫我哋就住呢三個課題即係去做研究。基本上我哋做完研究，亦都提交咗嗰個 final report。而家叫做執埋。因為我哋仲有好多文件，嗰啲 tidying up 番啲嘢咁樣嘅啫。所以個 task force 基本上個工作係已經完成咗。

問：應該就 to wind up investigation？

答：係，to wind up，其實 more accurate。

問：Okay。第二 "To recommend measures to prevent recurrence of similar incidents in future"，呢個仲係㗎？

答：做咗㗎嘞，其實喺個--我哋最終嘅報告，亦都有提咗一啲 recommended 嘅 improvement measures。

問：咁仲係--即係冇個囉喎，又係冇咗囉喎？

答：其實 wind up㗎嘞。你頭先講得好準確，即係其實呢件嘢已經係 wind up 已經，去到一個地步。

問：呢個 wind up 就我唔知寫到邊度喎？

答：我可能要返去諗下，其實可能最簡單 delete 咗佢就得。因為基本上個工作大致上完成，因為 Secretariat 係--因為執埋啲嘢，咁就做完。

問：跟住就 "To follow up on a recent case of Legionnaires' disease found at Kai Ching"，呢個呢？

答：喺個報告裏面都有一個 chapter 係講呢個情況，點樣跟進咗。

問：即係又完咗嘞？

答：完咗㗎嘞，完咗囉。

問：而家再冇跟進嘅咩？

答：吓？

問：都可能仲有 Legionnaires' disease，係咪？

答：唔係，因為嗰時就有一個 case，呢度話 recent case，當其時係應該--如果我冇記錯，好似係佢哋喺 15 年 5 月尾發現有個 case，跟住 7 月就--我唔記得 exactly，我哋都要睇番。

其實我哋嗰陣時 task force 個工作，好主要都係去同番--因為房署都成立咗一個 interdepartmental 嘅 working group，去處

理番嗰個單位嗰個 LD disease，咁佢哋好似做咗好多 sterilisation，最後嘅結果，睇番晒啲水辦，都 okay。我哋一路跟進番佢，已經處理咗件事，我哋其實喺個報告裏面都有個 chapter 係講番呢樣嘢。

問：唔係，咁而家呢？而家你哋水務署都仲跟進，將來可能再發，咁樣就唔關佢事？

答：應該唔係個 task force 要處理嘅嘢。

問：即係成個 task force 應該要 wind up？

答：應該要 wind up。

問：點解仲要擺喺度？

答：我返去同啲同事講需唔需要--因為其實而家仲有個 Secretariat 喺度叫做埋尾，執埋啲嘢，所以仲擺住喺度咁解。

問：即係成個應該唔擺喺度㗎嘞？

答：我估其實可能過埋呢個月或者 3 月尾喽，個 Secretariat tidying up 晒啲嘢，就可以 delete 咗佢呢個。

問：哦，你而家咁講，即係其實呢幾個月已經執嘢，執嘢，執嘢㗎嘞？

答：係，仲有--當然 COI 有啲嘢問我哋，我哋又要提交啲報告，寫嗰啲嘢。

問：邊個 CY，請問？

答：COI。Sorry，COI。

問：哦，COI。C...

答：我哋都睇--呢度，呢個，呢個調查委員會。

問：哦，哦。即係可以話而家暫時未曾清咗，就係應付而家呢個 COI？

答：都有啲嘅。即係譬如關於--如果 COI 有乜關於 task force 嗰啲嘢，可能都要搵番啲資料出嚟咁樣樣。

問：哦，係咁嘅啫？

答：係，冇乜特別嘢，已經係，即係應該進入尾聲。

問：咁我就再睇埋另--頭先我有另外一張畀你㗎？

答：好呀。

問：嗰個就叫做--上面，左上角又係 "Water Supplies Department"。

答：係。

問：右邊就 "Organization of Development Branch"，直情講 Development Branch。

答：係，頭先--啱。

問：你睇個領導人，又係梁中立。

答：係。

問：佢就有幾個 division 嘅，一個 "Development(1)"；一個 "Development(2)"；一個 "Water Science"。

答：係。

問：Water Science 後面，就睇到 "Water Science Division"，係咪？

答：唔，唔，係。

問：Chief chemist，而家就因為...

答：陳健民退咗休。

問：...陳健民退咗休，咁就郭有定，Kelvin。

答：郭有定，嗄，嗄。

問：佢個 function，就 manage the operation，原來呢啲嘢大家睇到，laboratories 啲嘢、quality and treatment of water resources、ensure the portable supplies conform to satisfactory internationally，而家就係呢個部門？

答：係。

問：我而家想問你一個題目，你而家呢個 task force，喺你哋呢個 WSD 裏面，就唔可以當係話佢獨立，已經入咗嚟個囉喎，係咪？

答：我唔--我唔係好明你點--唔可以...

問：即係我以為--頭頭嘅理解，task force 係獨立於你哋個 department？

答：其實當日嗰個 task force 嘅成立，就係發展局長 appoint 我哋，咁就由我做主席。其實...

問：但係有局外人㗎嘛？

答：有好多外人㗎。

問：係，係。

答：其實有三個學者專家。

問：係。

答：另外仲有其他部門。其實呢度 task force more，其實嗰陣時主要其實就個 Secretariat provided support 畀呢個 task force，個 task force 自己呢，你問我，我覺得都好獨立運作。因為我哋其實裏面即係好多專家，好多啲其他部門嗰啲專業人士去做呢樣嘢。

問：就係咁嘞，因為即係我嘅--我不嬲嘅理解，都係覺得係佢係獨立嘅。你哋都要話畀人聽佢係獨立㗎，係咪呀，早期？

答：嗄。起碼我哋其實當其時係用一個即係好專業嘅--好 technical，技術層面去 handle 呢個問題。甚至--即係我睇到兩位專家嘅報告，都 endorse 我哋嘅 findings 嘅，即係覺得我哋都 proper。

問：好。或者簡單啲，早期呀，而家就要...

答：執嘢。

問：...一路執嘢喇。以前，即係一路做開嘢嘅時候，未曾寫報告嘅時候，一路，嗰陣時係獨立㗎嘛？

答：獨立，我覺得獨立嘅。

問：係。就唔會話受政府任何一個部--即係你都唔可以控制佢㗎嘛？雖然你係主席。

答：係。

問：你唔想以水務署嗰個...

答：唔想，唔想。

問：...位嚟控制佢？

答：你見到我哋做嘢，其實--你睇番我哋成個報告，其實我自己咁睇，都好專業咁去做處理，去做嗰個 findings，搵番嗰樣嘢。

問：Okay，好。而家我想你睇 task force 第五個會，文件係 C19.6，tab 136，就 14057 頁。14057。你揭去第--後面，第二頁，揭去後面嗰頁，即係 14058。

答：Okay。

問：中間嗰度，"Confirmation of findings"，2.0。

跟住 2.1，"The Secretary gave a PowerPoint present..."

Secretary，係你哋嗰個 task force 嘅 Secretary，係咪？

答：係。

問："...gave a PowerPoint presentation of the latest findings as per TF Paper 5/02 and remarked that pending comments from Members,..."，即係 members of Task Force，"...this PowerPoint would be presented to Senior Administration. The meeting noted that despite a few changes proposed to be made, members agreed to the content of the presentation."

我就想問你，首先呢個 paper，其實就喺 14067，14067 就睇到。呢個就係個 paper，你喺上面睇到喇嘛？

答：係。

問：5/02？

答：唔。

問："Task Force to Investigate Cause of Excessive Lead Content in Drinking Water. Preliminary Findings."

Terms and Reference 嗰啲唔使讀。你再揭去 14078。

答：14078，係。

問：呢度就講開 Taps 嘅。

答：唔。

問：即係你係講緊嗰啲 components？

答：唔。

問：咁就上面嗰個。即係 14078 上面嗰個。你睇到就係 "Hong Ching"，"Hong Ching House"，就講嗰啲 Taps。跟住喺右手面，你就睇到 "Kitchen"；再過就係 "Washing Machine"；再過就係 "Shower Mixer"；再過就 "Basin Tap"，係咪？

答：唔。

問：你落一格，即係又係有呢啲字嘅，就 Hung Hei--睇下， "Hung Hei House"，睇唔睇到？

答：睇到。

問：Hung Hei House，照我嘅理解就係冇影響嘅。

答：係。

問：亦係攞嚟做 control，係咪呢個？

答：係，係。

問：呢個 control 嘅，所以重要嘅。

答：唔。

問：你睇住--先睇 Taps 嗰度，落嚟就 lead content，有 before cleansing；即係 Lead content in mass，就 before cleansing；跟住就% lead mass，就 British Standard 咁樣。

呢度我想理解下，lead content，而家講緊含鉛量，跟住就幾多個 ug/L，呢個 micrograms，呢個即係代表咩嘢嚟？係咪 solid 嚟？

答：其實咁嘅，嗰個因為我哋--你知我哋...

問：因為我哋睇得好困難，睇呢啲嘢。如果你話幾多個 micrograms per litre of water，我明，一路傾咗好耐都係傾呢樣嘢。

答：係。

問：係傾開水吖嘛。

答：因為其實當其時我哋要--你知我哋做所謂 leaching test，leaching test 係其實將嚿嘢浸咗水，然之後將啲水攞出嚟做呢個分析。直接個結果 from 個 machine 出嚟，係一個 concentration 嘅，即係 ug/L。但係當--我哋有陣時都需要去評估番，因為你--我哋要評估番成條水鏈裏面，每一嚿嘢，其實我哋所謂佔個水鏈裏面總含鉛量嘅 say percentage 咁樣樣，就一定需要將佢轉化成個 mass 嘅。

問：Mass，係 solid force？

答：即係 ug，即係 ug。

問：即係 solid？

答：其實唔係一定 solid 嘅，點講呢？即係因為我冇可能--即係譬如--可能 scientific 啲。即係你譬如一個 fittings 自己咁樣，佢有個 concentration，即係 is 10ug/L。

問：即係浸出嚟呢啲嘢？

答：浸出嚟個結果、但係佢可能個水量喺個 fittings 裏面其實好少。換言之、實際上喺個 fittings 裏面嗰個真正嘅鉛含量，唔係鉛個 concentration，咁你要乘番佢個 volume，得番即係--我諗即係 mass 除 volume 等如 density，我哋咪要計番個 mass 出嚟，就 density 乘番 volume。

問：咁你點...

答：所以我哋要轉番每一個部件，講緊個...

問：你點樣轉到--點樣由 liquid 轉做 non-liquid？

答：唔係，唔係，唔需要嘅，唔需要嘅。

問：都唔係，唔需要。

答：其實係個計算嚟嘅啫。

問：哦，計算嚟嘅啫。

答：純粹計算番佢個 mass 係等如幾多，我先有得比較。如果唔係，我好多個 concentration 係冇得比較。

問：而家呢個即係 mass 嚟嘅？

答：係，mass 嚟嘅。

問：Okay。呢個就係 lead content in mass，係咪？

答：唔，唔。

問：Before cleansing，cleansing 即係攞呢一嚿嘢，佢裏面有 deposit 嘅？

答：係。

問：嗰啲 deposit 裏面有鉛嘅，你就洗咗佢？

答：係有啲 deposit，係，係。

問：你盡量洗乾淨佢，係咪？

答：其實應該咁嘅，其實如果我--畀啲時間我，我詳細啲解釋。即係當日我哋做 first round leaching test 嗰陣時，其實我哋由地盤拆番嚟，嗰啲部件我哋係唔 disturb 佢。即係都--如果你睇番我哋都好謹慎嘅，即係返到嚟，又入晒膠袋，label 晒。甚至我記得連個 flow direction 我哋都 mark 得好清楚。

返到去之後，其實我哋盡量唔搞佢，做第一轉嘅 leaching

test。當陣時個結果就令我哋有少少詫異嘅就係話，甚至去到一啲copper pipe，點解都仲有leach lead呢咁樣。我哋嗰陣時好奇，因為copper pipe本身，即係以我哋...

問：應該冇嘅？

答：...--係唔應該有鉛。於是乎我哋就去examine裏面，就發覺「咦，其實原來佢裏面可能有啲」--我哋見到其實有啲白色嘅--其實好fine嘅嘢。

問：黐住，但係睇到嘅？

答：黐住，見到嘅。我哋--我哋...

問：就厚唔厚嘅？

答：吓？

問：厚唔厚嘅？

答：Vary，即係有啲地方厚。

問：佢有時好厚嘅？

答：我自己冇親自inspect過，不過我記得我report裏面都有啲相，咁我冇每一個都睇。我哋要證實，即係我哋--因為我哋要知邊個部件leach lead吖嘛，that's why我哋其中要做一樣嘢就話，我都嘗試將裏面啲deposit清洗咗先，再浸佢，睇下佢仲有冇鉛釋出。

問：好。你清洗呢，點樣清洗嘅？係咪好詳細清洗？

答：呢個好--做過好多方法。因為初頭我哋第一，唔想disturb到個surface。即係因為如果你--譬如我博命揸佢，揸甩晒之餘，可能你又對嗰個金屬個面係重新又刮花晒佢，可能影響咗個結果。所以嗰時我哋用一啲好幼嗰啲擦，即係我聽啲同事講，類似嗰啲細路仔洗奶樽嗰啲咁嘅擦，好soft嘅，就係希望盡量洗咗去。

問：仲soft過牙擦呀？

答：我估soft過，因為我哋唔...

問：因為牙擦都有幾停。

答：吓？

問：牙擦都有幾停，有硬、有軟。

答：係，係。我哋盡量 soft 啲，因為我哋唔希望刮花個面。

問：Okay。

答：清咗之後，再做 leaching。

問：所以你有個叫做 partially cleansed 就係咁解？

答：因為其實我哋最終發現，其實你話一百個 per cent clean，係冇可能嘅事嚟嘅。因為甚至 copper pipe，我哋做咗幾個 step，我哋--即係當然我哋搵一截截嚟，其實同啲專家都一路傾。我哋搵擦擦佢，再浸，「咦，都唔掂喎。」浸出嚟，都--即係嗰個 concentration...

問：都有？

答：...都成五個 microgram per liter。呢個我哋都--冇理由，你 copper pipe 冇理由。於是乎仲做咗一個 step，叫做 sand shake，即係其實我哋入啲沙入去撳佢。

問：哦，sand shake。

答：就再好啲，會再 reduce。但係最終我哋都係要做 elemental analysis。我就將個 copper pipe，直頭將個 content 搦去化驗。就得出--個 copper pipe，我記得我記得嗰個 lead content，唔知係零點零零幾個 per cent 嘅。即係 which confirm 其實 copper pipe itself 係唔應該 leach lead。

但係你會見到其實嗰啲 copper pipe，你有陣時甚至你肉眼都未必睇到，好得意，佢濕同乾都唔同。濕濕地嗰時，你仲見到有少少白色喺個面度；乾咗，你見唔到。因為我相信喺個 copper pipe 個面，唔係滑到我哋想像中咁滑，其實佢可能係有啲凹凹凸凸，that's why 裏面可能仲係有一啲 deposit 係黐咗喺裏面。因為嗰隻嘢係好幼，幼到我記得陳健民先生嘗試話搵一啲好細嘅 microgram，唔知 450 micro，等佢過濾都唔得。

問：Okay，得，呢度我哋得。

答：Okay，得，okay。

問：但係你都覺得如果你係洗咗佢，同唔洗佢係有分別？

答：係，所以...

問：即係對你嘅--對你哋嘅呢個計數嚟講，係咪？

答：所以我哋 first round 嗰個 leaching test，全部係冇 disturb 過。

問：即係呢啲叫做 before cleansing？

答：Before cleansing。

問：然後就 after...

答：After cleansing，就選擇嚟做嘅。

問：After--其實多數你都用 partial cleansing，係咪？即係穩陣啲咁樣。

答：因為我哋想--呢個好誤導，我哋唔想喺個 report 度話係 cleanse 咗。

問：係，係。

答：因為 especially 去到一啲 fittings 嘅。即係裏面因為--如果你想像下，一個水掣咁樣，即係個面更加難清。

問：好，得，我明白。我想問一問你，partial cleansing 嘅時候，即係你呢個 partial，其實都做--都--你都係差唔多盡力而為 cleanse，係咪？就唔想影響到個 surface，係咪咁？

答：係，第一，唔想影響個 surface；第二，你話要 complete testing，我哋覺得近乎冇可能嘅事。但係嗰個 partial cleansing 有個好重要嘅 indication 就...

問：唔係，我而家講緊 degree，其實講緊 degree。

主席：唔係，我想知道問呢啲問題，李大律師你個目的係想話畀我哋聽咩

嘢嘢？

李柱銘先生：唔係，其實我想知道佢哋個方法。因為我哋睇係好辛苦，睇來睇去啲數字都唔知邊度嚟。

主席：你睇--唔係，我明，你可能睇唔明，係咪？但係個目的係想做咩嘢？

李柱銘先生：而家暫時就--我遲一步--下一步至要多啲，不過我而家問咗先咁解。

主席：唔係，你而家話埋畀我聽你個目的係想做咩嘢？

李柱銘先生：目的就係，而家我就想--因為佢有啲數計咗出嚟，我就覺得佢係--即係佢做個 comparisons 嘅時候唔妥。

主席：個目的係咩嘢嘢？你想表達--你想...

李柱銘先生：即係話我哋都唔--究竟唔知道呢啲 components 裏面含嘅 lead 其實係幾多，即係都唔知。

主席：哦，冇人知個喎，冇人知個喎。

李柱銘先生：但係又係--都係點都唔多唔少都有影響。

主席：唔係，呢樣嘢，如果你係想表達呢一樣嘢嘅話，我就可以 cut short 你。因為點解呢？你記得 Prof Lee 個報告裏面都係咁講，係咪？呢啲部件係有 leach lead，不過 exactly 究竟個 proportion 係幾多，就...

李柱銘先生：好，係，明白。但係我仲有一個理由。

主席：係。

李柱銘先生：就我哋覺得有啲誤導嘅成分喺度。

主席：例如呢？

李柱銘先生：我一陣會去嗰度，我而家...

主席：唔係，因為而家你問咁多 test 嘅嘢，我覺得就不如你直接去到嗰一個 point。

李柱銘先生：係。

主席：因為你想我明咋嘛，係咪？

李柱銘先生：係。

問：咁我一陣返番嚟呢度。好嘞，另外一個 point，就係 A1/19，internal page 就 31。

答：係，睇到。

問：你睇到 internal page 31？有嘞，係咪？

答：第幾？

問：底下嗰度。

答：係。

問：最底下嗰度。

答：唔，睇到。

問：呢度係咪有...

答：即係 2.10.14 嗰度，okay。

問：最底下，sorry。唔係，仲落啲嘅，應該。再落，再落，係嘞，係嘞。再可以落。因為我要睇--係嘞。

你睇到底下嗰度，就"(c)Scenario 3 - Lead leached solely from copper alloy fittings"

答：係。

問：呢度。

答：係。

問：我一陣會返轉頭，而家解咗先。第二版。

答：唔。

問：上面就係 "Before cleansing"嘅。

答：唔。

問：底下嗰個圖，就係 "After cleansing"。

答：係。

問：好，再過隔籬嗰版，即係 internal pagination 33，又有個圖，又有個--去到中間嗰度都，低啲。係嘞，呢度有個圖，呢度。呢度呢啲料，其實都係--我哋睇到係其實係 before cleansing，呢度就冇 show 出嚟。隔籬嗰兩個就 show 咗，上面嗰個就 before cleansing，底下嗰個就 after cleansing，係 show 出嚟嘅。呢個就冇 show 出嚟。但係我哋係...

主席：再落啲吖，唔該。

李柱銘先生：嗄。

答：點--因為原因...

主席：邊度呀？

問：係嘞。

答：原因係佢嗰面冇呢個 lead deposit。

問：哦，呢個就係 annex 2.7 呢度，其實就 "Before cleansing"。

答：其實...

問：咁樣你--跟住你就講 comparisons。

答：係。

問：呢個圖，即係又--而家啱啱睇完呢個圖之後，你就話：

"It was noted that the amounts of lead leached from the copper alloy fittings in Hong Ching House and Yuet Ching House of KCE and Luen Yat House of KLE2 (after cleansing deposits) ..."

就即係頭先另外嗰版下面嗰橛，係 after cleansing。

答：係，after cleansing 嗰橛，係，係。

問：係，就嗰橛。

答：係。

問：你話嗰度嗰啲 figures，就" ... were comparable with the amounts of lead leached from the copper alloy fittings in Hung Hei House of HFE."。

呢度係 before cleansing，其實就 before cleansing，咁我哋--即係我個 team 就...

答：唔係，sorry，sorry，你意思係鴻禧樓係 before cleansing？

問：係，係。

答：Okay。

問：即係我就覺得奇怪，點解就攞個 after cleansing 同個 before cleansing 嚟 compare？

答：因為鴻禧樓本身係冇呢個 lead problem，佢所以其實就冇 deposit，所以就唔需要做呢個 cleansing。

問：但係...

答：即係差唔多可以講話 before、after 都係個結果會一樣。

問：咁...

主席：唔係，李大律師，但係 ultimately，到最後我覺得都唔需要理佢

究竟係before cleansing，抑或after cleansing，某程度上，係咪？因為部件--有啲用嘅部件含鉛量超出咗British Standard，呢樣嘢我相信都冇人否認。

李柱銘先生：得。

答：有發現有啲部件超出咗。

主席：Exactly，係咪？

李柱銘先生：但係超幾多呢，但係？

主席：超幾多唔重要。

問：跟住我問題，就係點...

主席：因為要換。

李柱銘先生：係。

問：但係你而家淨係做咗三條咋喎？

主席：係呀。

答：唔。

問：其他冇再做落去，啱唔啱？冇再拆喫嘞，定係拆多一條？

答：你意思--吓？

問：即係拆啲水喉嚟咁樣驗？

答：呢個其實我哋當日啲專家都有討論。當我哋做完三條邨之後，我哋有討論過，其實仲需唔需要...

問：拆？

答：...去拆晒其他嗰啲邨嚟睇。

主席：係。

答：個專家個睇法就話，即係主要其他嗰啲邨嗰個 design 其實係 similar，佢哋都好有信心，其實個結果係一樣。即係換言之，有幾個先決條件，第一，佢哋都係用 copper pipe；第二，佢哋嘅 solder joint，都係發現含鉛。

主席：係。

答：第三，就係其實佢哋嘅 fittings，又係 copper alloy fittings，個 number 又相若。於是乎佢哋就覺得--其實我真係直接同佢哋傾過，話「啊，我仲使唔使去其他嗰啲？」佢話「冇乜意思，因為你再 cut 少少，你做唔到。一係你就成條邨做，拆晒佢。」但係如果成條邨拆晒，given 個 time，時間係咪值得咁做呢？同埋佢...

問：咁但係--係嘞，因為你知道有三條，okay，係有問題，咁...

答：因為三條--係，sorry，你講。

問：你預備點做呢？如果好似主席咁講，因為咁樣，成個邨啲水喉都換晒，咁又唔同喇。

主席：唔係，個問題就係咁樣樣，你都要明白，Prof Lee 其中佢講嘅 recommendations。因為你睇到佢其中一樣嘢好重要要做嘅--佢仲做嘅呢，就係嗰個所謂 computational fluid dynamic。佢做完晒嗰啲嘢之後，佢就話到畀我哋聽，佢個 result 出嚟就係話今次嘅事件裏面，最主要 leach 出嚟嗰啲，就係喺嗰啲 solders 嗰度。部

件有 contributions，不過係唔 significant，亦都唔影響嗰個--即係個 contributions 係 insignificant。

李柱銘先生：做咗㗎嘞。

主席：係，已經做咗㗎嘞。所以你見到佢其實--雖然佢冇好 explicitly 咁樣講出嚟，不過佢嘅意思其實就好簡單，就係話第一，如果你肯沖水沖一分鐘，就已經 significantly 減咗好多，okay？第二樣嘢，佢雖然冇直接講出嚟，不過基本上佢就話畀我哋聽「啊，其實我哋有好多嗰啲 bends and Ts 乜乜乜嗰啲，就係喺個 meter room 裏面搵到。」

李柱銘先生：係嘞，係嘞。

主席：基本上，如果你真係--即係如果你話 a long term，我完全同意 long term，你一定要換晒佢。不過，如果你話 medium terms，medium terms，你其實可以換晒個水〕--應該咁講，你首先換晒水錶房裏面所有嗰啲嘢。

答：嗰啲 bends 嗰啲。因為多 solder joints 嗰啲。

主席：嗰啲 bends，嗰啲 Ts 嗰啲嘢，你就已經係大幅度減低，啱唔啱先？

李柱銘先生：係，係。

主席：所以 ultimately，即係呢啲嘢，你問「啊，咁有幾多 lead？」實際上喺裏面，其實如果你用--即係我就好簡單嘅諗法，就係你 ultimately，如果你換晒，梗係冇問題。不過喺呢個 during the mean time，你換咗嗰啲，都冇問題㗎嘞。如果你再開埋一分鐘水，更加好，係咪？

你就算睇番世衛嘅 guidelines，佢裏面都係咁話，「你要 solve 呢個 problems，係需要好多時間，需要好多錢，亦都唔會 immediately 你係可以做到。」

所以喺咁嘅情況之下，即係你繼續探討呢個問題，去到最後，其實對個 recommendation 又好，對要 follow up 嘅 action 又好，做嘅嘢呢...

李柱銘先生：我明白。

主席：...係好--可以做嘅嘢係好少嘅。

李柱銘先生：我明白，我亦同意。但係而家問題就係究竟呢一個 task force report 嘅 integrity...

問：即係如果呢樣嘢對你個 final-- 其實對你個 final recommendation 都可能冇問題㗎？

主席：佢個 integrities，應該咁講，某程度上你睇咗 Farewell 同埋 Prof Lee 嘅報告，佢哋基本上都係話係冇問題嘅。

李柱銘先生：但係佢哋亦 rely on 呢個。

主席：啱。

李柱銘先生：係。

主席：佢哋睇--佢哋一定識得睇呢啲數據，遠超我同你識睇嘅程度。

李柱銘先生：唔係，我哋 team 都有好多人係好熟嘅，都冇法子睇到，係。

主席：我明白。唔係，咁個問題咁，你唔可以尋日就抬舉 Prof Farewell，今日就踩佢，係咪先？

李柱銘先生：唔係，呢個問題我冇問過佢。唔係，我又冇問過佢喎。因為我...

主席：啱嘛？

李柱銘先生：係。

主席：唔係，我明你嘅意思。即係除非你話畀我聽，「喂，呢啲數據完全係有問題嘅」，我就好樂意去聽。

李柱銘先生：我唔係話完全冇問題。

主席：係嘞。

李柱銘先生：我唔係話完全都有問題，而家係呢一度。因為我冇法子計到出嚟。

主席：唔係，如果純粹係話呢啲部件本身其實係--含鉛係超標，遠超過British Standard，因此有機會contribute to嗰個leaching，呢樣嘢我相信就唔需要再繼續花時間糾纏落去，因為全世界都接受。

李柱銘先生：我同意，喺呢一方面。

石先生：即係李教授佢嘅報告，佢喺review task force嗰幾段，29至到35，其實都已經指出得好清楚。就係即係佢同意佢哋嗰個isotopic analysis。

主席：Analysis，係。

石先生：佢亦都有好多嗰啲control samples，就係話你試下搵一座係冇用leaded solder，但係都係用其他部件，即係水喉頭嗰啲，...

主席：嗰啲部件差唔多嘅，係。

石先生：...計出嚟好大嘅分別，即係整體上嗰個main ...（聽不清）就係嗰啲leaded solder。

主席：啱。

石先生：佢亦都睇得出，就係話task force個報告裏面，有一、兩個數學嘅model佢未必咁同意，但係我記得我都問佢，但係嗰個係唔影響個大局。

主席：係，係。

石先生：我都問過李教授。

主席：係，係。你...

李柱銘先生：仲有一度就係--係重要嘅呢我哋認為，就係因為而家我哋有一個重要嘅環節，就係好多料係唔合乎BS。

主席：係，啱。

李柱銘先生：呢個其中一個，喺嗰啲components。

主席：係。

李柱銘先生：咁而家點樣處理呢啲問題？如果你唔知道，你唔覺--如果佢哋唔覺得有問題嘅就唔會跟。

主席：唔係，得，呢個問題，我諗佢哋都唔否認有一啲部件係唔合乎 BS，係咪？

李柱銘先生：係，點樣跟進？

主席：點樣樣跟進？呢啲就返番去尋日你問嘅問題。就係個問題就係返番去你 annex 嗰啲 form，你嗰啲 WWO46，你 LP 又要 certify，certify 咗之後，跟住你哋又做咗啲咩嘢去 verifications。其實就返番去嗰一個問題。

李柱銘先生：但係由嗰度可以搵到，但係呢個方面，如果佢查又可以搵到㗎嘛。

主席：吓？

李柱銘先生：即係睇--直頭睇嗰啲--睇啲 component 就可以睇到。

主席：啱，我--我唔會否認你呢一個嘅說法。不過呢度又--我唔係幫佢講說話。

李柱銘先生：當然唔係。

主席：我係睇世衞。

李柱銘先生：係，係。

主席：因為世衞話，如果你係--講到係--真係有啲 construction building materials 影響到水質嘅話，個 prime objective 就唔係 monitor 呢啲 water qualities，就係去呢個 material--去 control 佢嗰啲 material use。呢個係 primary 嘅 considerations。

我唔係話你所做嘅嘢唔得，得，不過，可能係比較 costly 一啲，同埋亦都可能會花時間。所以其實呢方面嘅問題，某程度上尋日已經 by and large 嚟探討過晒。

李柱銘先生：但係仲有一度就係究竟呢一個問題，廣泛到咩嘢情況，去到

邊幾個樓宇。個 extent of 呢個 irregularity。

主席：我同意，不過個問題歸根究底，就係究竟有 significant 先。啱唔啱？如果係好 significant，或者係 significant，影響到 health risk 嘅，當然要繼續做落去。

李柱銘先生：係，我明白。你喺呢個 angle，我完全同意，主席。

主席：係。

李柱銘先生：但係如果係有 irregularity，如果係有人違法，佢身為--佢哋一個係 regulator，咁佢哋個責任係咩嘢呢？係咪算數呢？

主席：唔係，唔係。你再問落去，你再問佢，我哋又返番去尋日嗰個情況。因為尋日我哋都已經 summarize 咗，佢就話基本上佢哋 regulator put 個 system in place 就得，完嘞，full stop。呢個係佢哋嘅 position。你今日再問佢，佢都係答番尋日佢嘅 position 嘅啫，係咪？呢一啲嘢你咪留番畀 submission 嘅時候，你同我講，跟住我咪寫落去個報告度。

李柱銘先生：但係以前嗰啲，而家--新樓就得，嗰啲 form 可以搞掂，如果可以解決。

主席：係，係。

李柱銘先生：舊嗰啲又點呢？你又--我哋又唔知道邊啲係有事。

主席：又係返番去頭先我講問題，sig 唔 significant 先？

李柱銘先生：即係唔查我哋唔知道佢有幾多。因為而家--而家問題...

主席：你如果 significant 係...

李柱銘先生：我當佢唔 significant。

主席：係。

李柱銘先生：我當係少少啫，係，有少少因為呢啲 alloy 走咗入去落啲水度，但係好低，唔需要擔心，我當咗咁先。

主席：係，係，啱，係。

李柱銘先生：但係我哋喺個執法個角度係咪唔理呢？如果係--又係違規。

主席：呢個佢--佢...

李柱銘先生：佢係 regulator 嚟個喎。

主席：佢 regulator，咁佢去告囉，係咪？佢鍾意佢咪去告。

李柱銘先生：但係去--去邊度告，都未 find out。

主席：佢咪自己去查，但係唔關我事，呢啲 individual 嘢就。

李柱銘先生：因為呢度，就我頭先...

主席：我唔係話即係唔--即係你明唔明，我冇 power 去告邊個。

李柱銘先生：我明，我明，我明。

主席：個問題你可--你可以問，你唔好問佢，你譬如問下一個，我唔知邊一個負責 enforcement。

李柱銘先生：Development 嗰啲冇--冇喺度。

主席：我知，唔好理佢。你鍾意你咪問佢，你咁多年--過去十年就住 material，你哋有冇做過 enforcement actions，有冇做過 prosecutions，出過幾多張 summons。

李柱銘先生：我琴日問佢乜都冇，係咪？

主席：冇咁 specific 嘅尋日問就。

答：我唔記--即係我之後仲有啲同事係 customer service 嘅。

主席：係囉。

答：我印象中冇特別為咗物料--不過，我想回應主席講得好啱，因為你喺執法，你仲要諗下嗰個 effectiveness，因為 even 我去點樣--因為要小心，如果去做呢啲所謂 elemental analysis，當然有一個話簡單射枝槍，但係嗰個唔係最準嘅。一定最準確嗰個，你就係要攞啲物料，即係拆嗰嚿嘢出嚟，切啲片，然之後驗嗰個...（聽不清）嗰個最準，但係你咁係好 disruptive。And given，其實我哋專家有講過，如果你有留意我哋報告，講咗一點，就係話呢啲嘢個 lead

content 係 exceed 咗個 limit，但係真係嗰個唔 significant，即係唔影響佢。

點解呢？因為其實我哋講緊啲部件，來來去去都係講緊三至六個 per cent 嘅 lead content，compare with 嗰個 leaded solder，係 talking about 三十、四十、五十個 per cent 嘅 lead。

再加上呢啲咁嘅部件，其實喺個 supply chain 裏面，通常都係得幾個。即係 as compare with solder joint，係遠遠--差好遠。所以佢哋嘅 contribution 係好--好唔 significant。所以我諗要全盤考慮。

問：係咪就唔使處理呢？Insignificant 我當佢。

答：所以其實我哋喺個 task force 嘅 recommendation 其中一樣嘢亦都建議番話將來，即係你--當啲 material deliver to site 嘅時候可唔可以抽番啲 sample 去做一個 checking 佢嗰啲--譬如呢啲咁嘅 content 去證明嗰個 batch。其實呢個 more--我覺得係一個 quality control 嘅問題嚟嘅。

問：係，如果你到時真係咁樣用呢個方法，真係 check 到有，係咪告佢哋呢？

答：呢個我估就要同業界一切夾。

問：你又同業界夾。

主席：對唔住，你唔可以乜嘢都話要同業界。

答：Okay，唔係，我--我意思...

主席：你抄牌之前問--問一問--問一問嗰個揸車嗰個，「我抄你牌好唔好？」咁樣樣呀？

答：唔係，唔係，唔係。我呢個業界我講緊啲 developer。即係呢個應該...

主席：一樣咋嘛，有咩嘢分別啫。

答:Okay。唔係,我諗緊 contractual 嗰度去 impose 個 requirement。

主席：啱唔啱？即係...

答：Okay。

問：其實已經睇到你哋個心態，你係副署長嚟㗎，你個心態就係當我--我哋係緊張你執唔執法嘅時候，你問過佢--唔係今日，講琴日都係咁。即係你咁點樣執法，你點做 regulator 呢？係咪呀？

答：唔係，我諗 to some extent，即係當然我要平衡番我應該要做啲乜嘢，法例要求我做啲乜嘢。

問：係。

答：And then 我都覺得 consult 下業界都應該做嘅。

主席：有陣時唔係平衡嘅問題，你個法例寫咗出嚟嘅時候你就要執行。係咪？你就要 enforce。如果唔係嘅話，即係我老生常談呢啲嘢，即係你寫條法例出嚟，寫到天依無縫，原來 enforcement 冇嘅，咁...

答：Enforcement 我哋覺得重要嘅。

主席：咪係囉，係咪？你如果...

問：但係你有咁嘅心態，就永遠唔會告人。你諗下，如果呢啲口供今日嗰啲所謂業界聽到晒，「啊，過癮嘞」佢話。聽到好開心。

答：唔係，我諗我都想講番，即係 enforcement 對我哋嚟講係重要嘅，執法係即係...

問：你個口話重要，但係你個心態我哋睇到喇，你咩嘢都問業界。

主席：同埋你水務署，你知你出張 summons，你都 time-bar，你可能得六個月，一過咗六個月冇得出添，你想告都冇得告。

李柱銘先生：係。

主席：係咪？所以你話又要傾又要睇，睇完之後過咗六個月，too bad。

答：呢個我哋喺條例上可以再睇一睇。

問：你哋嗰啲--你個部門，邊度係負責執行，呢啲即係 enforcement？

答：Customer Service Branch。

問：哦，Customer Service Branch。

主席：我諗我哋探討完呢一個問題，係。

李柱銘先生：我返番去原本嗰度。

主席：又返番去原本嗰度，唔。

李柱銘先生：因為我原本問緊嗰度其實係有理由嘅。

主席：係。

李柱銘先生：我問緊佢係 14078 嗰度。

主席：係，okay。

問：我哋去到 taps 嗰度，14078，上面嗰個圖，底下嗰格，鴻禧樓，你話呢個係唔受影響，又係 control。你去到--睇到 "Taps at"--第二嗰個，第一個係 "Kitchen"，跟住係 "Tap at Washing Machine"，最底下嗰度，就 "3.2"，睇唔睇到 "3.2"？

答：唔。

問：你走番去左手面，就 British Standard 就係零點五個 per cent 去到二點五個 per cent 就係合格，呢個就超出，係咪？

答：唔，唔，唔。

問：呢個點樣呢？呢個你預備點樣處理，同埋有冇處理到呢？

答：即係我諗都係講番嗰個--佢個 significant，第一，其實佢喺呢度，我哋睇番...

主席：唔好重複呢啲，係。

答：係，okay，好。

主席：即係有冇處理過，冇處理過就冇處理過囉。

答：Okay。呢個--呢個未有處理，呢個。

問：好。睇番轉頭，14058，我頭先睇 2.1 段嗰度。

答：係。

問：14058。中間嗰度，點解個 PowerPoint 要畀 Senior Administration 呢？

答：其實我哋主要因為...

問：首先 Senior Administration 即係咩嘢意思？

答：主要係發展局長，因為佢係 appoint 我哋，我哋即係做咗，有咁嘅 findings，我哋都需要向佢報告番。

問：即係你哋個局個局長。

答：係，發展局長 appoint 我哋，我哋咪向佢報告番。

問：包唔包括埋嗰個跨部門嗰度？

答：冇喺嗰度做過。主要同阿局長講番嗰個 findings。

問：你話主要係個發展局局長，仲有咩嘢人呢？主要係佢，係。

答：仲有呀？我--呢個--即係呢個咁嘅 PowerPoint 我係--係同阿發展局長、副局長、常秘嗰啲都有。

問：唔係，而家呢度寫 Senior Administration。

答：對我哋嚟講，呢啲 senior㗎嘞。

問：點解唔係--政務司司長唔包括呢？

答：政務司司長，我有冇同--我應該冇同佢 present 過個 findings。即係呢個 PowerPoint 應該冇同政務司司長 present 過。呢個 PowerPoint 我唔記得有。

問：但係你知唔知道後來就冇咗，即係想睇番都冇，呢個紀錄--冇咗紀錄個囉喎。

答：咩嘢意思？

問：即係後面嗰個有違規嗰度，頭先嗰個 3.2 嗰度，嗰個洗衣機嗰個 tap，後來就唔見咗，我哋睇過啲文件，即係冇咗直情，冇紀錄。

答：唔係好明。

問：你而家呢度--睇呢份係第五個--第五個會，你哋第五個會。

答：係。

問：有啲文件喺度睇到有呢個違規嘅情況睇到出嚟，跟住就冇晒呢啲文件，唔見晒已經。

主席：唔見晒係咩嘢 sense？

李柱銘先生：即係冇再提呢一點嘢。

主席：哦，冇。

李柱銘先生：係，唔再...

答：即係我哋...

主席：冇再跟進。

李柱銘先生：係。

主席：唔。

答：唔。

李柱銘先生：我睇唔到有文件係再反映呢啲嘢。

主席：再跟進，唔。

答:因為嗰陣時其實你知我哋個 time frame 非常之短,我哋一定要 focus 去 find out 個 cause。我哋一路--其實一路都係集中去搵個--嗰個 cause of excessive lead。

And then 我哋亦都即係--其實你見我哋做咗好多樣嘢--因為其實當其時都有人 query 係咪就係呢樣嘢咁樣。我哋盡量都希望係透過幾個方面一齊去證明呢樣嘢。

問：係，你個目的就係想睇下有冇 excessive lead，而家睇到呢度真係有，你又唔處理，咁點呢？你而家搵到出嚟喎。

答：唔係 excessive--個 cause of excessive lead in water，我哋希望 find out 到--即係其實嗰個我哋--我哋嗰陣時--如果你睇我個 terms of reference，個重點就係 find out 點解食水含鉛超標。

問：係。

答：嗰陣時我哋係要 find out 究竟係 solder--其實我哋--嗰陣時最 puzzle 我哋嘅就 solder--咁啲 fittings 都有 leach lead 出嚟，究竟點個係 main cause 呢？

問：係，係。

答：於是乎我哋要用好多嘅方法去證明 lead solder 係個主因。所以我哋又透過用一個 isotopic analysis、mathematical model，即係我個報告裏面講，幾樣嘢，compare control...（聽不清）。我希望透過幾個方法去即係好科學化證明到呢一樣嘢。

問：好科學化嘅做法，就雖然你去到嗰度有理由相信主要嘅--嘅--個犯人都係 solder 嗰度有 lead。但係你哋科學嘅--繼續要研究，就其他都唔可能忽略，所以你至做。你而家做到真係有，你又好似冇理到，

咁點呢？

答：唔係，我哋其...

問：唔得科學化喎。

答：我--如果你有睇我哋報告，我哋報告係有話其他啲部件係有 leach lead。我哋甚至話--即係你睇嗰個 mathematical model 咪一路去--去計算落去。我哋一路撇除，okay，如果當 solder 唔 leach，個情況又點呢？淨係啲 copper alloy fittings leach 又點呢？甚至將佢同其他啲一路 compare。

主席：呢度其實返番去個大問題，就係啲部件最初交畀你哋做 certifications，擺上去你哋嗰個 approved list 嘅時候，當然正如李大律師講，嗰個 supplier 梗係會交一個最完美嘅畀你，complied 晒 with 所有嘅 British Standard 嘅嘢畀你，係咪？但係個問題，後來 subsequently，去到 project level，你哋而家都純粹係倚賴個 LP 同埋個 AP 個 signatures 咁就算個囉喎？

答：其實我哋而家呢套咁嘅我哋叫做 type test，即係你畀個 sample 我去 lab 驗咗，然之後我去 accept 呢樣嘢，呢一個嘅做法就英國嘅 WRAS 都係用類似咁嘅方法。因為你牽涉下一個步--其實頭先講個問題就係另一個問題，就係嗰個生產嗰個 quality control 嗰個問題。Quality Control，其中一個方法，當然去處理就--我唔知你有冇聽過，就係 control certification。就係點呢？我除咗 accept 你呢個 sample 之外，我仲要嗰個--嗰個 board，即係有個 certifying body，就要去到你個生產嘅地方，一路睇住你個 quality control 做成點。呢個係一個方法。但係呢個對於--因為香港個市場細，我哋自己好難話自己喺香港--我唔知可唔可以做到個...（聽不清），呢個可以探討嘅。但係嗰個 compliance cost 亦都相當之貴嘅。我聽過喇，譬如我今日，我哋譬如有啲水龍頭，可能唔係話一啲好名牌嘅水龍頭，搦咗個 sample 嚟，我哋今日個 sample approve 咗，然之後你仲要譬如喺澳洲嗰啲 WaterMark 咁，搵個人要走去佢個--做。呢個要探討囉，我唔敢講話一定唔啱。

主席：我唔係講緊呢啲咁複雜嘅問題嘅。即係我講緊你會去到 project levels 嘅話，咁你點樣樣可以做囉？

答：所以呢個其實...

主席：即係如果你講嚟講去嗰個，你講咁多嘢，就話畀人哋聽，啊，呢樣嘢又好困難，嗰樣又好貴，呢樣嘢又唔應該做。

答：所以其中我哋 pass 咗一個折衷方法，就係其實用 construction site 好多時都用嘅方法，就係當啲嘢 deliver 去地盤嘅時候，抽 sample。

問：邊啲人收呀？

答：其實 resident site staff 其實佢哋做好多呢...

主席：係囉，抽 sample。咁抽完 sample，咁點呢？

答：唔啱咪 reject 個 batch 囉。

主席：點樣樣？抽完 sample 之後點樣樣--抽 sample 嚟驗囉。

答：係喇，驗喇。

主席：咪係囉。

答：係喇，驗完，如果嗰個--譬如佢--譬如一個 batch 裏面，超過幾多個唔得嘅，嗰個 batch 咪要走囉。

問：邊啲人去抽同埋邊啲人去驗？

答：通常佢哋做建造業，即係我--其實好 common㗎咋，我哋好多啲咁嘅嘢，reinforcement，鐵嗰啲送到地盤都有做啲類似咁嘅嘢嘅。

問：唔係，邊個去驗呀？係咪你嘅...

答：嗰啲 resident site staff 囉，authorised person。

問：吓？

答：Authorised person。即係佢...

問：點啲話？

答：即係個 resident site staff，resident site...

問：即係又係交番畀個 AP 處理囉喎？

答：係。其實呢個應該係最有效嘅。

問：咁你哋又係跟進唔到？又係畀番 site staff。

答：唔係，但係呢個其實好 in line with construction 嘅，所有物料都咁做個喎。

問：咪可能就係 construction 成度都唔啱。

答：唔會。

主席：唔係，佢 construction 做呢樣嘢冇問題，不過你如果話畀我哋聽，你哋乜都唔做，咁就唔得。

答：唔係，呢個我可以再進一步探討點解...（聽不清）探討。

問：又可以探討。你到而家都仲話可以探討。

答:唔係,即係你--我覺得唔係一個好 simple 話一步可以好簡單 switch 過去做嘅嘢囉。

問：唔係一步。呢步應該行咗好耐㗎喇，你哋好耐、好耐都唔肯行。

主席：Exactly，呢步應該行咗好耐㗎喇。

問：你行咗嗰步就可以而家我哋唔使喺度，日日喺度問你。

主席：你可能會話「喂，咁我哋咪返番去以前嘅 stamping 嗰個咁樣樣嘅。」啱，你可以咁講，係。因為我話--即係其實你可以睇到，self-regulations，呢個世界 self-regulations，我可以話畀你聽，唔係咁可靠，啱唔啱？你香港好多 profession 都係，有好多人唔係滿意 self-regulations，係咪？

黎先生：事實上...（聽不清）都係一個 risk-based 嘅 assessment 嚟嘅。

答：Okay。

黎先生：即係問題即係如果--你而家嘅睇法就係咩嘢呢，你就覺得將嗰個--啲部件嗰啲嘅 testing 嘅嘢，你覺得係要喺晒嗰個 AP 嗰個身上咁解啫。咁但係而家我哋講緊呢係講緊 water quality，水質嗰啲嘢，個責任喺你哋嗰度。當然個 AP 可以話需要去做，因為佢個 contract 個 provision 有嗰個 main contractor 佢哋需要啲嘢，但係並不表示佢哋做，你哋就係-- Water Authority 可以係完全唔使做，係咪？

答：呢個我同意嘅。其實...

黎先生：唔係話即係佢做就等於你唔使做，冚嘩吟係晒佢做。

即係事實上你嗰個諗法，我覺得會唔會太過係偏一啲，就純粹覺得咩嘢呢，將個責任完全擺晒喺個 AP、contractor 佢哋呢啲所有其他嘅 stakeholder 嗰度去做，完全你哋自己就純粹就係咩嘢呢，倚賴佢哋嘅 testing，佢哋嘅 certification，然後你哋自己然後個 random 嘅呢個 testing 都唔去做呢咁，係咪？

答：呢個同意嘅。其實我哋都 currently 仲諗緊啲嘢做緊嘅，係即係睇下可唔可以用一個方法就係--如果你要去到搞個 control cert，可能 complicate。

主席：梗係喇，

答：有冇得我，譬如我喺市場，我自己我去市場去買一啲嘢嚟到 verify

番佢個 quality 呢咁，呢個都係一個方法嚟嘅。呢個我哋而家都...

主席：唔係，你基本上差唔多一定要行。

答：Okay。

主席：你問業界，你問建築商或者起樓嗰啲，咁佢哋梗係話唔好，唔使講，係咪先？「我哋自己做得㗎喇，你唔好管我哋喇。」梗係咁。

答：我哋接觸佢哋又未一定係咁嘅。

主席：唔係，你睇下...

問：仲有一個問題嘅，你而家嗰啲用做水喉嗰啲 component，你就要 British Standards，但係你仲有一個 approved list，係咪？

答：係，啱，啱。

問：人哋就如果合嗰個 approved list 就 okay？

答：唔。

問：會寫入個 form，嗰個 46，嗰啲係 okay？

答：唔。

問：好嘞，咁喺入咗之後，照我理解，你就一路都得，明年又係得，一路咁落，十年都得，而家就唔得，而家唔得。

答：而家唔得，而家唔得，而家唔得。

問：但係以前係一路都可以得，係咪？

答：我早一、兩日我都有解釋過。

問：係咪先，以前？

答：啱，啱，啱，你啱。

問：跟住，但係個 BS 又間中有少少轉，少少轉，少少轉，咁少少轉，你又唔理，又冇問題喎。

答：唔係唔理嘅。即係我哋以前嘅概念就係話，即係只要唔係有好 significant 嘅 change，嗰件嘢...

問：咁你可能好--你第一次有少少 change，第二次有少少 change，第三次有少少 change，夾埋就唔掂，你跟唔上。

答：所以而家我哋咪加強咗個 control。

問：係喇。

答：不過我諗我之前都即係講過，而家我哋其實 tighten 咗個 control，就畀番五年佢；甚至係如果有需要，我哋可以 withdraw 咗個 approval 嘅。

問：即係所以你要明白，而家係用好多公帑嚟做呢個 enquiry，係好多人喺度，嗰好多心機、時間。

答：明白。

問：咁而家就係希望你哋就攞啲好嘅方法出嚟，係咪？幫我哋解--即係等主席同埋個 member 寫一個好嘅 report 出嚟。

答：其實我哋都係一路諗緊。你見我哋其實都 implement 咗一啲 measure。正如頭先你講嗰個五年嘅，咁我哋呢件事都係我哋即刻即係要...（聽不清）

問：但係唔係我--但係好多好嘢你又唔跟，Professor Fawell 嗰啲嘢。即係你個部門咁都唔--畀埋好嘢你嘞，人哋，國際專家，你哋都唔要嘅。即係你--所以你哋呢個部門個態度係令我好失望。咁點搞啫，將來？靠你喎，人哋。而家啲水都係要靠你哋嘅。Professor Fawell 話你哋可以做到好好㗎。佢話而家唔曳嘅，好多嘢，但係點解咁大件事出嚟？咁佢諗埋方法幫你解決，你冚嘩吟你都唔要。

答：唔係唔要嘅，我哋...

問：你係好多嘢唔要。

答：我哋會詳細研究個報告。

問：但係根本你淨係最緊要你哋話嗰個 WHO 嘅 standard，佢已經話唔係呢個 standard 嚟嘅。都唔係你嘅理解。你就話 health-based，人哋都話唔係嘞，你又唔睬佢。

答：唔係，唔係我...

問：佢話唔使 10，5 都得。甚至我問佢，佢話 2 都得。你又係唔睬佢。

答：唔係唔睬。琴日我都講過我會...

問：去到個 water safety 個 plan，係要 involve 好多人嘅，嗰啲 stakeholders 嘅，你又係唔聽話，又唔睬佢。咁點啫？

即係我哋可以做嘅，做到點呢，主席已經幫你諗埋計，做埋個 preliminary report，兩個 expert 話係一定要 first draw，你又唔理佢，係咪？

答：唔係，今日我--我諗我唔想再詳細即係再重複，因為其實我都講過...

問：你係冇理到，唔接受。

答：我唔同意係冇理到。其實我哋--琴日都講過我哋會...

問：你唔接受囉。

答：我哋要研究，因為其實而家係-- Professor Fawell 當然佢嘅意見我哋好尊重，我哋亦都要睇番其他...

問：尊重而唔跟嗰度弊吖嘛。

答：唔係，我諗合理地去睇番。

主席：呢啲我哋唔好再花時間，係嘞，呢啲口水戰。

問：我想問你，你哋去抽水辦嚟驗嘅時候，咁你哋咪攞咗好多抽水辦嘅，啱唔啱？

答：你講緊係個 task force 嘅工作，定係...

問：即係加埋晒幾多個抽水辦？你如果冇呢個數字，唔緊要。即係相當多，加埋晒，當然係好多、好多樓宇裏面。其實你總共嘅抽水辦，我哋覺得少嘅，不過你抽好多。你每一次抽水嘅時候，你啲伙記去㗎嘛，係咪？

答：你講緊幫即係房署公屋驗水嗰個計劃？

問：係嘞，係嘞。

答：係呀，我知道都抽咗好多水辦，但係具體數字我冇。

問：咁係咪你哋嘅伙記有份去嘅？

答：我哋我...

問：邊個去抽水辦㗎？

答：我哋，我哋，我哋。

問：你哋？

答：嗄，嗄。

問：你哋負責嘅？

答：係。

問：好嘞，咁你哋開個水喉開到大，兩分鐘或者五分鐘，啱唔啱？

答：照個 sampling protocol，主要就係兩分鐘。

問：一定要大，開大個水喉㗎嘛？

答：Exactly 個 sampling protocol，我嘅印象中係要開兩分鐘，然之後...

問：唔係，開大個水喉兩分鐘，你 flushing 吖嘛，你冇理由細細聲，啲水喉㗎嘛；你唔知呀？

答：我相信係開盡嘅應該。

問：係喇，梗係喇，邏輯上。

答：我相信應該會，應該係，flush，flush 兩份鐘。

問：好嘞，你開盡呢兩分鐘，甚至五分鐘，有冇措埋啲水，將來點樣用？慳水吖嘛。你叫人哋慳水，咁你自己有冇措埋？

答：我諗 practically 我啲同事去做 sampling 嗰陣時就好難做到呢樣嘢。

問：呢個就係問題。即係你哋自己可以好好咁表揚畀人睇，「喂，慳水呀，嗱，攞個盆出嚟載住佢。」你都冇做。

答：因為--唔知呀。即係你--當其時...

主席：對唔住，呢個問題真係唔好--我明你講乜㗎嘞。

李柱銘先生：Okay。

主席：下一個問題。

問：你哋係知道，即係你哋嘅部門，起碼你自己係知道，如果啲啤啤未出世受鉛水嘅影響，喺媽咪嘅肚裏面，或者有啲出咗世之後受含鉛超標嘅影響，係會影響到佢哋嘅發達嘅，你知唔知？

主席：出咗世之後。

李柱銘先生：出咗世之後，係嘞。

問：你知唔知？

答：呢個而家我睇咗好多報告，知喇。即係以前我就基本上知道對健康有影響，即係去到幾細，即係點樣影響...（聽不清），嗰啲我就即係--係喇。

問：係嘞，同埋個專家話咗出嚟。

答：係嘞，係嘞。

問：同埋影響咗--因為佢係嗰個--當佢發--當佢一路咁樣大嘅時候，嗰啲細胞一路咁加，加嘅，嗰個時候，如果一影響咗，唔返得轉頭嘅，即係唔可以遲啲生番轉頭，唔得嘅。你聽過呢度，啲口供？你知嘅？

答：咁詳細我就冇...

問：即係有得補救。

答：咁詳細我冇跟得咁貼。我淨係知道對即係六歲以下嘅小朋友個影響係大嘅。

問：Okay。你哋又知道有啲香港人同埋啲住居屋嘅人，佢有啲人，你哋就話好少數，但係都有相當多人係朝頭早一開水喉，喺個廚房開水喉，就用嚟做飲同埋食嘅用途，你知吖嘛？有啲咁嘅習慣。

答：唔係，即係如果我哋係--而家係咪即係又話番個 sampling 嗰樣嘢？

問：唔係，唔係。我而家好快脆咁樣講。你知㗎嘛？

答：唔係，你話有冇人咁做，唔係...

問：唔係，你哋啲 figures 攞出嚟㗎。

答：即係我哋話有 5 個 per cent，...

問：係喇，係喇，咁都 5 個 per cent...

答：...喺早上可能攞去飲先咁樣。

問：咁 5 個 per cent，唔少人，係咪？

答：有一定數量。

問：係喇，所以有一定數量。咁呢啲家庭裏面，一定有啲家庭裏面有啲小孩子，一定有㗎嘛，係咪？一定有㗎？

答：相信會有。

問：咁所以如果呢啲人用咗 first draw 係可以對嗰啲小孩子帶來無可補救嘅傷害，你睇到㗎喇？

答：我...

問：一步跟一步咁落嚟，係咪？

答：唔係，即係其實你--我哋而家成日講就話佢 average 即係日常飲用水嘅水質。即係佢--甚至你話佢會...

問：你唔好同我拗呢度嘞，因為佢真係飲水，唔係日日用嗰啲。

答：唔係，但係佢跟住全日都會仲飲其他水質嘅水。

問：佢有啲--你煲咗水喉--一煲咗一大煲水，跟住就一路飲。跟住呢度就係凍滾水，我哋中國人叫做，係咪？

主席：唔係，個問題咁，lead 係 accumulative，你明唔明？

李柱銘先生：係，唔沖得散。

主席：係呀，係一個 accumulative 嘅 toxin。

答：唔係，我想講番話即係你--因為佢--如果你計全日計，咁佢唔係飲到最高嗰個。

主席：你又好難--你唔可以咁樣樣。

答：Okay。不過我諗-- okay。

主席：某程度上唔可以話「啊，你全日，跟住下晝飲嗰啲水，你冇咁多鉛，所以你就係...」

李柱銘先生：洗番乾淨，咁唔使...（聽不清）

主席：「...稀釋咗嘞」咁，唔可以咁，唔可以咁計。

答：Okay。不過我--係喇，我諗陳健民先生都...（聽不清）

問：唔好講佢呀，我唔該你真係唔好講佢。

答：Okay。

問：你睇--我啲係邏輯嚟㗎，逐度、逐度，你同意吖嘛？即係話如果有個家庭係用 first draw 嚟煲水，跟住就開奶粉畀嗰啲啤啤或者啲細路仔，就會影響到佢嗰個腦部嗰啲細胞嘅 growth，你同意吖嘛？

答：唔係，呢啲專家講過呢啲，我睇過佢啲意見。

問：係喇，佢會咁吖嘛。

答：嗄，嗄，啲專家。

問：你冇第二啲專家意見話佢講錯話，講錯說話，唔啱吖嘛？

答：我自己亦都唔係咁識。

問：係喇，okay。好嘞，咁你又知道--我唔想深入，但係我話畀你聽，所以如果你驗 first draw，可能就有一個樓宇就變咗係 affected 嘞。但係因為你唔驗 first draw，咁呢個樓宇就變咗 unaffected 嘞。咁嗰個細路仔要喺呢度住，就可能受害個囉喎，啱唔啱？同唔同意呢個可能性先？

答：唔係，而家你--即係，第一，我唔係即係喺 sampling 呢個 specialist，我亦都唔係即係嗰面。

問：我都唔係。

答：即係我聽咗幾面嘅專家嘅講法，Professor Lee 有，Professor Fawell 有，甚至我哋陳健民先生都有畀咗即係唔同嘅意見...（聽不清）

問：唔係甚至，係尤其是陳健民先生，喺你嘅角度。

答：因為你--陳健民先生，我記得佢都喺呢度都解釋過好詳細，即係點解會 take 一個咁 sampling protocol，個 base on that。

問：唔係，你當而家我哋嗰兩個專家話一定要用 first draw，你當佢錯先。咁事實上你錯好、啱好，事實上係有人哋用 first draw 嚟飲食，嚟用吖嘛。唔好理佢啱定錯，呢個事實嚟嘅。你哋自己都查到，5 個 per cent，okay？當你 5 個 per cent。你明唔明？咁呢啲人，嗰啲有孩子就會中招，係咁簡單之嘛；你接唔接受？

答：我...

問：你唔好理佢係咪 normal，冚嘩吟唔好理嗰啲。

答：唔係，但係我真係唔係呢瓣嘅專家，研究係咪...

問：你唔使專家，求其有普通常識、有邏輯就會明白我個問題。問題你肯唔肯答嘅啫。

答：唔係，我諗我答唔到。

問：唔係你答唔到，你唔想，唔肯定答之嘛。

答：唔係，我...

問：你點會唔...

主席：得，得，得，唔好再繼續嘞。下一個問題。

李柱銘先生：Okay。

問：而家你嘅部門就仍然係唔肯驗 first draw 嘅，啱唔啱，到而家為止？

答：我哋個 sampling protocol 仍然係嗰個。

問：係。好嘞，我而家再畀--拎番個本子畀你睇。

李柱銘先生：好快嘅啫，主席。

問：A1/22。Internal pagination 係 10。

答：Sorry，...

問：呢本本子，第 10 版。

答：唔。

問：有冇？

答：睇到，睇到。

問：第 10 版，係嘞，左手面嗰面，係嘞。頭嗰四行，呢度，第三行開始得嘞，「由政務司司長領導嘅跨部門會議於 7 月 11 號啟動，並作出重要後繼工作」，後繼工作，「和相關措施嘅決定。」

因為頭先我啱啱問你嗰啲問題，你覺得有冇需要而家將呢個唔肯抽呢個 first draw 嘅水辦呢個決定，應唔應該向佢哋作出一個報告，等佢哋可以作出一個相關嘅決定，你預唔預備交畀佢哋去處理？

答：我覺得呢個一個幾專業嘅問題嚟嘅，我需要--你話--點都好，我哋今次譬如調查委員會好，幾個專家報告都好，我哋都睇咗，佢哋有佢哋嘅意見。我哋會同我哋專業嘅即係我哋啲化驗師等等，我哋都會好詳細考慮番大家畀嘅意見，我可以咁講。

問：你冇答我個問題。你預唔預備聽完...

答：唔係，因為我唔覺得你叫我答問題。

問：因為佢哋嘅決定，佢哋要作出決定吖嘛。

答：你點講，咩嘢決定呀？

問：我頭先啱啱讀完，第四行，「並作出重要」，呢個重要喇，「後繼」，後繼喎，「工作同埋相關措施」，相關措施就係咩嘢水辦都係包喺嗰度，「的決定。」佢哋可以 overrule 你哋㗎嘛，係咪？林鄭月娥女士可唔可以 overrule 你哋呢個決定，即係唔肯行多一步，唔肯抽 first draw，啲水辦，呢個決定，佢哋可唔可以 overrule 你呢，可唔可以先？

答：我諗佢當然對我哋嘅工作可以有啲指示，但係我覺得呢個咁專業嗰個睇法，我都要同我啲 chemist 佢哋--我諗呢個最重要，因為佢哋專

業啲㗎嘛。

主席：唔係，你純粹答佢個問題。

石先生：其實呢個答案都已經重複咗好多次，咁亦都係用番琴日嘅。我諗問好多次個官方嘅取態，都會係話要研究。呢個可能係一個滿意或者唔滿意嘅答覆。咁但係即係委員會遲啲考慮晒所有嘅證供，出到個報告，可能有一連串嘅提議，咁水務署考慮有足夠時間，如果接受或者唔接受...

主席：唔係，我知你想講乜，我亦都知道你嘅答案。不過佢個問題就--你要答李大律師嘅問題。我即係...

答：唔係，因為我覺得呢個係一個專業嘅工作。

主席：唔係，唔係。佢話如果--你有你嘅睇法。你個睇法上咗去之後，佢可唔可以 overrule 你？咁佢作為政務司司長，我相信一...

答：唔係，我諗佢都要考慮番我哋嗰個專業嘅要求。

主席：唔係，佢可唔可以 overrule 你？佢考慮咩嘢嘢係另外一件事，啱唔啱先？佢考慮完之後，佢可以話「我跟番你。」

李柱銘先生：升幾級添，可能。

主席：或者考慮完之後，「我 overrule 你。」可以㗎嘛。

答：我諗佢要 take into account 所有嘅 profession...

主席：唔係，呢個係另外一樣嘢嚟嘅。聽清楚個問題。可以定唔可以，係咪？即係可以喇，梗係。

答：唔。

主席：佢聽係另外一件事，啱唔啱？兩件事嚟㗎嘛。

答：Okay。

問：咁點呢？

答：即係好似主席咁講囉。

問：你岋頭冇用，因為岋頭呢度冇 record。

答：佢可能要考慮晒所有嘅專業意見。

主席：啱。

答：不過諗專業意見，一個好重要嘅意見嚟嘅。即係因為呢個其實都幾重要...

黎先生：唔係，我覺得係個問題應該係咩嘢呢，喺現階段水務署會唔會就已經得到喺呢個委員會聽到其他專家嘅意見嗰陣時，喺呢個階段向呢個跨部門委員會提出任何建議，關於係即係驗水辦嗰個嘅方法，定係等到呢個委員會嘅報告出咗之後，然後先至提交意見上去畀呢個跨部門委員會呢？

答：我諗我而家需要嘅係一定係要詳細研究，我亦都要諮詢我專業嘅部門。

黎先生：即係事實上簡單啲就等我哋嘅報告出咗，然後先至...

答：我諗 in the meantime 我哋都會做嘢嘅。

黎先生：咁梗係喇，係咪？

答：嗄，嗄，嗄。

黎先生：即係咁解囉。

問：你哋可唔可以 set 一個 preliminary 嘅線？聽日出咁就最好。其實我個問題到而家，我想你入 record 之嘛。因為主席問咗你可唔可以。主席話可以喇，你岒頭。岒頭，個 record 冇㗎，嗰度 show 唔到出嚟㗎，將來。你話「可以」，咁就得嘞。

主席：唔係，咁我想問嘞，咁又有啲咩嘢意思呢？下一個問題就係。

李柱銘先生：既然佢岒咗頭，即係可以，咁佢又唔講，咁個 record 冇㗎嘛。不過都得嘅，我講咗咁多喇，應該得㗎嘞。因為我話佢岒頭，佢冇 deny，冇出聲 deny。Okay。

答：...（聽不清）因為我覺得黎生頭先個問題就即係準確啲，我可以答得到囉，係

問：好呀。

答：係。

問：係。我哋三個人，你答一個都好，你答吖。

答：係。

問：係，答喇，黎生個問題，你頭先...

答：我答咗囉。我咪話我哋會研究，即係啲所有專家報告，我哋都會詳細研究，我要同署方...

主席：即係你會等我哋個委員會報告出咗...

答：我諗 in the meantime 我都會做嘢嘅。我一定--因為而家有兩個專家報告已經出咗，咁我哋一定會睇睇大家...（聽不清）

問：咁我就冇法子唔問嘞，做乜嘢呀，in the meantime 你會做過乜嘢？

答：我要同我啲專業部睇囉。唔係，我呢個真係需要。

問：咁好嘞，如果呢個委員會做咗個報告嘞，係認為你哋有做得唔啱嘅地方，希望你做好啲，你哋會唔會又同啲專家研究下，同啲業界研究下？定係既然委員會聽咗咁多意見，寫咗個報告，清清楚楚，畀個指示我哋嘞，我哋就跟住去做，會唔會做，定係只係話「咁我哋都可以考慮嘅」咁？係咩嘢嘅答案呢？

答：我諗咁好難答個喎。

黎先生：呢個事實上係政府係咪接受我哋嘅報告嘅啫。

答：即係而家...

主席：係呀，係呀，呢個另外一樣嘢。。

黎先生：係咪？我哋個報告唔係交畀佢㗎嘛，我哋交畀政府㗎嘛。

問：咁如果係政府接受，咁你就聽喇，係咪？

答：政府接受，我都係 part of the 政府㗎喇，係咪？

問：需唔需要再研究下？

石先生：考慮過好多嘢之後就會決定接唔接受㗎喇。

李柱銘先生：不如石大律師坐喺嗰度，我問佢快好多。Okay。

石先生：因為其實好多嘅問題都已經係接近陳詞嘅性質。

主席：係呀，陳詞嘅嘢嚟嘅。

石先生：同埋係睇緊水晶球，睇下將來會點樣。將來嘅事自然...

主席：呢個我唔會--永遠都唔知㗎喇，係。

問：Okay。我冇乜幾多嘢問㗎嘞。你哋呢個做咗一 questionnaire 係問人哋點樣去--嗰啲用水，啲人嘅習慣，朝頭早用咩嘢水。我而家問你幾個 general question。你唔使睇嘅。咩嘢嘅理由或者咩嘢事令到你哋覺得喺呢個委員會仲聽緊口供嘅時候，都未做完呢個工作嘅時候，突然間要咁快嚟做一個咁嘅調查；然後個調查都未完，就拿拿聲就將嗰啲暫時睇到嘅嘢就交畀呢個委員會；有咩嘢令人咁做呢？

答：我冇直接參與呢個...

問：冇人話你直接參與呀。

答：嗄，嗄。

問：你同意佢哋咁做㗎嘛？

答：我相信同意，因為係我哋啲同事會做。因為其實我哋有個 TWM 個--即係 Total Water Management 其中一個 survey，咁我哋都想了解下佢哋個用水習慣。

問：點解突然間呢個時候做？同埋都未曾做完喎，就拿拿聲去交出嚟？

答：我估有啲--我唔記得一路發展落去係好似有啲人想--陳健民先生 quote 咗...

主席：咩嘢話？

答:陳健民先生喺佢作供嘅時候 quote 咗一個咁嘅 interim finding of survey，於是乎大家覺得需要，咁搞到入嚟啫。

問：咁即係係咪因為想拿拿聲做啲證供，拿拿聲做啲嘢，有啲資料，等陳健民先生可以喺呢度用呀？

答：我覺得未必一定咁直接嘅，不過我唔知有呢個--我...

問：未必一定咁直接，okay。

答：我應該答唔到嘅，呢條問題。

問：Okay。未必一定咁直接，okay。而家我哋知道出毛病嘅地方，咁我哋又好多建築商又嚟，喺度喇，有啲喺度，有啲唔喺度喇，咁就 main contractor 喺度，subcontractor，咁又有水喉匠喇，你預備--即係呢啲名而家上網可以睇到喇，咁你哋會唔會預備再查下，即係呢啲咁嘅 companion，即係又係呢個建築商，又係呢個 main contractor，又係 subcontractor，跟住用呢個水喉匠，佢哋仲有冇第二啲工程係佢哋做㗎？你哋會唔會喺嗰度再查多啲呢？即係用呢個 angle 嚟查，會唔會？

答：其實我印象中--我啲同事都睇過個喎，好似--就算同一個水喉匠，或者同一個，都唔係單單有問題個喎。我記得好似喺呢個 hearing 度都有咁嘅，係知道。

問：咁即係你哋有...

答：有望過下。

問：...根據呢個方面，係因為呢一班人呢一次就做得唔好嘞，你哋有--你有跟住去再查其他所有嘅 projects，有冇咁做？其他...

答：我哋應該有攞過。同埋我記得委員會...

問：攞過？

答：即係睇一睇。因為委員會都發覺其實--我記得唔係委員會發覺，應該係個 hearing 嗰陣時亦都有睇，有呢個，見到呢個情況就話就算係嗰個水喉匠或者個 contractor 等等，都唔係話單單有問題嘅。

問：係。即係咁你有冇細細心心咁樣，仔細地做一個咁嘅工作？

答：唔係，因為我諗...

問：即係呢--譬如呢幾個人出咗事嘞，咁係因為呢幾個人喺香港咁多水務工程裏面，私樓好--先公屋先喇。公屋裏面，仲有冇第二啲 project 佢哋做㗎？

答：因為你而家...

問：就係因為咁而特別去查，有冇？有定冇啫？

答：我哋睇過，冇咁嘅 conclusion 可以 draw 到。

問：咁就即係冇做囉喎？

答：唔係，你...

問：你睇唔到㗎？你點樣睇呢啲？查佢至得嘅。

答：唔係，佢冇咁嘅 companion 有 affected。冇 affected，你咪知囉。

問：因為冇 affected，就算冇 affect 呢，因為啲 sample 唔係多吖嘛，你...(聽不清)唔 make 咁 sure？點解唔去查啫？你而家有個方法，喺出面查㗎嘛，係咪？出面驗吖嘛，係咪有呢個方法吖？

答：唔係，即係我覺得...

問：唔係，係咪有呢個方法先？

答：嗰個可以查嘅，係，可以。

問：咁點解唔去試下呢？喺出面啲水喉嗰度試下呢？可唔可以呢？

答：唔係，其實個問...

問：幾個個組合，呢啲組合，再做咗其他公屋，就算你認為佢而家 unaffected，咁出面試下，唔係好難啫，係咪？

答：係呀，其實講緊個 scale of problem 都好多嘅，你講緊都好大嘅。唔係，我想講番頭先你講個 point，其實佢個 first line 去做一個 screening，你得出個結論係冇咁嘅情況。咁我覺得你喺...

問：呢度奇怪嘞，有冇--你而家事實上話十一個屋邨有喇。

答：唔係，因為你--其實你--我覺得你--做嘢都係有個 party，因為我嘅資源係 finite，我唔係乜都走去做。即係當我睇咗第一個...

問：你個資源 finite，嗰個跨部門嘅委員會可以畀你支持㗎嘛。今次又試有盈餘嘞。今日講㗎嘛，有大把盈餘。

答：唔係，即係我哋個 first line screening 其實已經睇到係冇嘅情

況吖嘛。

問：點解冇呢個情況？你十一度公屋係有啲咁嘅情況嘞，你知道呢幾個人嘅組合，起碼喺呢度出咗事嘞。

答：但係喺--亦都見到有係好--佢好多條屋邨係冇事吖嘛。

問：你冇出事，你係驗水啫。咁我而家話你既然有啲先進嘅嘢嘞，唔使驗水嘞，咁係再驗下，得唔得呢？唔好驗水嘞，唔係一陣又拗過嘞，又first draw 嘞。唔好驗水，喺出面啫。

答：我都講咗，即係我個睇法就係咁樣樣喇。

問：即係唔肯喇，係咪？

答：唔係，我真係睇唔到個需要，因為我好 honest...

問：睇唔到個需要，okay。係，我冇題目嘞。多謝你。

答：好。

主席：你有咩嘢問題呀？

陳宇文先生： Mr Chairman, I only have one question, but I would just like to just ventilate it with you, to see whether in fact you wish this to be put to this witness or whether this is something you are content to have done by way of submissions.

Back in the days of the Airport Core Programme works, the ACP works, there was the concept of an independent work checker, independent design checker. I am just wondering whether this concept of the use of an independent work checker is something that you would allow me to put to this witness, or are you content for it to be done by way of submissions?

主席：Submission 得喇。

陳宇文先生：Thank you.

許偉強先生：主席，就住琴日李大律師同黃先生討論有關嗰個 task force 嗰個 meeting 個 minutes 嗰度有一點我想跟進番嘅啫，就係嗰個第一個 meeting 嗰度。

許偉強先生繼續盤問

問：或者麻煩你睇一睇 C19.6，13898。

答：13898，okay，okay。

問：Paragraph 4.4，就係尋日李大律師同你問過嘅，就係呢度就話"Members expressed that the procedures to collect water samples would affect the testing results of lead content."咁呢度就講"Flushing tests ... and Stagnation test ..."，兩個 test 都講晒出嚟嘅，就"... are to be conducted at different time intervals so as to address the controversy over the procedures of taking water samples."

呢度就係第一個會議。咁我知道就係水務署，你就係作為個 task force 嘅 chairman，咁另外一個參與嘅就係陳健民先生。

答：陳健民都有，係。

問：同埋就係梁中立先生，佢就係作為...

答：梁中立係 secretary，secretary，係。

問：...個秘書嘅，係咪？

答：係，係。

問：咁我想問一問就係例如你哋討論過呢啲咁嘅抽水辦嘅事情，你喺個 task force 嗰度討論完之後，就有冇攞番去水務署嗰度就再傾番，即係你哋嘅意見係點樣嘅？

答：冇，因為嗰個抽水辦其實當其時大家好想 find out 嘅就係個 effect of stagnation and the effect of flushing on 嗰個 content。呢度我諗唔係最--因為即係當其時好多人拗，頭啖水係咪高啲呀，咩嘢，咁樣樣。咁我嘅印象中大家都係想睇睇 stagnation

嘅 effect 係幾大嘅，即係究竟令到佢譬如高幾多；然之後 flushing 嘅 effect 有幾大，咁所以我哋喺個報告亦都有交代呢個 point。

問：Okay。就從個報告嚟睇，咁應該你哋當時，你本人喇，同埋你哋即係一齊水務署代表參與個 task force 都冇異議就係話，啊，都應該係考慮用 flushing 同埋 stagnation 嘅 test 去嚟到攞水辦嚟到係...

答：唔係咁嘅意義，唔係咁嘅意義。

問：係。

答：我再想講，呢個 stagnation and flushing test 純粹係想睇 the effect of stagnation。即係唔係話「啊，你哋第日攞水牌呢要攞 stagnation sample 定係 flushing sample」，唔係咁嘅 intention，係想睇個 effect。即係當你一個水留咗喺個 system 裏面，一段時之後，四十八個鐘頭，其實佢會係點樣影響緊個水質嘅。And then 如果你 flush 咗之後，又點樣影響緊個水質。

問：好。咁或者我睇一睇另外一個 meeting 嗰度，就係--如果我哋先睇第二個 meeting 嗰度，係 13919。

答：一三九，sorry？

問：13919。

答：Okay。

問：13919 就有一度係講"Testing of Samples"，咁當時就講呢個啟晴邨同埋呢個葵聯邨嘅。咁你睇下 3.1 嗰度。咁 3.1 就係即係"Members' views on TF Paper No. 2/03 were sought. The Paper was subsequently endorsed at the meeting."

如果你睇番呢個 Paper 2/03，就應該係 13944 嗰度嘅。

答：13944，係喇。

問：13944 同埋 13945，都係講緊當時即係建議嗰個 stagnation test 同埋個 flushing test 喇，係咪？

答：點做法。

問：係咪？

答：嗄，嗄。

問：咁就13945就講番出嚟嗰兩個test個methodology喇。

答：嗄，嗄，嗄，嗄，嗄，嗄。

問：係咪？咁然後如果你去番13919，咁當時大家即係討論完之後，就係同意就係呢個啟晴邨同埋葵聯邨都係採用即係兩種個test方法嘅，即係stagnation同埋flushing test都會採用嘅，係咪？

答：唔係，唔係採用，係其實當其時係想做一個叫做--即係正如我頭先講過，我哋喺葵聯邨同埋啟晴邨揀咗五個vacant flat去做呢樣嘢。咁嗰個test就係會咁做，即係當stagnate咗，一路攞水辦，四十八個鐘，and then flush水。即係唔係採用，即係其實係成個testing protocol就係。

問：明白。咁但係你哋當時討論完之後，同意咗個結論就係話samples從例如stagnation test同埋呢個flushing test嘅samples都會攞嘅，當時嘅討論。

答：其實唔係，因為成個investigation，during the stagnation嘅時候，我點知佢嗰個lead content點increase法啫？咁我惟有就係話每一段時間，喺stagnate一個鐘、兩個鐘、四個鐘、八個鐘，每一個時間我都要攞個水辦出嚟，去驗番佢裏面個lead content，我先知佢個變法。

問：明白。但係起碼你同意就話呢個討論完之後，你哋嗰個agreement就係話唔可以淨係睇個flushing test？

答：哦，冇，我--我唔係得出嗰個結果。唔係得出嗰個結論，係得出嗰條curve嘅結論。

問：Okay。咁你如果--麻煩你再睇一睇第五個會議，喺14057。

答：14057。

問：如果你可以揭去14061，3.2嗰度

答：係。

問：咁呢度就話"The Secretary"，即係梁先生，"presented the paper titled 'Proposed Mitigation of Lead Contamination in Tap Water' prepared by the Advisory Committee on Water Resources and Quality ..."，即係嗰個水諮會，"The paper set out the overseas experiences in tackling lead contamination problem and proposed a number of measures ..."

咁我哋睇下個"Short-term measures"先，"Flushing for at least one minute prior to drawing water for potable use"。即係呢個就係可能你要即係同啲公眾講嘅。第二就係"Proper use of filter"。第三就係"Standardising the water sampling methods"。

如果我哋睇一睇呢一個咁嘅報告，呢個 Paper，...

答：呢個 Paper。

問：...喺 14111 嗰度，咁有關嗰個我剛才提到嗰個 sampling method 個事項，就喺 14117。

答：Okay。

問：第 3 點，呢度咁講，"WSD should standardise and educate ..." --呢個就係嗰個水諮會嗰個報告。

答：係，係。

問：就係"... educated the public on the proper sampling methods and protocols for drinking water and the analytical method in order that the water quality results by WSD and outside parties are comparable. At present, the practice of WSD is to flush the pipe leading to kitchen taps for 3-5 minutes before sampling ... However, as shown in Appendix 1, other countries and places have adopted different protocols. Notably, the Lead and Copper Rule requires a first draw sample ..."

主席：第3點。

許偉強先生：第3段，14117，"Recommendations"底下第3段，係嘞。

問：跟就係中間嗰度，"Notably, the Lead and Copper Rule requires a first draw sample, ... that is taken after water has been standing for at least 6 hours and from an interior tap typically used for consumption - cold water kitchen or bathroom sink in residences. The EU 'Guidance on sampling and monitoring for lead in drinking water' recommends random daytime sampling with no flushing for inventory monitoring, while a different protocol is recommended for investigative monitoring. It is understood the Legislator Wong is adopting the LCR protocol.

跟住嘞，"We recommend that both pre-flush, i.e. allowing water to stand in pipework for at least 6 hours and post flush samples, ... after flushing for 2 minutes, should be drawn from the kitchen taps and that ICPMS ..."，呢個係其中一個spectrometry，就係一個方法嚟嘅。

答：係。

問："...should be used for analysis in [the] HOKLAS accredited laboratory."

我想問一問，黃生，你記唔記得即係呢一個咁嘅short-term recommendation，即係關於即係話，欸，唔好淨係攞flush嘅sample嘞，即係都可能要考慮埋其他國家嗰啲建議，就係--而呢度個水諮會嘅建議都係話要攞pre-flush同埋post-flush嘅samples嘅。首先我想問下你，喺第五個會議嗰度，有冇討論過呢個問題呢？

答：我印象中應該冇嘅，因為當其時--我諗講講個背景喇。因為我哋去到8月，因為我哋--你知我哋其中一個terms of reference就係要make recommendation吖嘛。咁我哋就開始搜集一啲資料，即係喺各個--即係有啲人嘅建議，因為我哋都要stimulate下，或者畀啲input畀啲task force member去諗將來我哋需要一啲咩嘢

recommendation。而你知我哋其中一個 member，係陳漢輝博士，咁佢係我哋水諮會主席，咁佢亦都即係畀咗一張佢自己做嘅 paper 出嚟。咁我哋其實當其時就純粹係話「啊，其實有啲咩嘢 recommendation 將來 task force 會考慮呢？」咁於是乎--其實詳細就冇嘅，只係純粹講咗，「啊，有啲咁嘅，可以諗喎，譬如 dosing of phosphate，呢啲咁」，咁嚟叫做畀一啲 input 個 task force member 去考慮將來要 make 一啲咩嘢 recommendation。

問：但係咁喎，你如果睇番 14061。

答：係。

問：呢度，其實石大律師有問過陳健民嘅，咁佢又話唔係好記得有冇討論過呢個問題。

3.2，呢度就講得好清楚，就話秘書處--秘書喇，就直情係 present 咗呢份文年出嚟，...

答：其實...

問：...咁就跟住--我哋睇下先吓。你等完我問埋你先吓。

答：好呀。

問："Short-term measures"同埋"Medium-term measures"。跟住 3.3，"Members were invited to propose measures to prevent recurrence of similar incidents in future."

我首先想問下你就係你有冇睇過啱啱我畀你睇嗰份即係水諮會嗰個報告，入面係有呢啲咁嘅 short-term measures 嘅 recommendations 先？

答：我自己就冇詳細睇過張 paper 嘅。當其時，正如你頭先都好呀，講埋 3.3 出嚟。其實成件嘢個 flow 就係話我哋畀一啲即係其他啲人嘅諗法，and then 我哋就 invite 嗰啲 member 去建議一啲 measure。即係我哋呢個可以講話 stimulate the thoughts of 啲 task force member，我哋--啊，即係大家有啲咁嘅睇法，有啲咁嘅意見，咁大家可唔可以呢？」咁我記得當其時係冇詳細討論呢張 paper 嘅，只係純粹畀你，「啊，有啲咁嘅嘢 measure」，咁樣樣。

問：你都講喇，即係你當時個會議都想 stimulate，...

答：係，stimulate the thoughts。

問：...大家有啲咩嘢意見，咁希望可以防止類似嘅事件發生。

答：其實 stimulate the thoughts of the member 去 propose 一啲 measures。

問：呢一個咁嘅 Proposed Mitigation of Lead Contamination，呢個水諮會即係都係一個即係喺水質嚟講，監控嚟講，都係一個即係重要嘅會嚟㗎，你同意嘛？

答：佢哋都係一個對水質監控有一個重要嘅...

問：係吖，咁 present 咗呢份 paper 出嚟，都係一個即係重要嘅 paper，當時畀你哋 task force 嘅 members 去考慮喎，同意嘛？

答：你話好重要，我又覺得唔係話真係--即係佢嘅 input 係好 valuable 囉，我覺得。即係佢 stimulate 一啲 thoughts 畀我哋。咁佢有啲--因為其實你到睇到個 paper 都好長嘅。如果你睇嗰次會，我哋其實當其時仲係實--如火如荼，最重要嘅都仲係想去證明嗰個 cause of excessive lead。咁就要開始--因為我哋要部署下一步嘅工作，就係我哋要準備 recommend 一啲 measure，that's why 我哋就搵一啲咁嘅資料返嚟，就好 briefly 話咗畀啲 task force member 聽，等佢哋--可以刺激下佢哋啲思維，然之後我哋你重要，喺 3.3 喇，就希望佢哋開始諗嘢，我哋有咩嘢咁嘅 measure 可以建議。

問：好。你喺呢個會度，咁起碼就係--即係你可能本人你冇留意到，話冇特別去睇呢份報告。咁但係我想問下，呢啲咁嘅資料，你喺 task force 嗰度攞咗返嚟嘢，咁你有冇話帶到返去水務署，例如同署長或者同陳健民先生同埋梁生去到討論下呢啲咁嘅 recommendations 呢？因為呢啲係人哋做出嚟嘅 recommendations 嚟個喎，即係你哋應該都係要虛心去考慮㗎嘛。

答：唔係，所以虛心考--即係當其時個最 primary 嘅 purpose 就係喺個 task force 度要 make recommendation 吖嘛，咁嗰個--成件嘢個目的就係咁嘅。咁我哋嗰陣時成個 focus 係擺喺 task force 度。

問：係。Task force 係當然你哋最後係要得出個 recommendations。

答：係，啱。

問：但係其他人嘅 recommendations，你哋都需要考慮㗎，同意嘛？

答：你講喺水務署嗰個層次？

問：好似我哋而家講緊呢個水諮會嘅 recommendations，都需要去考慮嘅，同意嘛？

答：係。我自己就冇特別將呢份嘢話搦過水務署嗰面傾過。

問：水務署亦都冇--以你嘅認知，水務署，你哋自己內部都冇特別考慮過呢份文件入面嘅 recommendations，係嘛？

答：我唔肯定--因為我亦都有啲同事負責水諮會嘅，咁我唔肯定嗰面有冇啲--特別討論過，我就唔肯定。

問：好，得，唔該你。

答：Okay。

黎先生：我...（聽不清）睇呢啲嘅文件，我有少少奇怪嘅，因為水諮會佢哋交嗰啲文件，你哋好似淨係 note 咗佢㗎咋喎。我個印象呀，淨係 note 咗有張咁嘅文件，咁係冇討論嘅，即係--而嗰個 water sampling 嗰個問題討論咗幾次喎，你喺個 task force 個會，但係次次睇落去睇唔到個 conclusion 嘅。我覺得好奇怪。

答：其實唔--唔係，我想搞番清楚個 stagnation and flushing test，in itself 唔係話真係想 devise 一個 sampling protocol 出嚟，唔係咁嘅意義。當其時即係大家講話「欸，你 first-flush，係咪好高呀？沖，係咪好易大家沖走呀？」咁我哋--我記得成員就話「啊，咁不如我哋睇睇，其實當你一啲水 stagnate 喺個 system 裏面呢，個 lead content 呢係點？」於是乎我哋成個 focus 就係擺喺我一路點樣做呢個樣辦。

其實我哋中間都有啲插曲，即係因為你攞，如果攞得多呢，你可能 disturb 咗嗰個 stagnation 嘅。即係如果我「Hur」一聲抽，抽 1 litre 出嚟，佢成個--咁我哋係主要個 focus 想睇到嗰走勢。And then 你見我哋喺個報告個結果度，喺 section --我唔記得 2.9 喇，我哋畀咗一條 curve 出嚟嘅。我哋睇番嗰個走勢其實係點

樣樣。

即係嗰陣時 task force 個 focus 係應該擺喺我哋想睇嗰個 effect，即係 stagnation 嘅時間對嗰個 lead content 嘅影響，就唔係話想 devise a sampling protocol 出嚟。

黎先生：但係唔係喎，如果睇你嗰個，譬如 14061，人哋個"Short-term measures"係講緊"Standardising the water sampling methods"嚟個喎。

答：嗰個係水諮會嘅建議吖嘛。唔係，個水諮會嘅建議吖嘛。

黎先生：係。

答：水諮會有一個建議。

黎先生：咁係一個建議嚟個喎。

答：佢因為佢其實...

黎先生：但係你哋根本完全冇傾個喎，淨係話嗰張 paper 喺度，就講緊呢樣嘢㗎咋喎。

答：所以嗰陣時個 presentation 就--因為我亦都講喇，我哋有-- task force 其實當其時有兩個工作好緊要，第一，就係 find out the cause，which 其實都好繁重嘅工作，即係...

黎先生：搵嗰個 cause 梗係重要喇，但係並不表示你就係話可以 ignore 咗人哋一啲嘅 proposal。

答：唔係，因為如果--唔係，我唔係喇。

即係如果你諗番 from task force 嗰個 terms of reference 嚟計，我哋其實個最重要就係 recommend 啲嘢 prevent recurrence 吖嘛。即係所以其中譬如 dosing of orthophosphate 呢啲，即係有人提出嚟嘅，佢水諮會有咁嘅建議，但係我哋最終係冇採納到。即係因為呢一系列嘅嘢係水諮會。我哋當其時個 primary purpose，即係話去 stimulate 番 task force member，去畀一個思維，「究竟我哋將來可以 recommend 一啲咩嘢 measure，去喺個報告度提出嚟。」

黎先生：Okay。

王先生補問

問：黃先生，喺你被房委嘅何大律師盤問嘅時候，其中一個範疇就係關於AP嗰個角色，話AP係咪適合去certify嗰啲用嘅stock，物料嘅。咁呢度我想帶你去睇兩份文件。呢兩份文件就係我哋喺禮拜一係入落去嗰個文件檔案夾嘅。咁就我想請你睇C21嘅19095頁。C21，19095。

答：係，睇到。

問：呢份文年就係1995年嘅，即係話1982年，即係adopt咗要AP做certification之後，大概十幾年之後，喺1995年嘅5月6號...

答：16。

問：啊，5月16號。咁呢封信就係話--我讀出嚟，"It is proposed to designate an appropriate group of qualified persons to take care of the design and installation of water supply plumbing work and the correct use of pipe material in building projects. This group of qualified persons shall be registered by this Department as Registered Persons for the specific purpose."

所以當時係有一個concept，個概念，話registered persons係水務署想propose嘅。咁你都記得何大律師帶你睇過HKIA嘅recommendation，佢就話「啊，你睇下個圖吖，有一度呢冇咗個'registered person'嘅。」

答：唔，唔，唔。

問：咁就喺1995年嘅時候就水務署曾經propose過有呢個registered person嘅。

答：唔。

問：All right。我想問你嘞，當時嘅關注點就係"to take care of the design and installation of water supply plumbing works and the correct use of pipe material[s] in building

projects."

咁我想問你嗰個焦點話"correct use of pipe material[s] in building projects",係淨係講 functionality 吖,抑或係講水質,包埋水質嘅?

答:我諗呢--去到 95 年,一定係包埋水質㗎喇。因為我琴日都講過,即係 material 嗰個要求,係除咗 function 之外,佢仲有好多嗰個 chemical composition,佢要求係要喺個 BS 裏面有,咁應該同個水質有關係。

問:Okay。咁跟住我就想睇下 HKIA response to 呢一個 proposal,咁就下一頁。咁就喺 1995 年嘅 8 月 29 號 HKIA 就回覆咗關於呢個 proposal,就進行咗一個回答喇。咁第二段,"Under the current practice, the Authorised Persons, who act as the co-ordinators of buildings works under the Building Ordinance, are the qualified professionals who look after the design and installation of water supply plumbing work and the correct use of pipe material[s] in building projects.

We therefore recommend that Authorised Persons under the Building Ordinance should be recognised as qualified persons to be registered by Water Supplies Department for this specific purpose."

呢個就係當時建築師學會嗰個反應喇。

答:唔,唔。

問:好喇,好喇,到呢個鉛水事件發生之後,如果而家 AP 就話「喂,其實我哋冇足夠嘅知識個喎,因為我哋係 AP 嚟嘅」或者「我哋係對水特別唔係好認識嘅,咁所以呢如果我哋要去 certify 呢,似乎就唔係好適當喇」咁樣。對於呢個講法,你有咩嘢回應呢?

答:即係其實我之前亦都講過,我唔同意嗰個睇法喇。第一,正如呢度咁講喇,即係其實佢哋都係一啲 qualified professional in construction 嘅,佢對即係 plumbing work 有基本一定嘅認識。第二方面,佢哋--即係因為係整個地盤個 co-ordination 等等,佢哋都係一個負責嘅人。佢就算唔去到一個話好 expertise 嘅 level,其實佢一定知道點樣去 put in a system,去 ensure 呢

啲嘢係 properly constructed 嘅。

問：Okay。我哋或者睇埋最後嗰度喇，佢就話"Members of our Institute that have qualified for the List 1 of the Authorised Persons would have acquired the basic knowledge of design and installation of plumbing system in their university education and professional training. They would have supervised periodically the carrying out of plumbing installation as part of their inspection duties on building works."

佢哋咁講，對於你水務署繼續畀 AP 呢一個責任去 certify 嗰個 compliance with 嗰個 correct building materials 有冇影響呢？

答：應該冇影響喎，佢哋應該係--我哋覺得佢係有咁嘅能力去做到呢樣嘢。

問：好。另一樣嘢就係何大律師都有問過你，關於嗰個風險評估。咁佢話風險評估就分開四樣嘢。一，就係 hazard identification；二，就係 risk assessment；三，就係 control measures；四，就係 verification。In view of 呢封信同埋呢個建築師學會喺 1995 年嘅取態，關於水務署喺發生呢件事之前，因為我哋可以有事後孔明，twenty-twenty hindsight，喺發生鉛水事件之前，你哋有冇 identify？你哋冇 identify 到有一個 hazard，呢個 hazard 就係 AP 或者係嗰個有關嗰個制度...

主席：呢個係 hazard，應該係。

問：即係有人唔遵守嗰個法例，呢個 hazard。即係有法例喺度，...

主席：呢個點樣樣話係一個 hazard 呀？呢個都叫做一個 hazard 呀？

王先生：因為...

主席：呢個係一個 control measure。呢個 control measure 究竟 e 唔 effective 係另外一樣嘢。

王先生：係。

主席：你點樣樣話 architect 係一個 hazard 呀？

王先生：唔係，唔係，我唔係話嗰啲 architects are a hazard，當然我唔係咁講。

問：即係話我想講或者個風險，即係話有立例。即係你記得何大律師曾經講過，有咗立例或者一個 contractual specification，all right，咁你記得佢話，佢話 eye on a ball，佢話 focus，即係話有啲 specification 重要啲，或者有啲 specification 呢，就我如果我唔知道個 significance，即係我可能個 focus，佢話 eye a ...（聽不清） on a ball，all right。In view of 呢封信，all right，你覺得話水務署當時就冇 identify 話個 risk，即係話有主咗例，就有人會違例，點解水務署冇有呢個，你個理由係乜嘢？即係話水務署點解當時唔 aware 到，「我立咗條例，我 put in 個 system，但係會有人唔跟嗰個 system」？

答：即係 given 即係...

主席：我唔明你個問題問乜呀？你想問咩話？

王先生：即係我想問--因為嗰個問題 being put 就係話，哦，水務署就應該到有個 risk，就係立咗例，有人會違例，有人唔會遵守嗰個合約嘅規定。咁個問題就係話解釋當時水務署冇 aware 或者冇 assess 到呢一個有立例，而有人唔遵守嗰個 contractual requirement 周埋嗰個 regulations，呢一個風險啫。

答：即係而家再睇埋呢封信，更加即係相信當其時既然即係 authorised person 或者 Hong Kong IA 都有表示佢哋有咁嘅能力去處理到或者確保到啲物料可以即係 comply with 嗰個 specification...

主席：呢個問題其實又即係問咗即係等如冇問嘅，基本上。

個問題就係譬如好簡單，你任何一個 ordinance 會 impose 好多 statutory duties 喺一個人嗰度。譬如醫生 order 啲 dangerous drug，佢要有一個 register，啱唔啱？

你個問題就話「啊，你有冇 anticipate 過呢，呢個醫生呢？你點解唔會」--即係你個問題即係返番去就係話，喂，你假設所有嘅醫生都一定 fulfil 呢個 statutory duties，就一定會 fill up 嗰個 register。咁呢個世界唔係咁㗎嘛。

王先生：唔係。主席，因為...

主席：咁你嘅意思係咪即係話，啊，於是 Department of Health 就唔需要搵啲 inspectors 係去查下嗰啲醫生究竟有冇跟足呢一個咁樣樣去做嘞；係咪咁嘅意思？

王先生：主席，呢個唔係我個意思，尤其是關於...

主席：因為你 precisely 就係咁嘅意思喇。

王先生：唔係，...

主席：你而家即係話「喂，你都 delegate 晒畀個 AP 嘞，你冇諗過個 AP 係會唔遵守法例嘅，唔遵守個要求，」有乜嘢唔同啫？

王先生：唔係，主席，呢個問題其實當時何大律師亦都問過 identical 嘅問題，何大律師都有問過嘅，我只不過想澄清，in view of 呢一封信，同樣一個問題...

主席：冇呀，有乜嘢分別啫？

王先生：主席，或者我冇再...

主席：唔係，你係 delegate 咗畀個 AP。唔係，我哋講嚟講去都係下一步吖嘛。係呀，你 put in control measures 去 prevent 嗰啲錯嘅 material 用吖嘛，係咪？呢個係一個 control measures 嚟㗎嘛。

石先生：我諗王大律師嘅 point 就係即係你之前可能得個信字。而家就係 AP 主要嘅來源，即係 IA 就話埋畀你聽，「你信我哋喇」咁，咁會唔會加深咗佢嘅信任。我諗王大律師係咁嘅意思。

主席：唔係，咁呢個係其中...

王先生：即 represent。

主席：呢個係其中一個 factors 攞落去個 control measure 個度之嘛，係咪先？即係因為佢係一個 qualify 嘅人，所以你會唔會更加信佢多啲，咁嘅意思之嘛。咁但係到最後都係去到下一個問題。

答：主席，我唔知可唔可以畀少少意見喺度。係我覺得 non-compliance 係可以係一個風險嚟嘅。然之後...

主席：唔係，我哋而家講緊 water qualities 吖嘛，你明唔明？

答：我知，即係你當然 put in --不過唔緊要喇。即係 put in 個 system 之後，呢班人--okay。

主席：我哋而家講緊 non-compliance --唔係，我哋而家講緊 water qualities 裏面嘅 hazard 吖嘛，啱唔啱先？

答：Okay。

主席：即係佢講嗰啲 hazard 就另外一樣嘢嚟嘅，基本上。

答：係嘞，佢嗰個應該係應該風險。

主席：完全都見唔同 context，講緊蘋果同橙，基本上。

答：唔。

主席：我哋而家休息，唔該。

答：係。

上午 11 時 47 分聆訊押後

下午 12 時 14 分恢復聆訊

出席人士如前。

水務署第四證人：黃仲良（水務署副署長）宣誓繼續作供

王先生：主席，我冇其他問題。

主席：唔該。

唔該晒，黃先生。

答：好。

主席：可以離開㗎嘞。

下一位證人，唔該。

王先生：梁永廉先生。

主席：或者我講一講先，我相信我哋個聆訊會喺--evidence-wise 就相信會喺 2 月尾就會完結，除非你哋有好多嘢問嘅啫。咁我相信 2 月尾，即係去到下個禮拜頭初就應該完㗎嘞，咁就...

請坐先喇。

咁就我睇番過去上一次南丫嗰個海事嗰個專責委員會嗰個程序就係，evidence 就係星期五完，星期日就要入呢一個 submission，星期一就聽呢個 final address。係呀，所以話聲畀你哋各位聽先，實際上係咁嘅，不過我唔會嘅，我會比較--不過我話畀你聽，唔好預咁多時間，有幾個--一個月或者幾個禮拜畀你哋做。即係而家 forewarn 你，如果要做嘅話，就唔該你快啲做。另外，就係去到 final--遲啲我會再出個 direction，就係究竟你哋究竟可以 file 幾多個 pages of 你哋個 final submissions 呀，唔多過幾多呀，同埋個時間係畀你哋講幾耐咁上下。

不過就可以話埋畀你哋聽，個 order of 嗰個 submission，就係調番轉，就係水務署會行先，跟住就係啲 licensed plumber，如果佢哋有嘅話。同埋啲 plumbing sub-contractors，跟住就 main contractors，跟住就到呢一個房委會。即係調番轉頭咁樣樣做嘅，所以房委會就有多啲時間嘅。

咁就一樣嘞，就都係一樣，我會 set 個時間就係要你哋喺同一日一次過一齊交晒所有嘅 submission，然之後我先至會公開，咁大家又係唔可以睇大家究竟寫咩嘢先。跟住到最後你哋有 final--最後可以 oral submission 嘅時候，咁你哋再先至去 supplement 你哋--如果人哋講過啲咩嘢，你哋咪喺嗰度 supplement 囉。

咁呢個就係我個一般嘅構思，所以話畀各位聽，你哋有嘅時間去做你哋個 final submissions 唔係咁多嘅啫。

係，得。

王先生：好，唔該，主席。

主席：唔該，唔。

水務署第五證人：梁永廉（水務署助理署長）以本地話宣誓作供

主席：請坐，梁先生。

王先生主問

問：梁先生，你就入咗一份證人口供，咁我而家就會將呢份口供，read it into the record。係。

COMMISSION OF INQUIRY INTO EXCESS LEAD IN DRINKING WATER APPOINTED PURSUANT TO SECTION 2 OF THE COMMISSION Of INQUIRY ORDINANCE (CHAPTER 86) ON 13 AUGUST 2015

WITNESS STATEMENT OF Mr LEUNG Wing Lim

I, LEUNG Wing Lim, Assistant Director / New Works Water Supplies Department ("**WSD**"), 48th Floor, Immigration Tower, 7 Gloucester Road, Wan Chai. Hong Kong, do say as follows: -

1. I am the Assistant Director/New Works of WSD and have held this position since 26 January 2012. My duties include. amongst other things, the planning, design and construction of new waterworks and replacement and reprovisioning existing waterworks such as water treatment works and water mains.

2. This statement consists of 2 parts. In Part 1 , I will explain the stakeholder approach, which is one of the principles underlying various administrative and operational measures undertaken by WSD in discharge of the statutory functions of the Water Authority ("**WA**") under the law. In Part 2, I will give evidence on the monitoring and control of water quality at waterworks from the perspective of design, construction and maintenance (a partial response to questions raised by the Commission of Inquiry at paragraphs i.2 and i.3 of Lo & Lo's letter dated 12 October 2015). In fact, the information requested at para i.2 and i.3 spans across different areas of the work of WSD, namely:

Waterworks

- The requirements and standards pertaining to the monitoring and control of water quality at the waterworks from a water science perspective, to

which the World Health Organization's(WHO) Guidelines for Drinking-water Quality are taken as a reference guide for water quality levels in Hong Kong although they have no independent statutory force. On this aspect, Mr. CHAN Kin Man, Chief Waterworks Chemist, is in a better position to provide the relevant evidence, and I understand he has addressed the same in Part 1 of his 3rd Statement;

- The requirements and standards pertaining to the monitoring and control of water quality at waterworks from a design, construction and maintenance perspective, which will be covered in Part 2 herein;

Inside service

- The requirements and standards pertaining to the monitoring and control of water quality at inside service from a water science perspective, albeit there is no statutory standard of water quality as such in Hong Kong. On this aspect, again Mr. CHAN Kin Man, the Chief Waterworks Chemist, has covered in his 3rd statement; and

- The requirements and standards pertaining to water quality from the perspectives of construction, custody and maintenance etc. of inside service, for which the consumer/agent of an inside service/communal service is chiefly responsible. This area includes the statutory requirements concerning construction of inside service by licensed plumbers (**"LP(s)"**), the stipulation of

British Standard (**"BS"**) in relation to choice of pipes and fittings, and the inspection and approval of inside service before effecting water supply, as well as other non-statutory waterworks requirements and standards. For these matters, Mr. LAM Ching Man, Assistant Director/Customer Services, is in a better position to provide the relevant evidence, and I understand that he has addressed the same in his statement.

Part 1 - Stakeholder approach

3. This part of my statement sets out the position, *as* derived from WSD's experience and understanding, as regards the usual and expected roles of various stakeholders including the Water Authority, Developer) Authorized Person (**"AP"**), Contractor, Plumbing sub-contractors and LP in ensuring that the plumbing works comply with contractual and statutory requirements in a building project. The position as regards the role of these stakeholders informs WSD's approach on the supply of safe drinking water and is relevant to any assessment as to possible enhancement measures as regards current arrangements.

Water Authority

4. While the Waterworks Ordinance (Cap.102; **"WWO"**) and the Waterworks Regulations (Cap.102A; **"WWR"**) do not stipulate any water quality standard, WA has pledged to ensure that the quality of water supply in the waterworks, over which WA has custody and control is in full compliance with WHO's guidelines. Waterworks end at the connection

point, i.e. the point between the government main and an inside service. As a policy initiative, WA has also taken steps to encourage the supply of safe drinking-water to end users through measures such as the Quality Water Supply Scheme for Buildings.

5. Apart from being a supplier of water up to the connection point, WA has also a regulatory function in administering provisions of WWO and WWR. In relation to an inside service, the statutory framework provides for, *inter alia,* the general standards of all pipes and fittings installed, LPs' responsibilities for constructing, installing, maintaining, altering, repairing or removing inside services, and consumers/agents responsibilities for keeping inside service clean.

Water Authority: Statutory framework in respect of inside service

6. Although WWO and WWR do not stipulate any water quality standard, WA considers that compliance with the requirements of WWR can reasonably safeguard the quality of water within the inside service. In relation to the standards of pipes and fittings, an obvious example *is* the prohibition of lead pipes and leaded solder. For plumbing systems constructed in compliance with the applicable statutory prohibition on lead pipes and leaded solder, the risk of compromise of water quality by lead contamination is low.

Water Authority: Prohibition of Lead Pipes and Solder by legislation

7. In Hong Kong, the use of lead pipe for applications involving drinking water has been restricted / prohibited since 1890. Reg. 16 of WWR 1890 provided that "[l]ead pipes will only be permitted in new services when the water which passes through them cannot be used for drinking or cooking". Reg. 11(5) of WWR 1938 provided that "[l]ead pipes will not be permitted for the conveyance of water supplied from the waterworks". By Reg. 19 and 20 of WWR 1974, every pipe and fitting shall be of BS and copper/copper alloy capillary fittings shall be of BS 864, which provides in its clause 5.2.2 (with its amendment AMD 5651 in April 1987) that "[f]or potable water applications the solder used for making capillary joints shall be one of the lead free grades of soft solder specified in Table 17". The Table 17 clearly requires that lead content in lead free soft solder'' shall not exceed 0.1%. There are now produced and shown to me marked respectively as **"Annex 1", "Annex 2", "Annex 3"** and **"Annex 4"** Reg. 16 of 1890, Reg. 11(5) of WWR 1938, Reg. 19 and 20 of WWR 1974 and a copy of BS 864.

8. As is apparent from the above historic development in legislation and technical specifications, the major components of plumbing in buildings that may cause high content of lead in drinking water have been prohibited for decades in Hong Kong. This is part of the background informing the assessment of the level of risk of poor water quality (including the risk of lead contamination) in Hong Kong.

Water Authority: Role in ensuring compliant pipes and fittings

9. It is important to note that the exercise of WA's regulatory function alone is insufficient to ensure the quality of water at tap, as inside service is not within WA's effective custody and control. In particular, to ensure compliant pipes and fittings are used in inside service, it is crucial that the owner of a property containing an inside service takes proper responsibility for the construction and maintenance of the inside service, this being an integral part of its property.

10. In this connection, WA has recognized that the quality control system adopted in the practice of the construction industry is generally an effective means to provide assurance that the pipes and fittings installed in inside service comply with the requirements of WWR. At the construction stage, the owner can normally be expected to and should implement relevant control measures which include: (a) stipulation of appropriate specifications in building contracts and adoption of measures to ensure that contractual specifications are complied with, (b) employing competent contractors to carry out the works and (c) proper site supervision by both the owners and their contractors. Such measures require effective collaboration among relevant stakeholders, with the property developer/owner playing a central role.

11. Based on the usual role of stakeholders, the relevant control measures at the construction stage should normally operate as follows. First, the developer of a building usually engages AP to design the building and to reflect its requirements in the relevant construction contracts as well as to supervise the construction of the building. Other qualified persons (such as Clerks of Works, Building Service Engineers, Building Service Inspectors) will also be hired by the

developer to station on the site on a full-time basis to supervise the works (including plumbing works) by contractors (including its sub-contractors of all tiers) for compliance with statutory and contractual requirements. Second, the contract administrator (usually the AP) certifies completion of the works if he opines that the works are substantially completed in accordance with the relevant statutory and contractual requirements. For every construction contract, the quality of the works, which in modern times will often be complex and extensive in scale, is primarily dependent upon an effective and detailed contract administration and day-to-day site supervision mechanism as well as the fundamental integrity of the main contractor (which is normally selected by the property developer/owner), plumbing subcontractor, the contract administrator and the resident site staff of the project.

12. WA considers that the likelihood of non-compliant pipes and fittings being installed but remaining unnoticed can be greatly minimised by making use of the above-mentioned quality control system which is widely adopted in the construction industry. The utilization of this system *is* also consistent with the WAs finite resources and its wide remit, covering waterworks across Hong Kong.

13. Based on the above understanding, one of the steps taken by WA to ensure that the plumbing works comply with statutory requirements is to require the LP (i.e. the qualified person to undertake plumbing works) and AP (the coordinator of building works) of the relevant building project to certify compliance with the WWR (and hence BS) of the pipes and fittings used in the construction of inside service. The LP and AP should of course satisfy themselves that they have properly carried out their

duties before such certification. LPs are qualified personnel specifically trained in the construction of plumbing works and their performance is regulated by law (WWR). APs are professionals hired by developers to supervise, among other duties, the construction of the works, including plumbing works, in a building contract. They would normally employ a competent supervisory team (such as clerks of works and building services inspectors) resident full time on site to supervise the works including plumbing works during construction. For complex and modem communities to function effectively, it is necessary to place trust on designated professionals by virtue of their skills, knowledge, experience and integrity (regulated either by legislation or by their professional institutions) to provide a guarantee to the quality of works under their supervision which can be generally taken as reliable.

14. By requiring the LP and AP of the relevant building project to certify compliance with the WWR (and hence BS) of the pipes and fittings used in the construction of inside service. WA considered that the likelihood of having non-compliant pipes and fittings installed but remaining unnoticed is slim because the control measure of legal prohibition of lead pipe and leaded solder, coupled with the certification of compliance by AP and LP, can be taken as effective. This view *is* buttressed by the fact that there had been no indication that the effectiveness of the continuous site supervision system was to be doubted. Prior to the present excess lead in water incident, there had been no complaint of existence of excess lead in water, and there had been no finding of use of illegal leaded solder in the past in Hong Kong despite its vast and long standing construction industry. Indeed, the WHO, with its global remit and substantial resources, did not consider there to be any generally pronounced global risk in respect of the unauthorised use leaded solders. On the above basis,

the risk of leaching of lead causing excess lead in water due to non-compliant pipes. fittings and materials should be minimal.

15. Indeed, the above-mentioned control measure is applicable to every component of pipes and fittings, not only lead pipe and leaded solder. In fact, to further safeguard the quality of water supply to consumers. the treated water before leaving the water treatment works is dosed with post-treatment chemicals such as chlorine for disinfection and maintaining a residual level of free chlorine to prevent bacteria re-growth in the distribution networks and hydrated lime for pH adjustment to about 8.2-8.8 to reduce corrosivity of treated water supply and protection of water mains. For details, please refer to the 3rd Witness Statement of Mr. CHAN Kin Man, the Chief Waterworks Chemist.

Water Authority: Measures implemented after the recent lead in water incident

16. The recent excess lead in water incident has drawn to WA's attention that the likelihood of illegal use of leaded solder which remains unnoticed under site supervision system at construction stage ma y be higher than previously believed. Thus, enhanced control measures as well as water quality monitoring at inside service have been put in place since the recent excess lead in water incident. For details, please refer to the Witness Statement of Mr. CHEUNG Yip Kui, Senior Engineer/Customer Services (Technical Support) 2 and the 3rd Witness Statement of Mr. CHAN Kin Man, Chief Waterworks Chemist.

Water Authority: Inspection and approval

17. Against the said framework of control measures for which relevant stakeholders such as owners are primarily responsible, WA carries out inspection on finished plumbing works of inside service for considering whether approval and connection to the main are to be granted. Because of the complexity of the plumbing installations and the short time available for inspection, it is impractical to examine every part of the water supply systems during inspection The inspection will generally follow a risk-based approach. One major focus of WA's inspection is on prevention of misuse and wastage of water and pollution to government water supply. It will focus on visual inspection of the communal parts of the inside service as any failure of the communal parts of the inside service will have a great impact on the proper functioning of the entire plumbing system. There will also be spot-check of the inside service within a few flats. The inspection focuses on the sizes, configuration and alignment/position of pipes, fittings and meters against the approved plumbing drawings as well as the materials as listed in the Annex to Form WWO 46 submitted previously by the AP and LP. In granting the eventual approval, reliance is placed on LP's and AP's certification that the pipes and fittings are in compliance with WWR as the final audit can never be a substitute for the proper and close day-to-day site supervision during construction. Also, leaded solder can hardly be detected by visual inspection after completion of the plumbing works, but can be more effectively and efficiently detected during the course of site supervision.

Water Authority: Encouraging consumers/agents to keep inside service clean

18. WA seeks to encourage the proper maintenance and cleanliness of the inside service after construction is complete and premises are occupied. For example. in 2002, WA launched the Fresh Water Plumbing Quality Maintenance Recognition (which has been renamed Quality Water Recognition Scheme for Buildings since January 2008 and re-titled Quality Water Supply Scheme for Buildings - Fresh Water in March 2015) to encourage estate management agents to regularly clean and inspect the inside service. There is now produced and shown to me marked as **"Annex 5"** a copy of pamphlet "Quality Water Supply Schemes for Buildings". These efforts are again premised on the reality that it is building owners and managers who are most appropriately placed to address quality matters in respect of their own inside service provisions. For details, please refer to the Witness Statement of Mr. Lam Ching Man, Assistant Director/Consumer Services.

Developers

19. Property developers have the responsibility of ensuring that all aspects of their buildings are in compliance with relevant statutory requirements when the building is delivered for use. It is also in a developer's own interest that its building is satisfactorily completed meeting all relevant requirements before requesting the statutory authorities for inspection to avoid any post-completion replacement or reconstruction works which could be costly and time-consuming thereby delaying the issue of the occupation permit. Developers usually engage APs to design the building and reflect their requirements in the relevant construction contracts. They employ contractors to carry out (and to sometimes design and construct) the building works including the plumbing

works. The AP (and a supervisory team) appointed are under a duty to supervise the building works including the plumbing works.

20. As mentioned above. any non-conforming works including the plumbing works may require substantial time and effort to rectify, which will in tum affect the development progress of the buildings and potentially prejudice end users. It is thus reasonable to expect that property developers would pay proper attention to the quality of plumbing works and make use of the various systems generally adopted in the construction industry to assure themselves as to the quality of works and compliance with relevant requirements. It is also reasonable to expect that they would properly design, construct and supervise plumbing works as in the case of other building works. For example, at the construction stage, property developers may deploy a system to monitor contractor's submission of material proposal, contractor's working method, delivery of materials to the site, supervision of works and inspections and testing. As such, from the perspective of compliance with statutory requirements and quality assurance (including the developers' own interest in seeing the orderly completion of construction works), it is reasonable to expect that property developers would assume a significant role in ensuring fully compliant inside services.

APs

21 An AP performs the essential role as a co-ordinator of building works. The role and expertise of APs are generally recognised within the Hong Kong construction context. The property owner/developer engages an AP to

supervise the works under a building contract, which normally includes plumbing works of inside service and contains relevant specifications of the plumbing works (including the requirement that the plumbing works will comply with the WWO). As a co-ordinator bound by contractual obligations, it is reasonable to consider AP as one of the key stakeholders in the control regime to ensure water quality by proper supervision of the plumbing works for compliance with the requirements of the building contract. Further, wider the Buildings (Administration) Regulations, Cap.123A, APs are required to submit to the Building Authority a certificate regarding water supply connection to be issued by WA upon completion of a new building. For buildings to which a supply of water is required to be connected for any purpose, the Building Authority may refuse to issue an occupation permit when it is not satisfied that connection of water supply has been duly made to the building by WA (section 21(6)(e) of the Buildings Ordinance, Cap. 123). It is thus reasonable to expect that the AP will likewise properly supervise the plumbing works as in the case of other building works.

22. In respect of the WWR's requirement of pipes and fittings in inside service to be of BS, the AP together with the LP have been required to certify compliance since 1987. There is now produced and shown to me marked as **"Annex 6"** copies of WSD Circular Letters dated 2.7.1982 (**"the 1982 Circular"**) and No. 3/86 dated 5.12.1986 (**"the 1986 Circular"**). The AP and LP were reminded of their responsibility to ensure that pipes and fittings conform to the requirements of the WWR.

23. By the 1986 Circular, since 1 January 1987, the AP and LP have been required to certify in the revised Form Ga that the pipes and fittings to be installed are

as prescribed by the WWR i.e. Reg.20 and subject to Reg.25 of the WWR, and to submit an Annex to the Form Ga to report all pipes, the draw-off taps, stop valves, gate valves, ball valves and combination fittings to be installed. Also, the AP have been required to sign the revised Form WWO132 to certify that all pipes and fittings used are in full compliance with Waterworks Standards and requirements.

Contractors and Plumbing Sub-con tractors

24. Developers normally contract with main contractors, who undertake to carry out all building works of the development projects including the plumbing works. With the growing complexity and increasing scale of plumbing works in modem buildings. main contractors of development projects rarely employ individual LPs directly to construct the plumbing works, but rather engage plumbing sub-contractors. The plumbing sub-contractors may either hire LP(s) or employ their own LP(s) to carry out plumbing works in compliance with the requirements of the building contract and of WWR.

25. Under a usual building contract, the mam contractor IS responsible for all works under the contract regardless of its sub-contracting arrangement. As such, the main contractor is responsible for engaging suitable construction management personnel for continuous supervision of the works in order to ensure compliance with contract specifications.

26. By the same token, sub-contractors would usually also have contractual obligations to ensure that the

personnel further down the line would comply with the sub-contract requirements. In the normal practice of construction industry, "back-to-back" arrangements are adopted, with the relevant requirements under the main contract mirrored in the sub-contracts. In the case of further tier(s) of sub-contracting, the sub-contractors at the higher tiers are (as in the similar situation of main contractors) also responsible for the supervision of the works of lower tier sub-contractor(s) in order to ensure compliance with sub-contract specifications. Where a sub-contractor lures or employs workers, the sub-contractors also have responsibilities to supervise the works done by the workers in order to comply with the sub-contract specifications.

27. Likewise, for plumbing works, plumbing sub-contractors are responsible for ensuring that the plumbing works carried out under the sub-contract will comply with sub-contract requirements. Depending on the sub-contract conditions. either the main contractor or the plumbing sub-contractors (or both) shall ensure that an LP is engaged to carry out the plumbing works in compliance with the requirements of the WWO and WWR.

28. Subject to the sub-contract conditions and arrangement for procurement of pipes, fittings and associated sundry items for the plumbing works, it is normally the contractual obligation of the main contractor or the plumbing sub-contractors (or both) to ensure that compliant materials are used for the plumbing works.

29. The arrangements outlined above are commonplace across the Hong Kong construction scene, including for private development projects. Since contractors and

plumbing sub-contractors are the stakeholders responsible for carrying out the plumbing works and are contractually liable for non-compliant or defective works, it is reasonable to expect that they would assume proper roles in ensuring that the plumbing works comply with the contractual and statutory requirements. This has indeed been the general experience of WA over the years.

Licensed Plumbers

30. By the 1982 and 1986 Circulars earlier mentioned, WA imposed requirements on LPs to certify, in his submission of Form WWO 46, that all pipes and fittings to be installed are as prescribed by the WWR. LPs (together with APs for new building works) were reminded of their responsibility to ensure that pipes and fittings installed must conform to the requirements of the WWR.

31. LPs are trained and qualified by relevant institutions to be capable of constructing plumbing works. They have the knowledge and experience in the industry to prepare plumbing proposals, to use approved materials and proper workmanship for compliance with the contractual and statutory requirements. LPs are subject to a range of enforcement actions, including suspension and cancellation of their licence, for contravention of WWR.

32. WA considers that LPs are stakeholders who have the requisite qualification to undertake plumbing works of inside service and to certify the works to be as prescribed by the WWR. As such, LPs have a key role in ensuring that the plumbing works comply with contractual

and statutory requirements.

33. As to the questions concerning licensing of plumbers raised by the Commission of Inquiry at paragraphs i.10, i.11 and i.12 of Lo & Lo letter dated 12 October 2015, Mr. LAM Ching Man, Assistant Director/Customer Services, is in a better position to provide the relevant evidence, and I understand that he has addressed the same in his statement.

Part 2 - Requirements and Standards *I* Monitoring and control of water quality at waterworks (from perspective of design, construction and maintenance)

34. The Commission requested information on the following area at paragraph i2 and i3 of the letter dated 12 October 2015 issued by Lo & Lo Solicitors:-

"i. Director of Water Supplies (the "Director")

2. explain and identify the prevailing statutory and non-statutory requirements and. WHO and other relevant standards and parameters in ensuring safety and quality of drinking water ("Requirements and Standards") (including an explanation as to the reasons/criteria on which the Requirements and Standards were chosen or adopted for Hong Kong);

3. explain the measures and quality control system in place (prior to the incident of excess lead in drinking water) by the WSD in order to comply with such Requirements and Standards and

to ensure the safety and quality of drinking water."

35. As explained at the introduction of this statement, there are different perspectives in relation to the broad questions as formulated. On top of this statement, please also see the 3rd Witness Statement of Mr. CHAN Kin Man, the Chief Waterworks Chemist and Witness Statement of Mr. LAM Ching Man, the Assistant Director/Customer Services. I will cover the applicable Requirements and Standards in relation to the design, construction and maintenance of the waterworks, i.e. the waterworks facilities from water source: water treatment works, water distribution system up to the connection point which is the point between the main and an inside service.

36. WSD adopts the following prevailing documents as the standards and practices for the design, construction and maintenance of waterworks:

Document	Issued by	Version date
Manual of Mainlaying Practice, 2012 Edition (**Annex 7** to this statement)	WSD	June 2015
Civil Engineering Design Manual (**Annex 8** to this statement)	WSD	June 2011
General Specification for Civil Engineering Works, 2006 Edition (**Annex 9** to this statement)	HKSARG	June 2015
Model Tender Documents (**Annex 10** to this	WSD	August 2015

statement)		
Water Treatment Works operation and maintenance manuals*	Contractors/ Suppliers	Varies (available upon completion of the relevant plants/ equipment.)
Water Treatment Works Working Manuals*	WSD	2011 - 2012
Departmental Instruction No. 805 [CoI Bundle: C5/43/3597-3600]	WSD	May 2008
Departmental Instruction No. 1007 [CoI Bundle: C5/43/3679-3685]	WSD	July 2007
Departmental Instruction No. 1252 (**Annex 11** to this statement)	WSD	May 1989

*The Water Treatment Works operation and maintenance manuals and Water Treatment Works Working tv1anuals referred to above are voluminous. Copies will be provided to the Commission upon request.

37. The above documents are non-statutory and have been adopted by WSD having regard to international standards, local conditions and practices, past experience and previous studies. The Manual of Mainlaying Practice provides guidelines and practices for the design, choice of materials, installation, repair, rehabilitation, operation and maintenance of WSD water mains. The Civil Engineering Design Manual provides the procedures and technical aspects for the design of waterworks, including mainlaying, pumping stations, service reservoirs and water treatment works. The General Specification for Civil Engineering Works and

Model Tender Documents are used for the preparation of the tender documents for construction of waterworks. The General Specification lays down the quality of materials, the standards of workmanship, the testing methods, acceptance criteria and quality control for civil engineering works, including waterworks. The Model Tender Documents are a set of typical reference documents to be used by officers for preparing tender documents for construction of waterworks. They include the standard Particular Specification which provides additional or specific requirements and standards for construction of waterworks in addition to the General Specification. Water Treatment Works operation and maintenance manuals are provided by the contractors/suppliers upon completion of the plants/equipment to facilitate the operation and maintenance of the water treatment works. Based on these operation and maintenance manuals, Water Treatment Works Working Manuals have been compiled to promulgate unified good practices and procedures, to promote the sharing of experience and information amongst operators, and to provide simplified guidelines to facilitate respective staff in operating and maintaining the water treatment works. The Departmental instructions Nos. 1007 and 805 stipulate the requirement of cleaning and sterilization of service reservoirs and water mains respectively. The Departmental Instruction No. 1252 stipulates the procedures for determining the security grading of the waterworks installations and the requirement of the associated security measures to guard against theft, unauthorized entry and sabotage.

38. For design of waterworks, WSD adopts the procedures in the Civil Engineering Design Manual to ensure that all necessary actions will be taken during the design stage to ensure the quality of the design. The documents prepared during the course of the design are required to be prepared, recommended, vetted and approved by appropriate officers. Officers will ensure that all

identified requirements are duly incorporated in the design, with reference to relevant standards and practices. The layout design will be circulated to all concerned parties; proper liaison and coordination with stakeholders will be carried out to address the relevant concern is including future maintenance, operation and control issues. To maintain the quality of treated water, all pipes and fittings for waterworks are designed to com ply with relevant international standards, mainly British Standard. In addition, the manufacture and testing of the material s are specified to be subject to the inspection by an independent inspection body (UB) prior to the delivery of the materials. Security measures will be provided for water treatment works, including access control, security fencing, locks, security lightings. etc. for prevention of theft, unauthorized entry as well as deliberate contamination of water supply; and to safeguard the premises against vandalism or sabotage.

39. Under typical government forms of contracts for construction of new works, the Engineer for a contract will deploy a team of site staff to inspect and supervise the works throughout the construction. There are inspection and supervisory staff resident on site working full time and led by part time professional engineers on site to discharge the inspection and supervisory duties. For major projects, there are resident professional engineers working full time on site. The Contractor will also deploy his own team of site supervisory staff to ensure the quality of the works in compliance with the requirements of the contract.

40. For quality control of the works during construction, the site staff will follow the requirements and standards specified in the contract documents inducting the drawings, General Specification and

Particular Specification, check the inspection reports submitted by the IIB, check and arrange taking samples and testing as necessary of the materials used and check compliance with the required standard of workmanship. When all the works have been completed by the Contractor, the Engineer will ensure that the works have been checked and tested as necessary against the requirements of the contract, and issue a completion certificate for certifying satisfactory completion of the works according to the contract.

41. For maintenance of the water treatment works, relevant operational staff will follow the working procedures and requirements stipulated in the respective Water Treatment Works operation and maintenance manuals, and Working Manuals to arrange regular cleansing of different treatment units including filters, and routine maintenance of the associated equipment to upkeep the quality of treated water.

42. After leaving the water treatment works, treated water is delivered to the connection points through an enclosed water distribution system consisting of service reservoirs and water main networks. The risk of contaminant intrusion into the system is slim. Notwithstanding this, WSD carries out regular cleansing to the service reservoirs and flushing of the water mains at dead ends, in accordance with Departmental Instruction Nos. 1007 and 805 respectively, in order to remove sediments to alleviate the impact on aesthetic quality of the treated water, such as turbidity. In fact, the contents of sediments accumulated in water mains are mainly lime, traces of iron or minerals but these sediments will not pose risks to health or safety of water supply. Before making connection to a new water main, WSD will ensure that the new water main has been thoroughly cleaned

and disinfected according to General Specification or Particular Specification. Furthermore, samples are taken from the water distribution system regularly according to the established sampling procedures of WSD to ensure representativeness of the samples for monitoring of the quality of drinking water as supplied.

43. I confirm the contents of this Witness Statement to be true to the best of my knowledge, information and belief.

Dated this 11th day of November 2015

問：梁先生，我頭先就讀咗你嘅證人口供，你可唔可以確認入面嘅內容係真確無誤？

答：係，我確認。

問：係，你願唔願意採納呢個成為你喺呢個聆訊入面嘅主問證供？

答：我願意。

王先生：係，主席，我冇其他嘅問題。

主席：好呀，咁我哋晏晝食完飯返嚟先至再繼續，唔該。

下午12時58分聆訊押後

下午2時32分恢復聆訊

出席人士如前。

水務署第五證人：梁永廉（水務署助理署長）宣誓繼續作供
石先生盤問

問：梁先生，就在你作供之前，就水務署你其他好多同事都已經嚟過作供，...

答：啱。

問：...包括署長、副署長同埋陳先生，陳健民先生，有個喜訊話畀你聽嘅，就係其實好多要問你嘅問題，關於你嘅證人供詞裏面所講嘅嘢，都差唔多已經同佢哋問得--即係翻來覆去問咗好多次，我唔會好多問題問你嘅啫。

答：好。

問：唔知你係咪一個值得高興嘅事情。

答：我盡量幫手。

問：好。你嘅證人供詞第一部分主要就係講述水務署嗰個叫做一個官方嘅立場，就係嗰個持份者嘅 approach，你哋作為水務署，我試下用好簡短嘅語言講畀你聽，睇下你同唔同意，...

答：好。

問：...其實三言兩語，我去撮要你哋嗰個持份者 approach，就係水務署係有有限嘅資源，所以佢係有需要所謂優先次序同埋係好好地咁樣用佢有限嘅資源，呢個係其中一個因素，你哋水務署嘅一個立場，對嘛？

答：係，其中一個因素。

問：其中一個因素。理想嘅世界就係乜嘢都做晒，由於有限嘅資源，你就可能係需要 prioritise，係咪呀？即係定下優先次序，呢個係一個做法。

答：係。

問：另外一個做法就係靠持份者去幫忙或者去謹守佢哋自己嘅崗位。

答：係。

問：你嘅供詞就係所謂 identify 咗唔同嘅持份者，你亦都解釋咗就係水務署眼中，由於法律嘅框架也好，合約嘅框架也好，或者係基於一啲商業嘅理由，譬如話發展商，佢哋各自都有自己嘅誘因，甚至係法律或者合約嘅責任，大家都係殊途同歸，係需要確保 WWR 或者係合約裏面有關 British Standard 含鉛量嘅規則係受遵守嘅，對嘛？

答：係。

問：所以就水務署雖然唔係話完全唔理，但係你都合理地係倚賴呢一啲嘅持份者，大家合作就係把好呢個 British Standard 含鉛量呢個關，我咁樣去撮要水務署嘅立場公唔公允呢？

答：係，或者我有少少補充，我哋唔係單純睇呢個有限資源點樣去調配最有效，唔係單純係用呢個嘅，當然呢個係一個因素，...

問：係，因為你嘅第 12 段就凸顯咗 finite resources 呢個概念。

答：係，冇錯，嗰個係其中一樣，但係最緊要，我哋做好嗰件工作先，做好一件工作，我首先定下睇下有啲咩嘢可能嘅持份者，然後有啲咩嘢任務係交畀呢啲持份者係最恰當去履行，即係可以達到共同嘅目標，令到嗰個所謂 control measure，即係話符合呢個合約規條嗰啲，特別係內部供水設施嗰啲嘢係完全符合呢個合約嘅條文同埋呢個水務署嗰啲規條，所以係一個最--嗰個都係一個我哋好重要嘅考慮因素，係恰當嘅 allocation of 呢個 responsibility。

問:其中一個前提或者假設就係各持份者佢都會恰如其分地去 discharge 去履行佢哋無論喺法例上或者合約上嘅責任，對嘛？呢個前提。

答：當然係，有一個假設，但係唔係完全，因為我哋又係採取一個所謂 multi-barrier approach，譬如以呢個內部供水系統嘅監察嚟講，有三個 party 嘅，主要嘅 party，LP、呢個承建商同埋呢個 AP，即係佢要三個都唔符合--唔遵守--即係做咗佢自己本份，先至會呢個出現唔符合合約規條嘅嘢，所以我覺得呢個三重，我唔係淨係單純信一個，當然有唔同比重，我如果坦白啲講，最緊要就係第一步梗係 LP 做得好先，因為佢係自己負責嗰個嘢，然後就承建商，第三步就係 AP，AP 因為有關同事佢有駐喺個地盤嗰度，佢係有個...

問：邊班同事？Sorry，有關...

答：嗰啲 resident site staff，即係有 clerk of works 或者 building services inspector 佢哋，就駐喺地盤嗰度，佢哋多啲機會，因為我好強調嗰個 in-process supervision 嗰個重要性，即係喺建築期間，佢哋喺日常地盤嗰度巡視，佢因為撞到譬如呢個你做緊燒焊嗰陣時個機會大啲，如果佢睇到用焊條抑或焊線，抑或睇下個包裝紙，咁已經有機會--我講緊機會啫...

問：你指係 main contractor？

答：唔係，係呢個 resident site staff，佢係 AP 嘅團隊嚟嘅，佢係 independent of 嗰啲 contractor 嘅，independent of LP 嘅，我覺得佢哋係--我自己作為一個工程師，我自己都有好多合約睇，我就覺得--我好強調嗰個 in-process 嘅 supervision 嘅，嗰個就可以幫我可以大啲、多啲機會去搵出嗰啲不規則嗰啲地方。

問：你亦都有提議到過，就係風險衡量呢個概念，風險衡量，簡單咁講，就係如果一件事曾經發生過，你就知道撞過板就梗係有危險，好多時候都係咁樣啲制度都係咁樣形成嘅，發生過一件事，你知道「原來我哋以前嘅一啲假設係唔穩當，咁就要把多啲關喇。」但係風險有陣時值唔值得去 guard against，就唔係純粹取決於有冇發生過嘅，一個風險好細都好，但係後果好嚴重，呢一個亦都係考慮嘅因素，對嘛？

答：係，即係 historical event 當然對我哋有幫助嘅，但係我哋可以見到一個問題，都可以靠想像力諗下有啲咩嘢 scenario 會發生，即係可能未發生過嘅，最 rigorous 嘅 risk assessment 先至 identify 所有嘅 scenario，history 係其中一樣。

問：但係唔係全部，即係當然。

答：唔係全部。

問：如果你嗰個後果係好嚴重嘅，就算個 risk 純粹百分比係可能好細，或者十隻手指數埋可能得半次發生過，你都係要考慮或者落啲比重嘅，對嘛？

答：係，risk --我諗我啲同事有講過，有兩個 element，likelihood 同埋 consequence，如果 consequence 好重，譬如真係會影響人嘅健康、生命咁嗰啲，當然無論佢發生嘅機率係幾多，我哋應該要睇重佢，覺得呢樣嘢應該要拎出嚟睇睇點樣去盡量減低個 likelihood of such consequence occurring。

問：好，我睇下你所交託嘅持份者，你嘅證人供詞裏面就係提到有兩個嘅，一個就係 AP、一個就係 LP，我哋睇一睇你嘅證人供詞第 13 段，你嘅證人供詞第 13 段，"Based on the above understanding, one of the steps taken by WA to ensure that the plumbing works comply with statutory requirements is to require the LP (i.e. the qualified person" -- and AP。

跟住第六行，"LPs are qualified personnel specifically trained in the construction of plumbing works and their performance is regulated by law"，呢個 LP 你就咁形容，"qualified personnel"，見到嘛？即係合資格嘅一啲人員。

"APs are professionals hired by developers to supervise, among other duties, the construction of the works"，諸如此類，你就用「專業人士」嚟到形容 AP 嘅，呢一個詞語之間嘅分別嘅選擇係特登嘅，係咪呀？你心中或者你哋嘅取態就係 AP 係專業人士，比重高啲或者叫做高級啲嘅，係咪呀？喺你哋嘅眼中係，可以咁講，你嘅眼中。

答：佢兩個有唔同嘅職責嘅，我唔能夠用咁樣劃分佢哋嘅重要性嘅，我覺得獨立就好緊要，亦都佢係用一個 competent 去 carry out 佢嘅 duty，無論佢係一個 trade 吖，抑或係一個 professional，我覺得好緊要，即係你叫個 professional 走去做燒焊或者監察燒--即係做呢啲咁嘅工夫，就未必恰當嘅，所以我覺得應該係最--首要嘅任務，唔好理佢個 train 呢個 tradesman 抑或係 professional，冇高低嘅，我唔覺得有高低分別，我覺得佢係可以做到佢--畀咗佢個職責，competent 地去 perform 佢嘅 duty，咁就已經好。

問：好，我哋唔好講專業人士係咪高或者唔係咁高級啲先，你頭先都啱啱講到，就係我想向你提出嘅一個 proposition，就係 hands-on，落手落腳嘅就係 LP，當然我哋有個爭拗點就係 LP 係咪應該落手落腳做定係可唔可以搵第二啲人做，但係落手落腳嘅就係 LP 嚟嘅，對嘛？

答：係。

問：專業人士，你話 AP 或者 AP 嘅團隊，就叫做可能係只不過可以係喺監督層面去扮演角色嘅，係咪呀？

答：係。

問：揀料或者用料，實際呢啲落手落腳做嘅事情就係靠 LP 嘅，對嘛？

答：揀料，當然佢選擇邊隻牌子，當然係承建商佢自己覺得...

問：當然，LP 未必係真係走去揀牌子，可能個 plumbing subcontractor 決定佢，但係我嘅意思係 as between LP 同 AP 嚟講，AP 係隔咗一重㗎喇嘛已經係，LP 就話到明就係 licensed plumber，係咪呀？

答：係。

問：歷史嚟講都係 LP 負責簽嗰啲 form 先，後來先至加埋 LP，歷史嚟講都係 LP 簽先，跟住到到八幾年先至要個 AP 去埋簽㗎嘛。

答：係。

問：所以如果你講話落手落腳做，實際上貼地啲嘅，我咁講，就係 LP，對嘛？

答：係，好正確。

問：所以我就想同你講一講 AP，其實你係實際上--因為好多時候寫就係咁寫，你張 form 就要 LP 同 AP 都簽嘅，到到 WW046，你哋叫 046 定係 046 嘅呢，其實？

答：WW046。

問：046，嗰張 form，嗰張 form 就有一 part 即係八十年代引進係要兩個人一齊簽，你知道，呢個歷史你知嘅，係咪呀？

答：我知。

問：開頭嘅時候就淨係 LP 簽嘅啫，八十年代就引進就要 AP 都簽埋。文件好多時候就係咁做嘅，我哋好多時候文件好多人都要簽，但係 risk assessment 其實有陣時你都要有興趣知道實際上啲人做嘅時候係點做嘅，你有冇其實了解過實際上啲人做係瞇埋眼簽，定係佢真係有實際上去驗或者係了解佢做嘅嘢先簽嘅，有冇呢個動作，水務署？

答：水務署，以我 engineer run contract 咁，你當個水務-- civil engineering 嘅 contract 最終嗰個負責人，即係喺個合約嗰度寫就叫"Engineer"嘅，capital letter E，我相信 building 嗰啲合約嗰個類似同等職位嗰個人叫做"Architect"，A，不過佢主要嘅職責就係最重要就係佢 put in place 一個 system，係呢個

supervision 嗰個 system，可能請啲合資格嗰啲 clerk of works、呢個 building services inspector 幫佢去巡視嗰個地盤，去 make sure 嗰啲合約要求係達得到嘅。我相信嗰個所謂大--我哋嚟講，個大個 Engineer 或者係 Architect，都唔會真係日日走去落手落腳巡嘅，佢冇可能做到呢樣嘢嘅，但係...

問：Architect 係一個個人，當然其實實際上我哋知道 Architect 就唔係一個人做，...

答：係，冇錯。

問：...即係佢會--間 firm 可能有好多唔同嘅人，我哋知道。

答：Engineer 一樣，...

問：當然。

答：...一個 team，就算我畀 consultant，到大 Engineer 都唔係一個人嚟嘅，如果我畀咗 consultant run 嗰啲 contract，都係一個 consultancy firm。

問：Firm，係。

答：咁樣佢有隊團隊去做，其實 under 個 contract，即係 substantial completion 嗰陣時，呢個 Engineer 其實係要 certify 話嗰啲 works 已經 completed in accordance with 個 contract 嘅，其實佢已經係做緊呢個職責㗎喇，不過我哋而家再--即係 for the avoidance of doubt 又好，即係話叫佢澄清多一次，「你可唔可以 certify 埋你嗰啲 plumbing works 係真係 executed in accordance with」譬如 Waterworks Requirement 或者 WWR，我唔知嗰啲字眼。

其實我哋想重申多一次，等佢知道呢樣嘢係一個好 solemn 嘅嘢，其實我做專業人士，我簽落去，當然唔係我真係落手落腳去做呢樣嘢，根本冇可能，但係你信賴嗰個 system，...

問：明白。

答：...即係佢自己信賴佢自己嘅團隊，...

問：係，得。

答：...咁先--即係佢會信賴佢哋嘅團隊，然後先簽嗰個名嘅。

問：好喇，你講起專業人士，AP，我哋知道佢哋嘅專業背景可能係architect，你喺大學讀書可能係 architect，可能係讀工程科，engineer，可能係讀 surveying 咁，基本上係有呢三類，對嘛？如果講做 AP 嘅話，大體嚟講。

答：呢個我唔知係咪，我唔敢肯定，但係...

問：得，總之會係一啲叫做--即係佢哋會--無論你係邊一種都好，可能你會諗到第四種，但係都叫做係我哋所謂傳統中嘅專業人士，就係有一定嘅譬如話學術水平，要讀過某一個學位，佢哋會屬於強制地屬於一啲專業嘅學會，咁對嘛？

答：係。

問：Architect，佢會係 IA，工程師可能係要 IE，每個專業學會都有自己嘅一啲守則，有啲傳統咁樣，可能都會有一啲強制嘅 CPD，係咪呀？要不斷地上堂咁樣，對嘛？呢啲係一般我哋傳統中所謂嘅專業嘅一啲基本嘅 features，對嘛？

答：（沒有可聽到的回答）

問：你就信佢哋，但係實際落手落腳做嘅 licensed plumber，我哋頭先講話 licensed plumber，你用所謂「人員」嚟到形容，我哋唔好分高低級，但係 LP 喺訓練或者係喺佢嘅嗰個 structure 嗰個架構嚟講，係冇 AP 咁嚴謹嘅，你同唔同意呢？

答：我諗係睇番個課程同埋之後做嘢嗰啲嘢，我都覺得佢唔係咁呢個學術性，或者我唔知用呢個字啱唔啱，intellectual 啲嘅，佢唔係呢類，係比較手作啲嘅，佢真係知道個--即係個 skill 緊要啲。

問：同埋可能係會雜錦啲嘅，關於嗰個 qualify 個途徑，因為譬如話有啲新興入行，可能佢話「我知道我要去 VTC 讀。」以前，好耐以前入行嘅，可能佢循一啲舊啲嘅途徑入行，佢哋嘅背景就真係所謂可能會係五花百門啲嘅。

答：係，冇錯，可能純粹...

問：我唔會用「良莠不齊」呢個字，因為都有啲係好嘅，但係佢哋嘅背景真係可能有啲真係手作出身嘅，一啲理論性啲嘅嘢佢未必會諗，或者

有啲嘢佢會知其然，但係未必係知所以然嘅，因為冇咁多理論層面，對嘛？

答：啱，啱。

問：同埋佢哋受訓嘅時候個世界係好唔同嘅，好多時候有啲七幾年已經攞到牌，八幾年攞到牌，跟住世界可能變晒，係咪呀？佢自己所謂有志氣，佢就可能真係會去 catch up，但係如果唔係嘅話，就冇一個制度係要確保佢哋係追上潮流嘅，知識上，同意嘛？

答：係。

問：亦都冇一啲強制性嘅 CPD 嘅課程，對嘛？

答：我知道而家係冇呢個強制性，...

問：係冇嘅。

答：...如果係有呢個--即係自發性，或者有時有學會咁樣，我知道有啲安排啲持續嘅進修，但係一定唔係強制性嘅，不過有啲咁嘅機會畀佢去進修，但係亦都唔排除你嗰啲係所謂 on-the-job training 嗰個亦都好緊要嘅。即係真係譬如有隻新嘢嚟到，我都相信有志氣嗰啲會睇下說明書或者問下個 salesman「應該點用啲新嘢？」但係呢個唔係好有系統嘅，我都承認呢樣嘢。

問：同意，係。AP 同埋 LP，就 LP 就叫做-- LP 下面可能仲有佢啲工人，嗰啲大工嗰啲，LP，你作為 AP 去 supervise 佢，已經隔咗一重，落手落腳嗰個就係 LP，即係比較靠佢，AP 就可能要抽樣或者要靠巡咁樣，即係實際嘅操作，對嘛？

答：係。

問：而由於 AP 會係隔咗一層，你有冇一個認知，有冇人話過畀你聽或者你在職嘅時候，你知唔知道係有一啲嘅現象，就係 AP 或者係坐 AP 呢個職位嘅人，因為你知房署嘅 project，佢哋唔係叫 AP，chief architect，佢哋有陣時會有一個傾向，就係會覺得佢哋反而倚賴 LP 去負責確保條例嘅遵守，到到佢哋手上嘅時候，佢哋就可能真係睇啲大路啲嘅嘢，細啲嘅嘢，可能佢哋諗住「我信咗你 LP㗎喇。」你有冇呢個認知，其實有一個心態存在，會喺啲 AP 當中？

答：呢件事之前我就唔知嘅，因為畀著我哋咁，我哋就唔會咁做嘅，我哋

當然要佢--譬如承建商要有個系統去管理啲人，甚至可能--我哋冇LP，因為我自己做開啲工程冇LP呢樣嘢嘅，但係我要求佢做一個咁嘅management plan，譬如subcontractor嘅management plan，唔係表示我信晒佢嘅，當然我一定有certain degree of trust，但係我哋一定會--點解會有in place一個AP以及佢嘅團隊，佢係獨立㗎喎，佢係contractor係無關嘅，佢就係專登請嚟去watch同埋inspect嗰啲works carried out by個main contractor，佢要獨立嘅。

你點信嗰個LP或者承建商嚟講，嗰個係一方面嘅，如果你話覺得呢個承建商佢往職幾好，咁就可能你真係未必需要擺啲好精英嘅人走去睇，但係譬如你覺得個承建商往職唔好，或者佢落價好低，你就真係要可能調撥啲資源落去，可能擺多啲人落去睇，或者搵啲more observing嘅resident site staff走去傍住佢，你要估佢邊度有機會出錯咁樣，其實anticipate，人實會犯錯，要anticipate佢邊度有誘因，或者邊度佢真係做得差嘅，你就針對性去睇佢嗰啲。

問：你講到就係individual contractor，可能佢係某個AP知道係on my good book嘅，佢哋叫做，大家夾開就知道「你都自己run得掂㗎喇」，呢個我明白嘅，但係我係講系統上嚟講--即係你饒恕我有個咁樣嘅諗法，就係LP做嘅嘢真係好--我唔係講要畫喉管嗰啲，嗰啲都可能係有些少叫做intellectual input，但係真係落手落腳做呢一瓣，譬如話監察用咩嘢焊料、手勢好唔好之類嘅嘢，就其實理論上你就話AP要睇埋，但係其實AP --譬如話你做engineer，你做surveyor，你做architect，你讀書，其實我都唔知道有冇一個module係講soldering material點樣去用諸如此類，同埋會用咗幾多時間，唔多嘅，係咪呀？對嘛？

答：我自己冇讀添，我哋係咁樣嘅，如果我識或者--我有讀，我識，咁就冇問題，但係就算我識，我未必分身到走去睇，我要搵個人佢識嘅走去睇，譬如我唔識，但係我要睇嘅，我睇下我學唔學到，如果以engineer嚟咁講，譬如呢個--即係等如呢個--我打個比喻，足球評述員同足球員，足球評述員就未必打波好叻嘅，但係佢可以評述得好叻嘅，即係知道個球...

問：教練都唔使踢得好叻嘅其實。

答：我諗我舉錯例子。

問：唔係，我明，講波同埋教波同埋實際落場係好唔同嘅一啲要求，我知。

答：係，我覺得睇人點叫做得好就係易過你真係落手落腳做做得好，等如唧膠咁，我自己試過，我知道咩嘢叫唧得靚嘅膠，但係你叫我自己唧，我就彎彎曲曲，但係我唔會因為我自己做唔到嗰樣嘢，就即刻話我唔識去評核一件好嘅嘢，合唔合格，我唔覺得係咁樣。

問：理論就係咁樣，但係實際上，譬如話我喺一間某某則師行嗰度做，我去做 trainee 或者盛，我係團隊嘅一部分，籠統嚟講，其實真係要走去--有興趣走去 check 焊料，理論還理論，實際上呢一啲喺所謂如果我係有志成為叫做專業人士，我喺間行嗰度做，其實呢一個真係唔係一個好大嘅誘因，一個人真係特別要走去 check 呢樣嘢嘅，你同唔同意，因為讀書就話我睇則、畫則，一般人嘅諗法就係即係要睇到焊料呢啲咁細微嘅嘢，會有個誘因就係佢哋覺得「呢啲嘢我信你師傅喇。」會唔會，你覺得會唔會有呢個現象？

答：我正話講過信賴師傅嗰度，就係愛嚟畀你做睇下擺幾多 effort 去 supervise 佢啫，但係你仍然係獨立地，獨立地你要有套系統去睇住佢係咪做好，你自己唔識唔緊要，我覺得冇人識晒嘅，尤其是而家好多 discipline，就算我 engineer 嚟講，有機電嗰啲我都唔識嘅，但係我有隊團隊，係夾埋，collectively 係可以 discharge 嗰個責任去監察晒成個工程裏面所包含嘅工種嘅物料咁樣嘅，如果真係你包含唔到，你要即係請專家都要，就唔能夠話「我都唔係好識嘅咋，咁由佢喇，我信晒呢個判頭。」因為我強調嗰個獨立性好緊要，否則你個 multi-barrier approach 就冇意義㗎喇，一個信一個，即係得一個關卡嘅啫。

問：係喇，冇錯，我就正正想同你探討呢一個，就係有陣時理論還理論，做起上嚟就你看著我，我看著你，就係互相喺度我以為你，你又以為我咁樣，呢一個咁樣嘅風險--實際嘅風險，我唔係講理論，理論上呢啲唔應該發生。實際嘅風險，有陣時有啲嘢大家都知道，寫係咁寫，行內有陣時會諗咗，其實啲人實際唔係咁做。

水務署其實有冇一個認知實際上啲人--唔好講理論，實際上啲人係咪有個傾向，就係話一啲叫做相對微細啲嘢，因為 soldering material，啲人都叫 sundry item，知道，呢啲咁嘅嘢，好多時候真係做 AP 嘅人，佢哋係相對地會掉以輕心嘅，或者會係信賴咗個師傅就算嘅。你哋有冇 aware 或者有冇認知呢一樣可能性或者呢個 probability？

答：之前我冇深究嘅真係，發生咗之後我知，嗰個理由話 sundry item 嗰啲我知，但係如果以我自己睇工程嗰啲，我覺得判斷--唔係我覺

得，我自己個觀察，都係唔會以一件物件大與細嚟去判斷佢若果偏離個合約標準所產生嘅風險，我唔會單純用佢嗰件嘢大與細。

譬如我而家要我--問我邊啲嘢個風險高啲咁樣，我會話畀你聽食水，若果--愛嚟食嗰啲水，如果接觸嗰啲物料，接觸得嗰啲物料，有機會飲咗呢啲咁嘅水，呢啲水飲咗落肚，若果係嗰啲物料有問題嘅，就會產生好大嘅--可能好大嘅健康後果，所以嗰啲嘢有機會接觸食水嗰啲嘢，我就會認為嗰啲係--嗰啲 consequence 一定 high，一定係高危。

問：High 係高，係咪呀？

答：係喇，冇錯，一定係...

問：唔係...

答：唔係，H-I-G-H，high。

問：高，高，高。

答：一定係高㗎喇，consequence 就 high。

問：要高，係咪呀？要高層--即係要比較...

答：係嚴重嘅，後果係嚴重嘅。你就要用盡方法去睇下用啲咩嘢方法去減低去發生呢個咁嘅偏差嘅機會。

問：但係你都真係需要相關嘅人士有呢個認知，就係原來呢個要求--合約嘅要求或者 WWR 嘅要求原來係同 health 有關嘅，因為頭先都講過，成份合約，所有嘅 WWR 成拃咁多字，成拃咁多嘅 British Standard，係咪呀？

答：係。

問：頭先你話齋，你要知道原來個 consequence 同 health 有關嘅，你就會即刻可以抽出嚟，但係相關嘅人士，無論係 AP 或者 LP，佢起碼要有呢個認知，知道原來呢個要求係 health-related 嘅，佢先至知道「原來我需要特別留意。」係咪呀？你同意嘛？起碼佢要知道？

答：啱，我諗咁樣講要，我哋自己做工程就知㗎喇，所有--我一定要跟足嗰個合約要求，譬如合約要求講晒 British Standard，我一定要跟 British Standard 嘅，就冇話邊啲 British Standard 我可

以跟多啲，邊啲可以唔跟多啲，但係我都知你話要有prioritisation，又有咩嘢，我只可以咁講，我最驚話呢啲重要，你第二啲唔使理，因為可以咩嘢都相對嘅話，咁就好大件事㗎喇。

我想講嘅，樣樣都重要，不過若果係真係有健康，譬如有健康或者係有危險，其實呢個 common sense 嚟嘅咋喎，即係唔使有嗰啲咩嘢高等嘅知識，即係嘢就唔好亂食，水又唔好--會有高風險，呢個係普通常識嚟啫，我覺得。

當然呢個唔緊要，你唔知呢個風險，你當 everything equal，你都有個責任，即係我呀，我自己做一個工程人員，我啲責任要盡力去呢個符合嗰個合約嘅要求，即係嗰個物料嘅規格，呢個係冇得退讓嘅呢個。

問：係，理論就係咁，你都好有志氣，咁即係，你知道 British Standard 裏面有關含鉛量嘅要求嘅嘢，同健康有關嘅，係咪？即係你個人有呢個認知嘅？

答：我個人--我未做過話要用含鉛焊料--唔係，唔係，用焊料嗰啲嘢，我做主要係 waterworks，即係大件啲嘅，咁就...

問：你知道 pipe 唔畀用鉛都係因為同健康有關，係咪呀？

答：係，呢個係我 general knowledge，但係我真係冇睇過嗰個相關嘅 British Standard，before 呢個 incident。

問：好，好，好。Pipe 唔准含鉛，就係香港法例嚟講，就唔關 BS 事添，因為你法例直情就已經唔可以喇。

答：因為法例就指去個 British Standard。

問：係，我知，你嗰條 main。但係你個人還個人，但係你話齋，你都係一個你嘅 general knowledge，但係就即係系統上嚟講，其實水務署係冇一個系統上或者所謂結構上係去強調，我明你話你特別強調，就反而好似令人哋覺得對第二啲嘢掉以輕心，但係撇除嗰樣嘢先，但係系統上，水務署就係冇將云云各個 British Standard 或者要求裏面有關健康嘅嘢係抽出嚟，係特別提醒相關嘅持份者，冇？

答：係冇，我可以好肯定咁講，係我哋冇嘅。

問：冇，係，okay，得。我想畀一段證人供詞你睇。

答：好。

問：就係 HA 嘅，就 B15.1 37708，B15.1 37708，37708，呢份就係啟晴邨嘅 chief architect，你如果睇番 37700 就會見到，就係呢個嚴先生，佢就係啟晴嘅 chief architect，我哋知道就係法例裏面有陣時有關 AP 嘅一啲要求或者一部分就唔一定適用於公營嘅房屋，但係我哋知道就係喺一座公營房屋裏面，chief architect 其實就扮演緊 AP 嘅角色，呢樣你知嘅，係咪呀？

答：係。

問：所以呢個嚴生，我哋當佢就係 AP。

答：Okay。

問：佢寫就係咁寫，37708，你睇下第 28 段，"The roles and Responsibilities of the Licensed Plumber are stipulated in the Waterworks Ordinance and Waterworks Regulations."28 段其實係講一啲好官樣嘅嘢嘅啫，實際上，法例上佢有咩嘢嘅責任咁樣。

29 段，"I relied on China State to monitor the service of the LP and would expect the LP to execute his duties under the Waterworks Ordinance and Waterworks Regulations. This was reinforced by the 'Point Penalty System' administered by the Water Authority which provided a positive incentive for the LP to carry out the task professionally and accurately."

平心而論，就我諗冇一個人話佢係完全倚賴晒人哋嘅，因為如果佢講話「我完全倚賴晒人哋。」就係盞係畀人攻擊嘅啫會係。但係呢度就有個傾向，佢寫話「我真係信賴，我倚賴」，佢倚賴個 China State 個主承建商就要去 monitor 住個 LP，就更加加上就係水務署亦都係會監管住個 LP，因為佢有扣分制嘅，呢個就係其實就我凸顯咗頭先我所講，就係叫做「你看著我，我看著你。」嘅情況，你就諗 LP，跟住就有個 AP 又會睇住佢，AP 就話「我以為 China State 會睇實個 LP，加上 LP 會畀水記扣分㗎嘛，所以 LP 我又會覺得係佢自己應該有個誘因會做得好㗎喇。」佢冇講到嘅就係話「所以我冇理。」Okay，但係個心態會係咁樣。

你知唔知其實業內有 LP 會係嗰個比重或者嗰個心態會係咁樣

呢？即係比較已經係著重於係倚賴，唔係 exclusively 起碼，即係公允起見。

答：係，我明你意思，...

問：水務局話你有扣分制，你又有扣分制，人哋又有 LP，又係一個--佢叫做 professionally。

答：起碼我自己 run --我真係少機會接觸 LP 或者 AP，呢個我自己個人經驗嘅限制，我自己 run contract，我真係--我唔會用呢個--起碼佢--我唔知佢老實吖，抑或係說漏嘴吖，抑或係唔係，佢唔係 mean 嗰樣嘢嘅，其實佢應該 in expect，佢...

問：唔係，平心而論，佢哋係冇一個--我而家驟眼，我諗唔起，冇乜邊個係話「所以我就完全唔理佢哋。」唔係咁講嘅，但係佢講得出呢番說話，其實佢都係鋪排緊就係話「佢哋，其實我都 expect 佢做佢嘅 job，所以就唔好賴我賴咁。」咁樣。

答：我哋受訓練，即係嗰個所謂 independent 嘅 supervision，我哋好 clear 嘅，呢樣嘢就，你話要求個承建商做乜做物，若果佢做好啲，你心底上，「我睇少你一眼。」我都覺得可以，但係我唔會咁講出嚟嘅，即係「我信晒你，你搞掂佢。」我唔會咁講出嚟嘅，但係你會調撥資源去--其實呢個就係去 risk management，你調撥啲資源去啲--睇啲差啲嘅，我會，但係我一定唔會 rely on，因為你咁就會影響咗你嗰個所謂 independence 嘅，個 multi-barrier approach 就冧㗎喇，因為你唔係 independent 嘅，你 rely on 佢，就變咗你削弱咗一個 barrier。

呢個可能--我唔知係咪 engineer 同--我唔知呢個係咪普遍現象，我唔識喺呢個建築界，但係喺我 engineering field，我嘅理解，就個個都好 independent 嘅，即係 supervision 嗰度，因為我有好大機會，我自己有 in-house 嘅 supervision team，我有畀 consultant 睇嘅，我亦都好強調呢個 independence 呢樣嘢。

問：但係系統上嚟講，頭先我哋都講過，就係你覺唔覺得其實水務署之前其實係冇一個我哋叫做 holistic 啲，唔好講 holistic，即係啲抽離啲，係針對性地將有關健康嘅一啲要求提醒各持份者，呢一樣，你覺唔覺得係一種--我哋唔好講遺漏，因為講遺漏好似有人要孭飛咁樣。係一樣其實睇番轉頭係需要改進嘅地方，因為健康當然係重要，頭先你講話掂得水嘅，咁梗係要 high priority，但係從來係冇一樣嘢係將公眾衛生呢一點係突出嘅，喺管理建築物料方面，喺水務局

方面，你覺唔覺得呢一樣缺少，呢個 omission，係一個遺漏，同埋一個--而家睇番轉頭係一個遺憾嘅遺漏呢？

答：我自己咁睇，我覺得 nice to have，你有通知，有溝通，有提點，互相提點係一個好嘅，但係我真係唔覺得有遺漏，因為評情而論，我諗喺--大家做得 professional，喺呢個建築行業，你都知一定要呢個跟足呢個合約要求，deliver 件嘢，你好難再 blame 話「點解你唔提我呢樣要跟多啲呀？」我都覺得有--我提得你呢樣，譬如唔係淨係呢個風險喎，我同意，食水安全嗰度有風險，但係一個建築工程有好多項目㗎嘛，窗門安得唔好，跌落嚟，砸親人。

問：會跌落嚟。

答：當然嗰個超出我哋個範圍，但係我想提嘅，即係好多嘢我提唔晒嘅，但係我覺得同意，尤其是呢件事件之後，我發覺呢樣嘢會有人遺漏，我覺得係值得互相提點，你講提點多，冇人話你咩嘢嘅，不過你當然要加一個 caveat，即係話「喂，我唔係表示我提你呢樣，你唔好理第二樣。」我就最驚呢樣，有嗰個所謂道德風險，即係 moral hazard。

問：經常都有呢個情況嘅，你寫咗出嚟，就凸顯咗，就令到啲人就覺得其他就唔多使睇喇可能。

答：我驚呢樣，係。

問：但係以一個所謂 layman，我問多一條題目，我就去講一啲實際上啲驗水嘅事情。但係以一般嘅常人嘅睇法，我知道法例就梗係話咩嘢都要做晒，但係常人嚟講，講建築，做建築嘅人一般就係諗住確保起好嘅嘢唔好秣，或者 function 到，你水務喎，即係水務，水務梗係確保水係 okay㗎喇，諗係會咁諗，關於水裏面安唔安全呢啲咁嘅嘢，其實所謂 gut reaction，好多人都會諗住，相對嚟講，係水務署應該個責任係大過 Housing Authority 嘅。

我知道，你局內人，你喺裏面做，但係你試下將自己 schizophrenic，你抽離啲，你作為一個常人，一個市民，相對 HA 同埋水務，關於一啲同衛生有關嘅要求，如果一個常人佢覺得話「我覺得水務署應該係殘重啲飛嘅，相對 Housing。」，你對呢個說法會有咩嘢睇法？

答：我都知呢個係 perception，subjective perception，但係我要處理，我亦都自己有好多朋友，好多圈--即係都有傾，佢--我諗十個--除咗我老婆，十個有九個都覺得水喎，水有唔妥，梗係水務負責

喫喇，呢個我覺得好正常，因為佢冇嗰啲資料，原來我哋嗰個分工係咁樣樣嘅。

我唔會話卸晒責嘅，我一定--我會設計套制度出嚟嘅，規管呢個內部供水系統嗰個符合規格嗰個，係我哋設計出嚟嘅，但係我哋係唔可以一個人做晒所有嘢，將呢啲責任就分畀啲適當嘅持份者。佢做唔好，當然外人唔知我哋咁分配，我覺得好合理、好正常。

不過我覺得我哋有責任，我希望個委員會亦都可以之後可以向市民講清楚大家嗰個--我哋嗰個係點分工嘅，不過我絕對同意嗰個perception，係，呢個係我自己個人經驗。

問：好，我而家就褪咗去另外一個課題，最後一個課題，就係你嘅證人供詞嘅第二部分就講到驗水，第 17 段開始，"Inspection and Approval"，你後面就有一連串嘢係關於 inspection 嗰啲焦點何在咁樣。

我嘅問題就唔需要你睇特別邊一個句子嘅，只不過就係我哋成日睇唔同嘅證人供詞，佢裏面就有講到好多唔同嘅概念，我哋聽到已經係滾瓜爛熟，就關於咩嘢八個 parameter，就喺個 connection point 度抽水，攞住 annex 1 走去執藥咁樣，去點咁樣，聽咗好多呢啲嘢，我想知道將佢哋有系統性地放番喺一個 jigsaw puzzle 裏面，知道喺所謂完成一個供水系統，邊一樣嘢係喺幾時發生，同埋邊個做啫。

我哋知道工程完工,開工嘅時候就用 WWO46 嗰張 form,有 annex 入咗去，通知開工，一路做做做，做到尾，就有個 part IV，WWO46 嗰個 part IV，part IV 就 LP 要簽，certify 就係個錶位啱，有一句好緊要嘅，part IV。

答：係。

問：邀請嚟驗嘅，係咪？

答：係。

問：裏面有一句就話「我邀請你嚟驗。」呢個就係 WWO46，邀請嚟驗，邀請嚟驗呢一個就係有需要 involve 到水務署要去驗，呢個係一種會驗。另外一個有可能要求 involve 到水務署要驗嘅就係出嗰張 1005 嗰張叫做水紙，你知 1005 喇？

答：我知。

問：1005就係pursuant to應該係134，係咪呀？應該係。

答：132。

問：132，132，就係pursuant to 132，水務署就會出一張1005嗰張嘅certification，嗰張其實就係under Building嗰面嘅法例去出嘅，就最終係會攞到入伙紙嘅係，你都知道喇？

答：未必係under Building法例，不過我哋出張咁嘅嘢certify availability of water supply去enable呢個...

問：佢可以根據Building法例就攞到OP？

答：OP，係，冇錯。

問：Okay，所以其實我哋已經見到，就有兩個位置係要involve WSD係要做一啲inspection或者去檢驗嘅嘢嘅，我就想同你搞清楚喺步驟上，先後次序上嗰個發生嘅步驟會係點嘅啫。一般嚟講，其實會係做咗part IV 46要求你去inspect嗰part先吖，定係去做咗出1005嗰張嘢所要求嘅inspection先，定係其實係同埋一樣嘢嚟嘅呢？

答：呢個真係我個理解，唔係我實際經驗，因為我唔係呢個subject嘅officer，okay。

問：唔係，因為你個證人供詞17段有講到呢度，所以我就...

答：得，嗰個我問人，所以我可以答你唔係我first hand嘅information。

問：得，唔係，你跟住另外都有同事講嘅，我知，不過既然你講開，我就問埋。

答：我理解，就係part IV就邀請我哋去做嗰個inspection，嗰個就完咗，即係已經complete咗嗰啲plumbing，叫我哋走出去驗，我哋驗完之後，若果fine，搵唔到一啲irregularity，就會喺part V嗰度簽番...

問：簽part V。

答：...話番畀佢聽冇irregularity。

問：對，呢 part 包唔包括驗咩嘢八個 parameter、喺個 connection point 抽嘢嗰啲嘢？簽呢個 part V 之...

答：呢個咁--真係對唔住，我都唔敢肯定嗰個驗咗水先...

問：唔緊要，唔緊要，我知道你後面另外有第二啲證人會講，不過我問下你。

答：我真係對唔住，我雖然有...

問：得，唔緊要。

答：我理解過嘅，不過我真係唔敢講，憑我嘅記憶去答你。

問：唔緊要，因為我見到你證人供詞大大段寫住"Inspection and approval"，所以我諗住就問你。

答：係，對唔住。

問：唔緊要。好喇，我知道 part IV 邀請你去驗，驗完 okay，就出 part V，呢個我知，但係至於呢一個驗水步驟係真係攞住個嘢去睇下 annex 裏面嗰啲嘢，驗一啲 functional 嘅嘢，定係包唔包括驗水，呢個就應該問第二位同事？

答：係，驗嘢，我就知會喺個 inspection 嗰陣時睇下，揀住個 annex 走去驗下，睇下啲牌子啱唔啱嗰個就係 before 簽 part V 之前，係...

問：Pursuant to part IV 嘅 request，引致到你簽 part V 嗰張嘢，嗰個 inspection 就會係叫做攞住個 annex，就去望下啲 functionality 或者 check 下個牌子咁樣？

答：係喇，嗰個就肯定，我覺得肯定係呢個驗完之後，然後先出嗰張 part V，話搵唔到 irregularity，至於驗水嗰度，我覺得應該係後一個階段嘅，即係 before availability of water supply，但係個 timing 係點，我唔知，真係。

問：Okay，即係 timing 上，你就唔知道究竟係驗咗呢啲 physical，驗咗啲喉先至叫做驗水辦，定...

答：唔係，我肯定就應該係驗完呢啲 physical 嗰啲嘢，然後簽埋張 part V，冇 irregularity found，然後先至驗水，但係驗水同呢個

availability of water supply 嗰張 cert.嗰個時間...

問：即係 1005 嗰張 cert.係？

答：係，1005 --我相信一定係 1005 之前，但係幾時驗水，我真係要--我唔敢肯定。

問：時序上係...

答：時序，係，一定係 part V 之後。

問：一定 part V 之後，得。

答：後，之後後到幾多我唔知。

問：得，得，唔緊要，因為我知道你其他同事都會講類似嘅嘢嘅，你等等，我睇下我仲有冇其他嘅問題。得，好，我冇其他嘅問題問你，因為其實好多關於呢個所謂 stakeholder approach 背後嘅一啲理念上嘅嘢，我哋都同你其他嘅同事都已經探討過，我唔會再重複同樣嘅問題，唔該晒。

何先生：主席，我想提出一個 point，就係基本上呢個就係個 stakeholder approach，再講番 roles and responsibility，我相信我作為房委嘅代表大律師，我曾經將呢一個課題我好深入問過署長，問過 Prof Fawell 嗰個理念，問過副署長，問咗大半日，如果我係再需要就住梁先生嘅口供同埋頭先嘅跟進問題，再同佢討論番呢個 roles and responsibility 呢個問題同埋一啲風險管理嘅概念嗰啲，我相信基本上我係重複番好多樣，我已經係問過晒。

主席：唔需要問喇。

何先生：我係希望就算我唔問呢位梁生，當然我相信水務署代表大律師到到呢個階段應該都好清楚我唔同意佢哋所講個風險管理同埋嗰個責任嘅分配嗰個問題嘅，如果係佢唔覺得如果我而家唔問係等同咗冇個機會等佢哋嘅證人去反駁，...

主席：唔需要喇。

何先生：...我就決定將嗰個問題係留待我陳詞嘅時候先再講。

主席：陳詞嗰陣時講得喇，你擺咗個 marker 喺度，我哋知道你嘅 position 得㗎喇。

何先生：係喇，我只有一個好簡單嘅問題問梁生嘅啫。

主席：好呀。

何先生盤問

問：我係想澄清你嗰個證人口供，有一點我唔係太明白你個講法，可唔可以請你睇番你個證人口供第14段，喺10716頁，淨係好聚焦，我淨係想你澄清你嗰個講法嗰個用字係咩嘢意思，喺第五行，你呢度就寫係"non-compliant pipes and fittings installed but remaining unnoticed is slim because the control measure of legal prohibition of lead pipe and leaded solder"等等等等等，"can be taken as effective."咁樣嘅。

你呢度用咗個字就係"legal prohibition of lead pipe and leaded solder"，我想知道你所講嘅"legal prohibition"個意思係乜呢？因為如果我就咁睇法例，法例係有要求譬如用料嗰啲係要符合嗰個 British Standard 嘅，但係講到話禁止，你呢度就用多咗一個"legal prohibition"嗰個問題。

法例我就睇過，就好似冇話如果你唔跟，就有啲乜嘢嘅懲處，除咗 LP...

主席：你講緊 leaded solder 嗰，係咪呀？淨係？

何先生：呢度係喇，呢度佢好聚焦講係 lead pipes and leaded solder。

問：我個意思可以我 read too much into 呢一個 sentence，你明唔明？我睇嘅法例第--譬如好似個 WWR，regulation 第19、第20段就係話有需要要跟番個 British Standard 去做，包埋--當然其中一項就係包咗嗰個啲--譬如啲焊料應該要咩嘢 standard 咁樣，喺個法例度寫。

主席：呢個問題咪即係較早前 Mr Hui 提過嗰個 ban 嗰個究竟係咩嘢意思咁樣，我諗你 read 太多入去，"restricted"喇，如果你唔鍾意嘅話咪。

何先生：冇問題，不過我想指嘅就係法例底下係冇--好似冇話如果唔跟，係譬如好似--如果你 LP --一個並非 LP 嘅人去...

主席：冇一個 sanction 喺度跟住，係咪呀？

何先生：係喇，冇一個 sanction 喺度嘅。

問：我想知道你個"legal prohibition"個意思有冇特別咩嘢意思，咁解啫。

主席：冇乜特別意思，我諗。

答：唔係，睇番上文，其實呢個"legal prohibition"係講緊第 7 段，即係 10713 嗰度，有講個歷史發展因素嘅，即係話其實 lead pipe 我哋好耐已經係禁止咗咁解啫。

問：冇乜特別嘅原因，我就...

答：冇咩嘢特別原因嘅。

問：對唔住，我唔想特別喺嗰個字眼度糾纏。唔該你。

許偉強先生：我個紀錄，個"ban"嗰個字就應該唔係我講嘅，呢個紀錄就寫咗係"Mr Khaw"，應該係 Mr Hui 講嘅，唔該。

主席：入咗你數。仲有冇人問嘢？冇？冇。唔該晒你，唔該晒你，梁先生，可以走得。或者我哋 take 個 ten minutes 嘅 break，跟住再繼續。唔該。

下午3時22分聆訊押後

下午3時39分恢復聆訊

出席人士如前。

王先生：主席，下一個林正文先生。

水務署第六證人：林正文（水務署助理署長（客戶服務））以本地話宣誓作供王先生主問

問：林先生，你就為呢個聆訊委員會做咗兩份證人口供嘅。

答：係。

問：我就會將兩份證人口供讀出嚟，然後就睇下你確認嘅。

COMMISSION OF INQUIRY
APPOINTED PURSUANT TO SECTION 2 OF THE COMMISSION OF INQUIRY ORDINANCE (CHAPTER 86) ON 13 AUGUST 2015

WITNESS STATEMENT OF LAM CHING MAN

I, LAM Ching Man, Assistant Director/Customer Services, Water Supplies Department, at 45/F, Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong, do say as follows:

1. I am the Assistant Director/Customer Services of the Water Supplies Department ("**WSD**"). My main duties are to oversee the functions of the Customer Services Branch including, amongst other things, processing applications for water supply, administering the licensing of plumbers, handling customers' enquiries and complaints related to inside service, taking appropriate action in respect of contravention of the Waterworks Ordinance and Regulations,

and handling meter installation and disconnection works.

2. I make this Witness Statement on behalf of the Director of Water Supplies, pursuant to the request of the Commission of Inquiry into Excess Lead Found in Drinking Water ("**the Commission**"), conveyed in a letter from Messrs Lo & Lo to the Department of Justice dated 12 October 2015 ("**the 12 October Letter**"). Save where otherwise appears, the facts deposed hereto are within my personal knowledge or are derived from office files and records and sources to which I have access, and are true to the best of my knowledge, information and belief. Save as otherwise specified, this Statement adopts the same abbreviations and nomenclature as in the 12 October Letter.

3. This Witness Statement covers the following areas:

(1) Monitoring and control of the safety and quality of drinking water at inside service (this covers, with necessary elaborations, Chapter 4 of the August Statement as requested at paragraph i.1 of the 12 October Letter and addresses paragraph i.2 and i.3 of the 12 October Letter);

(2) Information about the water treatment plant through which water is supplied to each Affected Estate (to address paragraph i.5 of the 12 October Letter);

(3) The approach to taking and testing of water samples from inside service before effecting water supply to the Affected Estates (to address paragraph i.7 of the 12 October Letter). (For the reason and rationale behind the chosen test parameters, etc., please refer to the 3rd Witness Statement of CHAN Kin Man, Chief Waterworks Chemist of WSD); and

(4) The inspection and testing of water in inside service from the perspective of the Quality Water Supply Scheme for Buildings (to address paragraph

i.8 of the 12 October Letter) (For a fuller response to paragraph i.8, please consider this part of the Statement alongside the 3rd Statement of CHAN Kin Man); and

(5) Construction of inside service in Affected Estates by Licensed Plumbers ("**LPs**") (to address paragraph i.12 of the 12 October Letter).

(1) Monitoring and control of the safety and quality of drinking water at inside service

4. The water quality at inside service, including consumers' taps, depends on the proper construction, installation, etc. of the inside service as well as regular maintenance and cleaning of the inside service.

5. In broad terms, the Water Authority ("**WA**") is responsible for the custody and control of the waterworks while consumers and agents are responsible for the custody and maintenance of the inside service. Within the present regulatory context under the Waterworks Ordinance. Cap. 102 ("**WWO**"), an "agent" or a "consumer" is a person who occupies the premises or is responsible for the management of the premises or any part thereof, and who gives an undertaking to, among other things, accept responsibility for the custody and maintenance of the communal service or inside service in any premises: see section 7(1)&(2) of the WWO. Further, regulation ("**Reg**") 7 of the Waterworks Regulations, Cap. 102A ("**WWR**") requires agents and consumers to be responsible for keeping an inside service clean.

1.1 Monitoring and Control of Construction, etc., of Inside Service

6. At present, neither the WWO nor the WWR specifies

any standard or requirement on water quality. Nonetheless, the WA has developed measures to monitor and control the construction, etc. of inside service based on the powers and duties conferred to the WA under the WWO and the WWR as well as the general practice of the construction industry. This is primarily with a view to ensuring the safety and integrity of the central system of water supply in Hong Kong as effected through waterworks. While the WA performs a regulatory role as regards inside service, the entire control regime involves and depends upon other relevant stakeholders including developers, Authorised Persons ("**AP(s)**"), building contractors, plumbing subcontractors and licensed plumbers ("**LP(s)**"). For details on the stakeholder approach, please see the Witness Statement of LEUNG Wing Lim, Assistant Director/New Works.

7. Under section 14(3) of the WWO, the construction etc. of inside service shall be carried out in such manner as may be prescribed by the WA. Throughout the application and approval process of inside service in new buildings, following the risk based approach, the WA primarily checks on whether the plumbing design and construction have taken into account the need to use safe materials, the avoidance of misuse and wastage of water, the prevention of pollution to the public supply and proper metering of new supply.

8. For the safety and quality of water at inside service, there are a number of measures on the monitoring and control of construction, etc., of inside service. These may be summarised as follows, with elaborations as appropriate further on in my evidence:-

(a) First, the construction, etc., of inside service is to be undertaken by an LP licensed by the Licensing Authority under the WWO;

(b) Second, every pipe or fitting is to conform to the widely recognised and established British

Standards;

(c) Third, for new building projects, all pipes and fittings must be confirmed by an AP (registered under the Buildings Ordinance, Cap. 123) to be in compliance with all applicable waterworks standards and requirements;

(d) Fourth, there shall be inspection and approval of the inside service by the WA; and

(e) Fifth and finally, water samples tested are to be in compliance with specified standards before effecting water supply to the inside service. As further explained below, prior to August 2015, the sampling process here involved samples taken near the connection point of a building. If the samples taken were satisfactory and the connection fee settled, the WA would arrange for the final connection works and would effect water supply to the building. For details, please refer to part 3 of this Statement and the 3rd Witness Statement of CHAN Kin Man.

1.1.1 Construction, etc. of inside service by an LP

9. Section 15(1) and (2) of the WWO stipulate that no inside service shall be constructed, etc. by a person other than an LP except for alterations and repairs to inside service of a minor nature.

10. For details on the licensing of plumbers, please refer to the Witness Statement of CHAN Hing, Assistant Secretary (Lantau).

1.1.2 Every pipe or fitting to be of the British Standard

11. The regulation of materials that may come into contact with drinking water is another means by which the risk of poor water quality in the inside service is controlled. The WWR specifies the standard of the pipes and fittings installed or intended to be installed in the inside service. Under Reg 20 of the WWR, every pipe or fitting shall conform to what are known as the British Standards. The British Standards are promulgated by the British Standards Institution and commonly adopted in developed countries such as UK and Singapore as the standards for the pipes and fittings. They have generally applied to pipes and fittings used in developments in Hong Kong for over 75 years.

12. The WA has set up a general acceptance system on pipes and fittings. Normally, suppliers will submit British Standards Institution Certificates (BSI Kitemark), Water Regulations Advisory Scheme (WRAS) Certificates or test reports issued by accredited laboratories to show compliance with the relevant British Standards to the WA. The WA will verify the validity of the certificates and the results of test reports prior to granting a general acceptance. A list of pipes and fittings accepted by the WA and an updated list of British Standards adopted by the WA are posted on WSD's website for the information of the public. Recently, the WA has enhanced the system by imposing a five-year validity period of the general acceptance to potable water supply pipes and fittings via WSD Circular Letter no. 2/2015 [COI Bundle C3/37/2203] and WSD Circular Letter no. 7/2015. There is now produced and shown to me marked as "**Annex 1**" a copy of the said WSD Circular Letter no. 7/2015. Prior to the commencement of plumbing works, the AP and LP are required to submit an inventory of pipes and fittings to be used in the plumbing works for approval by the WA.

13. For details about the control on the use of plumbing materials, please refer to the Statement of CHAN Hing.

1.1.3 All pipes and fittings confirmed by an AP to be in full compliance with the waterworks standards and requirements

14. Under Reg 25A(2)(a) of the Building (Administration) Regulations, Cap. 123A, an AP is required to submit to the Building Authority a certificate regarding water supply connection to be issued by the WA upon completion of a new building (Form WWO 132). The certificate is referred to as a "Certificate regarding water supply connection". For buildings to which a supply of water is required to be connected for any purpose, the Building Authority may refuse to issue an occupation permit when it is not satisfied that connection of water supply has been duly made to the building by the WA (section 21(6)(e) of the Buildings Ordinance, Cap. 123).

15. With the growing sophistication and enlargement of the scale of inside services across Hong Kong, the WA recognised that, relying on LPs to ensure quality of inside service may not be adequate. In view of this, in or about 1982, the WA put in place a system to include a higher qualified professional to share the responsibility of ensuring compliance with the WWO and WWR in respect of construction of inside services. As a result, APs, by virtue of their professional role responsible for the overall construction work of the building project, have since 1987 been required by the WA to certify that pipes and fittings installed/intended to be installed, including those as listed on the Annex to Form WWO 46 and those not listed are as prescribed by the WWR prior to the commencement of plumbing works, and to confirm that the pipes and fittings used comply with waterworks standards and requirements upon completion of the plumbing works for issuance of "Certificate regarding water supply connection".

1.1.4 Inspection and approval of inside service by the WA and water sampling with specified parameters

16. Inspection and approval by the WA is required in the process of application for water supply. The typical process for new buildings is in practice divided into four stages, namely the enquiry stage, proposal stage, inspection stage, and effecting water supply stage. Various forms (referred to as "**WWO Forms**") are used during the process [COI Bundle C5/67e/4114.23-4114.39]. Further, to facilitate the LP and AP to properly construct and install the inside service, the WA has issued several booklets on requirements, guidelines and practices, etc. of plumbing installations such as the Hong Kong Waterworks Standard Requirements for Plumbing Installation in Buildings [COI Bundle CS/47], Handbook on Plumbing Installation [COI Bundle CS/48] and WSD Circular Letters [COI Bundle C3/ 37].

1.1.4(a) Enquiry Stage

17. At the enquiry stage, the AP of the applicant (normally a developer) will make a submission to the WA to enquire about the availability of water supply (Form WWO 132 Part I). In response, the WA will reply to the AP (Form WWO 1004) that a supply of water from the waterworks for the purposes of paragraph (2) of Reg 10A of the Building Regulations can or cannot be made available to the premises.

1.1.4(b) Proposal Stage

18. This stage covers two sub-stages, namely, the submission of an application on plumbing proposals and an application for commencement of the proposed plumbing works.

王先生：Chairman, I will skip the footnote.

1.1.4(b)(i) Application on plumbing proposals

19. For the first sub-stage, under section 7 of the WWO, an applicant applies (by submitting Form WWO 542) to become a consumer/agent of the inside service/communal service and agrees to give an undertaking to accept responsibility for the custody and maintenance of the inside service, etc. Normally, in the same submission, the plumbing proposals will be submitted (including vertical plumbing line diagram, plumbing layout plans, etc. showing the alignment of pipes, location of pumps, water meters, valves, taps, etc.) to the WA for approval in accordance with Reg 5(2)(b) of the WWR.

20. The WA will check whether the plumbing proposals are in compliance with the requirements of the WWO. The plumbing proposals will be presented in the form of vertical plumbing line diagrams and water pipe alignment plans. If the plumbing proposals are in order, the WA will issue an approval letter to the applicant and AP.

1.1.4(b)(ii) Application for Commencement of Plumbing Works

21. The applicant, AP and LP will apply to the WA (Form WWO 46 Part I & II) for permission to commence the plumbing works as stipulated in Reg 5(1) of WWR as follows:

(i) In Part I of Form WWO 46, the AP and LP will have to check and certify that the pipes and fittings intended to be installed are as prescribed by WWR.

(ii) In Part II of Form WWO 46, the applicant will endorse the information submitted by the LP and AP in Form WWO 46 Part I.

(iii) AP and LP will list out the proposed pipes and fittings intended to be installed in the plumbing works in the Annex to Form WWO 46.

(iv) Furthermore, via WSD Circular Letter no. 1/2015 [COI Bundle C3/37/2205], for all applications for new water supply submitted on or after 13 July 2015, submission of lead free certificate for solder material, if soldering is used, is required.

(v) The WA will check the submission and, subject to any material irregularities, it will give permission to the LP to proceed with the plumbing works if the submitted information is found to be in order (Form WWO 46 Part III).

1.1.4(c) Inspection Stage

22. During the construction stage in a building project, various stakeholders are involved and have their roles to play in ensuring that the plumbing works comply with all applicable contractual and statutory requirements. For details of the stakeholder approach, please refer to the Witness Statement of LEUNG Wing Lim.

23. On the WA's part, after part/all of the plumbing works have been completed by the LP, an applicant (normally the developer), the LP and the AP will apply to the WA for inspection and approval of the works (Form WWO 46 Part IV) in accordance with Reg 6(1)(a) of the WWR. (For completeness, in cases where there are completed underground or concealed pipeworks, upon application by the LP. WSD will carry out interim inspection(s) before they are covered up. There were no underground or

concealed copper pipes with solder joints in the 11 Affected Estates. Full inspection of underground pipeworks before a water meter for every building shall be conducted, while random inspections shall be conducted on underground pipeworks after a meter or concealed pipeworks above ground of all new developments.)

24. The WA will carry out site inspection in accordance with an inspection checklist [COI Bundle C4/41/3256-3277] which replaces the previous provisional check sheet [COI Bundle C4/41/3351] to spot check the completed works against the approved plumbing proposals and the materials listed in the Annex to Form WWO 46 submitted previously by the AP and LP. When defects are identified in the plumbing works, the defects will be recorded in Form WWO 1008 and the plumbing works will be rejected for rectification by the LP. Further inspection will be carried out after completion of the rectification works and the above procedure will be repeated. If no irregularities are found, the WA will issue approval of the plumbing work (Form WWO 46 Part V) to the LP.

25. After all of the plumbing works have been completed by the LP, upon application by the LP, the WA will then carry out final site inspection in accordance with the same procedures as above. The final site inspection of the WA primarily focuses on checking the plumbing system against the approved plumbing drawings, the communal part of the plumbing system and inside service of some flats selected on a random basis. The inspection also focuses on prevention of misuse and wastage of water and pollution of government water supply. Since 28 August 2015, via WSD Circular Letter no. 5/2015 [COI Bundle C3/37/2 l 95], non-destructive tests on solder joint samples randomly selected by the WA will be carried out to confirm whether the joints are lead free. On 18 September 2015, via CE/CS Instruction no. 4/2015 [COI Bundle C4/41/3251 -3277], the WA issued an internal guideline with a set of new inspection check lists for enhancing the record-keeping of the site inspections. Further, Form WWO 1008 has also

been revised, via WSD Circular Letter no. 8/2015 issued on 29 October 2015. There is now produced and shown to me marked as "**Annex 2**" a copy of the said WSD Circular Letter no. 8/2015.

1.1.4(d) Effecting Water Supply Stage

26. When all of the plumbing works have been completed and approved by WA, the LP will arrange to cleanse and disinfect the newly installed fresh water inside service and collect water samples near the connection point and within the building for testing in accordance with WSD Circular Letter nos. 1/2015 and 5/2015. The water samples will be tested by the WA or accredited laboratories for specified parameters. Separately, the AP will apply to the WA (Form WWO 132 Part II) for issue of a "Certificate regarding water supply connection" (Form WWO 1005). The AP is required to confirm that the pipes and fittings used in the project are in full compliance with waterworks standards and requirements in his application. Commencing August 2015, if the water sample testing results (in respect of the said water samples taken near the connection point and within the building) are satisfactory and the connection fee has been settled, the WA will arrange for the final connection works and effect water supply to the building. For details, please refer to part 3 of this Statement and the 3rd Witness Statement of CHAN Kin Man.

27. The WA will issue the "Certificate regarding water supply connection" (Form WWO 1005) to the Building Authority direct with a copy to the AP and LP. The certificate is normally part of the forms/documents to be submitted by the AP to the Building Authority for application of an occupation permit on completion of building works.

1.2 Maintenance of Inside Service

28. As I have previously mentioned, under section 7 of the WWO, agents and consumers have undertaken to accept responsibility for the custody and maintenance of an inside service. Further, Reg 7 of the WWR requires agents and consumers to be responsible for keeping an inside service clean. WSD has pledged to supply fresh water with quality in full compliance with the World Health Organization ("**WHO**") Guidelines up to the connection points. Beyond the connection points, water quality is for consumers and agents to maintain.

29. Whilst an agent or a consumer is responsible for the custody and maintenance of the inside service, WSD from time to time receives complaints from the public in regards to the water quality of the inside service. WSD responds as appropriate pursuant to provisions of the WWO and WWR (see paragraph 30 below). Moreover, WSD has developed and implemented a water quality monitoring regime covering water samples at consumer taps under its Water Safety Plan (WSP). Further, WSD implements measures to encourage agents and consumers to properly discharge their maintenance responsibility of inside service.

1.3 Complaints handling on water quality at inside service

30. On receiving complaints from the public on water quality in inside service, the WA will carry out an investigation. If irregularities of a minor nature are found in the inside service, the WA will serve an advisory letter on the consumer or agent. If the WA considers that the inside service does not comply with the provisions of the WWO, the WA may issue a notice under section 16 of the WWO to the relevant consumer or agent requiring him to carry out the repairs or other works specified in

the notice to the inside service. Should the consumer or agent, on receipt of a notice under section 16, fail to carry out the repairs or other works specified in the notice, the WA may serve a disconnection notice on the consumer under section 11 of the WWO with a view to disconnecting the inside service as empowered under section 10(e) of the WWO.

1.4 Water Quality Monitoring Regime

31. Notwithstanding its policy pledge as regards water quality being limited to parts of the water supply system up to the connection points, the WA implements water quality monitoring at consumers taps according to its risk based approach in line with that of the WHO under WSD's WSP. The WA takes water samples at consumer taps routinely to check the microbial and general chemical quality of treated water. In view of the recent excess lead in water incident and the emerged risk of excess lead in tap water, additional consumer tap samples are collected randomly for lead testing for public reassurance on the quality of tap water. For details of the water quality monitoring regime, please refer to the 3rd Witness Statement of CHAN Kin Man.

1.5 Encouraging consumers and agents to discharge maintenance responsibility of inside service

32. WSD has been implementing a multi-pronged approach over the years to encourage consumers and agents to properly discharge their maintenance responsibilities of inside service. Major measures include:

(i) Promulgation of the Fresh Water Plumbing Maintenance Guide to provide technical advice for consumers, management offices and agents:

(ii) Regular organization of water seminars for the plumbing trade, property management agencies and the public on the proper maintenance of inside services and preservation of water quality;

(iii) Assisting the Buildings Department in the vetting of private owners' applications for Building Safety Loan Scheme which also cover replacement of defective water pipes in common areas of existing buildings; and

(iv) Equipping WSD's staff at the Customer Telephone Enquiry Centre and Customer Enquiry Centre with necessary knowledge to enable them to advise the public on water quality in specific areas.

33. In addition, to encourage and promote proper maintenance of inside service and thus preservation of water quality. WSD, with the support of the Advisory Committee on Quality of Water Supplies ("**Advisory Committee**") launched the Quality Water Supply Scheme for Buildings - Fresh Water ("**the Scheme**") in 2002. As at October 2015, some 45% of the total residential households in Hong Kong has been covered by the Scheme. Under the Scheme, the owners' corporations or management agents of buildings are required to carry out regular maintenance of plumbing systems including periodic cleansing of water tanks, employment of LP or qualified persons to inspect plumbing systems and examination of water quality by taking water samples. Since the emergence of the excess lead in water incident, the WSD has separately proposed through liaison with building management offices and other stakeholders to enhance the water quality monitoring by strengthening the prevalent Scheme to further encourage the owners' corporations or maintenance agents to properly maintain the plumbing systems within the areas under their jurisdiction and responsibility. For details, please refer to Part 4 of this Statement.

(2) Water treatment plant through which water is supplied to each Affected Estate

34. This part of my Statement identifies the water treatment plant through which water is supplied to each Affected Estate, which addresses paragraph i.5 of the 12 October Letter.

35. Of the 11 Affected Estates, 6, namely Kai Ching Estate, Wing Cheong Estate, Shek Kip Mei Estate Phase 2, Tung Wui Estate, Hung Hom Estate Phase 2 and Un Chau Estate Phase 2 & 4, are supplied with water by the Sha Tin Water Treatment Works ("**WTW**"). Another 2 Affected Estates, namely Lower Ngau Tau Kok Estate Phase 1 and Choi Fook Estate Phase 1, are supplied by Pak Kong WTW. The remaining 3 Affected Estates, namely Kwai Luen Estate Phase 2, Yan On Estate and Ching Ho Estate Phase 1, are supplied by Tsuen Wan WTW, Ma On Shan WTW and Sheung Shui WTW respectively.

36. In cases of emergency or operational need, the supply source to some of the Affected Estates may be changed to another WTW as far as the concerned supply network permits such a supply source transfer. For example, when the supply from Pak Kong WTW to Lower Ngau Tau Kok Estate Phase 1 is disrupted, the supply source to the estate may be temporarily switched to Sha Tin WTW by operating a number of valves in the supply network concerned.

(3) Taking of water samples from inside service before effecting water supply to Affected Estates

37. This part of my Statement addresses paragraph i.7 of the 12 October Letter, which states as follows:

"7. paragraph 45 of the August Statement implies that

before connection of water supply to the Affected Estates, water samples would have been taken not only from the inside service near the connection points but also from the inside service within the building:

(a) please confirm expressly whether this is the case and if so, explain and identify the locations and points where water samples were taken for testing before connection of water supply to the Affected Estates;

(b) describe the tests and parameters of the tests performed;

(c) describe and explain the reason and rationale behind the chosen test parameters;

(d) describe and explain the reason why, before the incident of lead in drinking water, the list of chosen parameters did not include the four heavy metals (lead, chromium, cadmium and nickel) which have only recently been added to the list."

38. In paragraph 45 of the August Statement, it was stated:

"Newly installed fresh water plumbing system is required to be cleansed and disinfected satisfactorily before they are put into use. WA [the Water Authority] provides guideline to LPs and APs on the cleansing and disinfection of newly installed fresh water plumbing systems. Water samples will be taken from the inside service near the connection points and within the building. The test items include eight physical, chemical and bacteriological parameters. Since 13 July 2015, four heavy metals, viz. lead, cadmium, chromium and nickel have been added to the testing list. If the water sample test results are not

satisfactory, the LP will be required to carry out investigation and remedial works as necessary."

39. I would first like to briefly summarize my answers to paragraph i.7 as follows:

(a) All along (including now), water samples have been required to be taken near the connection points for testing as a condition precedent to effecting water supply. In practice, water samples taken near the connection points were tested for 8 parameters. The 8 test parameters are turbidity, colour, pH at 25°C, free residual chlorine, conductivity at 25°C, total coliforms, E. coli and heterotrophic plate counts.

(b) In August 2012, the WA issued WSD Circular Letter no. 2/2012 - "Guidelines on Cleansing and Disinfection of Fresh Water Inside Service" ("**Circular Letter 2/2012**") [COI Bundle C3/37/2215-2222] which provided a guidance to the LP and AP for proper cleansing and disinfection before the inside service is put into use. Under the circular and as clarified in a meeting with the plumbing trade associations on 25 November 2013 ("**the November 2013 Meeting**") [COI Bundle C5/67f/4114.52-4114.61]), water samples are recommended (with guidelines provided) to be taken from the inside service. However, satisfactory test results of such water samples taken from the inside service were not a condition precedent to effecting water supply. The same 8 test parameters for water samples taken near the connection point are stated in this circular.

(c) After the occurrence of the excess lead in drinking water incident, the WA issued WSD Circular Letter nos. 1/2015 (COI Bundle C3/37/2205-2206] and 5/2015 [COI Bundle C3/37/2195-2198] in July and August 2015 respectively to add new parameters for

testing of water samples and standardize the number and location of water samples to be taken from inside service. From this point of time onwards, the testing of water samples from the inside service (in addition to the connection point) became a condition precedent to effecting water supply to new building projects; i.e. water supply will only be effected where the test results of all water samples (both near connection point and in the inside service within the building) meet the acceptance criteria.

(d) Of the 11 Affected Estates, 8 were completed before the issue of Circular Letter 2/2012, i.e. they fall within sub-paragraph (a) above. For these Estates, water samples taken near connection points were tested by the WA with the 8 parameters except for Tung Wui Estate and Choi Fook Estate Phase 1, for which tests for water samples taken near connection points were conducted by HOKLAS accredited laboratories with one additional parameter (iron).

(e) For the other 3 Affected Estates in which the construction of the inside service was completed after the issue of Circular Letter 2/2012 (i.e. they fall within sub-paragraph (b) above), the WA took water samples near connection points for testing against the 8 parameters. After the water supply was effected, additional water samples were taken from the inside service of 2 of them (Kai Ching Estate and Wing Cheong Estate) and they were tested by HOKLAS accredited laboratories with the 8 parameters. As for the remaining 1 Estate (Kwai Luen Estate Phase 2), the Housing Authority carried out cleaning and sterilization of the fresh water plumbing system at the inside service without taking water samples for testing.

(f) For the reason and rationale behind the chosen test

parameters; and the reason why, before the incident of excess lead in drinking water, the list of chosen parameters did not include the four heavy metals (lead, chromium, cadium and nickel), please see the 3rd Witness Statement of CHAN Kin Man.

40. The ensuing paragraphs elaborate paragraph 45 of the August statement and the above summary to the questions at paragraph i.7 in a more comprehensive and detailed manner. I will explain (1) the water sampling near the connection point before effecting water supply to new buildings; (2) the guidelines on cleansing and disinfection of inside service and taking of water samples from inside service in the light of the occurrence of the Tamar incident; (3) the stepped up measures taken by the WA since the excess lead in drinking water incident; and (4) the testing of water samples before effecting water supply to the Affected Estates.

3.1 Water sampling near the connection point before effecting water supply to new buildings

41. For all new buildings, when plumbing works have been completed, the LP will arrange to collect water samples from the inside service near the connection point before effecting water supply to inside service. The water samples will be tested for specified parameters by the WA or accredited laboratories to indicate the effectiveness of cleansing and disinfection near the connection points. The 8 test parameters, as mentioned in paragraph 39 (a) of this witness statement, are chosen mainly based on bacteriological concerns because bacteriological quality is the most common and widespread health risk associated with drinking water. If the results are satisfactory, WSD will effect water supply to the building. The purpose of the testing of water samples near the connection point at this juncture was not for identifying the presence of non-compliant

materials in inside service as an end product test but more to guard against contamination to the government water supply by the inside service. Taking indirect water supply system as an example, the water sample near the connection point can only check the water quality for the pipe between sump tank and the connection point but not the entire inside service system (i.e. the communal service and inside service after and including the sump tank). For details, please refer to the following schematic drawing showing a typical indirect water supply system and the location of connection point to the inside service.

42. There are 89 chemical parameters in the 2011 edition of the WHO Guidelines. On the basis of the risk-based approach for water quality monitoring, the testing of more parameters from the 89 chemical parameters in World Health Organization's "Guidelines for Drinking-water Quality" (2011) in the water samples was considered not necessary. For the rationale behind the chosen test parameters, please see the 3rd Witness Statement of CHAN Kin Man.

3.2 Guidelines on cleansing and disinfection of inside service and water sampling (taking of samples from the inside service within the building)

43. In light of the occurrence of the Tamar incident in late 2011, the WA issued Circular Letter 2/2012 - "Guidelines on Cleansing and Disinfection of Fresh Water Inside Service" in August 2012. The objective of the circular was to provide guidance to the LP and AP for proper cleansing and disinfection before the inside service was put into use. The circular recommended the taking of water samples by LP and AP within the building (in addition to the connection points) for testing against the same 8 parameters with the same test methods. If the results of the analysis of water samples within the building were

not satisfactory, the LP/AP should carry out the disinfection and testing procedures again. The test results of water samples taken within the building were not a condition precedent to effecting water supply; the results were to be submitted to the WA as and when needed.

3.3 Stepped up measures since the occurrence of the excess lead in drinking water incident

44. Following the risk-based approach, the WA has stepped up measures in light of the occurrence of the excess lead in drinking water incident. In July 2015, the WA increased the number of testing parameters from the 8 parameters to also cover 4 heavy metals (lead, cadmium, chromium and nickel) via WSD Circular Letter no. 1 /2015 [COI Bundle C3/37/2205-2206]. The WA issued WSD Circular Letter no. 5/2015 [COI Bundle CJ/37/2195-2198] in August 2015 to further address and clarify the water sample testing requirements at inside service. The number and location of water samples to be taken at inside service are now standardized. After plumbing works have been completed and the inside service has been cleansed and disinfected, water samples will be taken from the inside service near the connection points as well as within the building. The locations of water samples include connection points, sump tank, roof tank and water taps at extremities of the supply system. Unlike the arrangement under Circular Letter 2/2012, the current arrangement is that water supply will only be effected upon completion of compliance testing of all water samples (both near the connection point and within the building) against the 12 parameters.

3.4 Testing of water samples for the Affected Estates

45. Of the 11 Affected Estates, construction of the inside services of 8 Affected Estates was completed **before**

the issue of Circular Letter 2/2012. These 8 estates are: Shek Kip Mei Estate Phase 2, Tung Wui Estate, Hung Hom Estate Phase 2, Un Chau Estate Phase 2 & 4, Lower Ngau Tau Kok Estate Phase 1, Choi Fook Estate Phase 1, Yan On Estate and Ching Ho Estate Phase 1. The water samples taken near connection points were tested by the WA with the 8 parameters except for Tung Wui Estate and Choi Fook Estate Phase 1. For Tung Wui Estate and Choi Fook Estate Phase 1, the tests for water samples taken near connection points were carried out by accredited laboratories with one additional parameter (iron). Water supply was effected after the test results of the water samples against 8 parameters were confirmed satisfactory. There is now produced and shown to me marked as "**Annex 3**" a document setting out the locations and points of the water samples taken at these 8 Affected Estates. No water samples were taken from the inside service within the building for the purpose of effecting water supply. As explained above, the water samples taken near connection points could not indicate the water quality of the entire inside service.

46. The inside services of the remaining 3 Affected Estates were completed after the issue of Circular Letter 2/2012. They are: Kwai Luen Estate Phase 2, Kai Ching Estate and Wing Cheong Estate. Water samples were taken by the WA near the connection point before effecting water supply to inside service. There is now produced and shown to me marked as "**Annex 4**" setting out the locations and points of the water samples taken at these 3 Affected Estates. Water supply was effected after the test results of the water samples taken near the connection point against the 8 parameters were confirmed satisfactory. Separately, as recommended under Circular Letter 2/2012, consumers carried out disinfection and cleansing of inside service in these 3 Affected Estates. Such disinfection and cleansing were done **after** water supply was effected to the buildings. There is now produced and shown to me marked as "**Annex 5**" setting out the locations and points of water samples by the accredited laboratories appointed

by the main contractors within the buildings for Kai Ching Estate and Wing Cheong Estate. For Kwai Luen Estate Phase 2, the Housing Authority carried out cleaning and sterilization of the fresh water plumbing system without taking water samples for testing, according to the cleaning and sterilization report [COI Bundle C6.1/73/43].

47. The following table summarises the different water sampling locations and test parameters for various periods for the Aftected Estates:

何先生：Chairman, I propose to skip the table.

(4) Inspection and testing of water in respect of inside service (from the perspective of the Quality Water Supply Scheme for Buildings)

48. Under the WWO and WWR, the WA does not have the statutory power and is not in the best position to carry out any periodic testing of water quality and inspection of the inside service of a consumer. As a matter of fact, it is not practical to carry out such inspection and testing by the WA whilst consumers and agents, under the WWO and WWR, are responsible for the custody and maintenance of the inside service. However, the WA will carry out investigation on receiving complaints from the public on water quality in inside service. Please refer to paragraph 30 of this witness statement for details.

49. Furthermore, to encourage agents and consumers to properly discharge their maintenance responsibility of inside service, with the endorsement of the Advisory Committee, the WA has launched the Scheme since July 2002. The aims of the Scheme are to encourage property management agents and other responsible parties to arrange regular inspection of plumbing systems and prompt rectification

of identified defects by qualified persons (such as licensed plumbers, qualified building services engineers or building surveyors) and cleansing of water tanks at least once every 3 months within the areas under their jurisdiction. Besides, under the Scheme, at least one water sample is to be taken once a year for new applications or once every 2 years for renewals from a randomly selected tap supplied from each water tank of each building by an independent body in accordance with the WA's recommended procedures to demonstrate compliance with the respective limits of the 7 parameters specified by the WA. The Scheme has been well received by the public and some 45% of the total residential households in Hong Kong are currently covered by the Scheme. For the reason and rationale behind the chosen test parameters, please see the 3rd Witness Statement of CHAN Kin Man.

50. In response to the recent excess lead in drinking water incident, WSD is currently consulting the Advisory Committee and major property management companies on enhancement of the water quality examination under the Scheme. The enhancements under contemplation are to include the testing of lead and three other heavy metals for water samples, expanding the scope of water sampling to cover both the communal and non-communal parts of the inside service, stipulating the water sampling process to be carried out by an accredited laboratory, and strengthening the scope of WSD's random inspection of the applications of the Scheme in which water samples will be taken and tested in accordance with the requirement of the Scheme.

(5) Construction of inside service in Affected Estates by LP

51. This part of my Statement addresses paragraph i.12 of the 12 October Letter, which states as follows:

> "12. sections 15(1) and (2) of the Waterworks Ordinance provide to the effect that no inside service shall be constructed, installed, maintained, altered, repaired, or removed by a person other than a Licensed Plumber ("LP") except for alterations or repairs to the inside of a minor nature. Please identify and explain if WSD has implemented any monitoring system to ensure that such inside service has been constructed, installed, maintained, altered, repaired or removed by qualified persons. Please also explain and confirm whether the plumbing system for fresh water supply in the Affected Estates has been constructed, installed, maintained, altered, repaired or removed by a person other than an LP and if so, whether any enforcement action has been taken by the WSD against such unlicensed persons. The Director should identify and state the names and contact details of all the LPs and other unlicensed persons involved in the construction, installation, maintenance, alteration, repair or removal of the plumbing system for fresh water supply in the Affected Estates."

52. To answer this question in brief, WSD notes for monitoring purposes the certifications made by LPs in different forms used throughout the process leading to the approval of an inside service, as well as the LP's presence in the inspection stage (when LP's identity is verified by checking his plumber licence). Furthermore, throughout different stages in the process of application for water supply, the LP liaises with WSD's staff. Enforcement action, which will be taken in appropriate cases, has not been taken in respect of the construction etc. of the Affected Estates given all LPs involved were holding valid plumber licences. The list of LPs involved

in the construction etc. of the Affected Estates is provided below.

何先生：Chairman, I propose to skip the table.

53. It has been a long established practice of the trade that LPs are assisted by construction workers. But under no circumstances would an LP use his licence to enable non-licensed persons to undertake plumbing work without involving himself in the supervision of the work. This practice is set out in WSD Circular Letter no. 2/1990 [COI Bundle C3/37/2422].

54. The following figures are of assistance in grasping the broader picture:

(a) As at September 2015, there were about 2,950 LPs registered under WWO.

(b) Among these LPs, about 1,300 were active, in the sense that they have submitted at least one application for constructing plumbing works since 2006.

(c) According to the number of applications received by the WA in 2014, the average number of new building jobs (large project) each licensed plumber handles is about 2.5.

(d) Generally, in a block of a housing estate with 800 flat units, there are roughly 96,000 number of joints (taking one of the HA's contractors (Yau Lee)'s report at Lower Ngau Kok Estate Phase 1 as an example).

55. According to the Construction Industry Council ("**CIC**"), the trade division of "Plumber" is among the 26

trades experiencing manpower shortage. Under the Construction Workers Registration Ordinance ("**CWRO**") (Cap. 583), a person shall not personally carry out on a construction site construction work unless the person is a registered construction worker, who can be a registered skilled/semi-skilled (provisional or otherwise) worker for a designated trade division or a registered general worker or under the supervision of a registered skilled/semi-skilled worker for the trade. As at September 2015, there were about 7,900 workers registered as plumbers under the CWRO. The qualifications of LPs and plumbers are not the same. In brief, to be qualified as an LP, a person should hold the certificates of two prescribed VTC courses, or equivalent qualifications, which in combination are longer than 3 years plus at least 4 years practical plumbing experience in between. On the other hand, to be qualified as a registered skilled plumber, a person should obtain the trade test certificate for plumber, or equivalent qualifications, or should have not less than 10 years plumbing working experience as at 1 April 2015 and if necessary have passed the assessment as prescribed in the CWRO. While an LP can be qualified as a registered skilled plumber, a registered skilled plumber is not necessarily qualified as an LP.

56. On-site supervision of the construction of inside service is carried out by developers / APs / contractors / sub-contractors / LPs on private premises. On the WA's part, it is noted that:

(a) Application for approval to commence the plumbing work submitted to the WA is made by, among others, the LP. Together with the AP, the LP provides relevant certifications and proposals on the plumbing works. Permission is then given to the LP to proceed with the plumbing works if the submitted information is found to be in order. See WWO 46 Parts I to III [COI Bundle C2/10].

(b) During the construction process, there are various stakeholders involved discharging their relevant functions in terms of on site supervision and contract management. WSD understands that the construction contracts normally stipulate that relevant statutory provisions are to be complied with.

(c) After the construction is completed, the application to the WA for inspection and approval of the works is made by, among others, the LP, along with relevant certifications by the LP. It is an established procedure that in the joint site inspection with the LP, the identity of the LPs has to be confirmed. This procedure is set out in WSD Supply & Distribution Branch Instruction No. 12/98 (Consumer Services) [COI Bundle C4/40/3001-3002] and in WSD Customer Services Branch Instruction No. 2/2013 [COI Bundle C4/39/2664-2665]. If no irregularities are found, the WA issues approval of the plumbing work to the LP. See WWO 46 Parts IV and V [COI Bundle C5/67e/4144.32-4144.33].

57. The above application process was followed by the relevant LP in respect of the plumbing systems for fresh water in the Affected Estates. WSD staff may contact the LP at any time during the application process for clarification or supplementary information, if needed. On the basis of available information, and based on the said established trade practice, the WA had no reason to doubt that the said plumbing systems were not constructed etc. by installed by LPs (with assistance by workers where necessary).

58. Amongst the 11 Affected Estates, the WA has interviewed 3 LPs involved in the construction of major inside service, namely Mr. LAM Tak Sum for 2 estates (Kai Ching Estate and Kwai Luen Estate Phase 2), Mr. CHEUNG Tat Yam for 3 estates (Wing Cheong Estate, Tung Wui Estate

and Hung Hom Estate Phase 2) and Mr. NG Hak Ming for 6 estates (Lower Ngau Kok Estate Phase 1, Shek Kip Mei Estate Phase 2, Yan On Estate, Choi Fook Estate Phase 1, Un Chau Estate Phase 2 & 4 and Ching Ho Estate Phase 1).

59. The WA is consolidating the relevant documents and will submit to the Advisory Board on Licensing of Plumbers for consideration and subsequent recommendation to the Licensing Authority on appropriate action against the LP concerned which might include suspension or cancellation of the licence.

60. The following is the relevant information in relation to the LPs and APs for the Affected Estates according to WSD's record:

(a) The list of LP for each of the Affected Estates is at paragraph 52 above.

(b) The list of AP for each of the Affected Estates is at "**Annex 6**".

WSD has no record on contractor(s), sub-contractor(s) and list of workers (if any) assisting the LP of the Affected Estates

61. I confirm the contents of this Witness Statement to be true to the best of my knowledge, information and belief.

Dated this 11th day of November 2015.

問：林生，呢個係你嘅第一份口供，我而家讀你嘅第二份口供。

主席：第二份口供，聽日先喇，四點半。

王先生：主席，你想唔想我讀埋，定係聽日繼續？

主席：聽日先喇，四點八喇而家。

王先生：好。

主席：聽日先，我哋聽朝早10點鐘繼續。

2016年2月24日

下午4時39分聆訊押後

Wednesday, 24 February 2016

(10.02 am)

(Transcript of simultaneous interpretation
except where otherwise specified)

MR WONG CHUNG LEUNG (on former affirmation)

Cross-examination by MR LEE (continued)

MR LEE: Good morning, let's continue.

CHAIRMAN: Yes.

MR LEE: The WSD has many departments; right?

A. Yes.

Q. After the lead in water incident happened, since then, would different branches within the WSD communicate with each other regarding the lead in water incident?

A. Well, that takes place almost every day. The director is involved and different departments talk with each other all the time. I'm not saying it happens every day but we sit down and discuss the matter very often.

Q. You would meet regularly because of the Inquiry; right?

A. Yes.

Q. Did you host these meetings or did the director do it?

A. If different branches are involved, sometimes the director or myself would convene the meetings. Sometimes meetings would happen within branches.

Q. Do you belong to any specific branch?

A. No. I report to the director directly.

Q. So you would be present in all these meetings, if the director is present?

A. Well, it depends on the schedule.

Q. So you are present in most of the meetings; right?

A. Sometimes we need to divide the work, because workload is heavy.

Q. So for meetings convened by yourself, you would be present; right?

A. Well, basically, we just sit down and discuss the matters together.

Q. Which specific branch deals with drinking water quality?

A. We have two main branches. First, the Water Science Division. That's headed by our chief chemist.

Q. So which branch does it belong to?

A. It belongs to the Development Branch.

Q. So who under the Development Branch is responsible?

A. We have an assistant director, Mr Chau was the assistant director, now Mr Leung Chung Lap is in charge.

Q. We obtained this document online this morning. There are two charts. We found it online.

Your department would often upload documents to the web?

A. (Chinese spoken).

Q. I would like to show you two documents. First, an organisation chart. (Handed).

Please take a look. We obtained these online.

At the bottom-left, do you see the words "Water Supplies Department", and do you see the words "Organisation chart"? Do you see the words, "Director of Water Supplies, Mr Enoch Lam", and then yourself, and on the left we have the Customer Services Branch and Development Branch, and on the right, the bottom right, there's a task force, which you used to chair.

A. Yes.

Q. Now, if you turn overleaf, you see "Development Branch", the officer in charge is the assistant director, Mr Leung Chung Lap. When you look at his principal functions and duties, it says "Control of the quality of water supplies to ensure compliance with approved standards."

So this person deals with drinking water quality?

A. As I said, under the Development Branch, we have a Water Science Division, and he has to take care of that division as well.

Q. On the next page, do you see the words "Task force" at the top?

A. Yes.

Q. The officer in charge is Mr Leung Chung Lap:

""Principal functions and duties: To carry out investigations to ascertain the causes of the recent

incidents leading to presence of lead in water drawn by households."

A. So they would continue to look at what we are already studying. The task force issued a final report, and it's about this work.

Q. But the principal work and duties are still to carry out the works.

A. So that used to be the terms of reference.

Q. So are they going to be responsible for taking further water samples?

A. I don't think so. The task force was set up by the Development Bureau, and we were asked to study three issues with regard to the incident. Before publishing a final report, we are doing final touch-ups and tidying up the remaining work. So the work of the task force is basically done.

Q. Second, "To recommend measures to prevent recurrence of similar incidents in future."

A. This has been done and we included recommended measures in our final report.

Q. Again, it would be wound-up?

A. Yes.

Q. So where does it say winding-up in here?

A. Basically, our work is done. The Secretariat has some final touchups.

Q. And to follow up on the cases of Legionnaires' disease found in Kai Ching?

A. One chapter in the report was dedicated to this issue. Again, the work is wrapped up.

Q. What about further cases of Legionnaires' disease?

A. At the time, at the end of May 2015, a case was detected. At that time, the work of our task force -- well, actually, the Housing Department set up an interdepartmental working group on Legionnaires' disease. They looked at water samples and they found them satisfactory. That had been done. A chapter in the report was dedicated to that.

Q. How about now? The WSD is still following up on the issue?

A. That won't be the task of the task force.

Q. So, in other words, the entire task force should be wound up?

A. The Secretariat has some final tasks to wrap up, and by the end of March the task force can be dissolved.

Q. So, in other words, you have been wrapping up in recent months?

A. The Commission might have some questions for us and we have to deal with them.

Q. So the task force still exists because of the COI?

A. The task force might assist the COI in digging up

certain information.

Q. We show you another document. On the top left, "(in English) Water Supplies Department", and on the top right, "(in English) Organisation of the Development Branch". Again, it's headed by Mr Leung Chung Lap, and there are a few divisions: Development (1), Development (2), and Water Science. Do you see the words "(in English) Water Science Division"?

A. Yes.

Q. Chan Kin Man, the former chief chemist, retired, so now it's Kelvin; and laboratories, and so on.

"(In English) ... quality and treatment of water resources ...

Ensure that potable supplies conform to satisfactory ...", and so on.

Under WSD, the task force is not independent; right?

A. I don't really understand your point.

Q. I thought the task force is independent of your department?

A. The task force was appointed by the Secretary for Development and I was the chairman, and we had three academic experts as well as representatives from three departments. The Secretariat provided support to the task force, and I considered the task force rather independent.

Q. My understanding is that the task force is independent, and you used to tell people that it's independent; right?

A. At that time, we handled the issue from a technical perspective. I read endorsements from two experts on our findings.

Q. Before the report was compiled, the task force was independent; right?

A. Yes, I feel that's independent.

Q. So, even though you are the chairman, you don't want to control the task force on behalf of the WSD?

A. Not at all. We have been professional in our findings and investigations.

Q. Now I would like you to look at the fifth meeting of the task force. C19.6, tab 136, page 14057.

Please turn to the second page, 14058. In the middle of the page, 2.0, "(In English) Confirmation of findings", 2.1:

"(In English) The secretary ..."

Does it refer to the secretary of the task force?

A. Yes.

Q. "(Partially in English) The secretary gave a PowerPoint presentation of the latest findings as per [task force] paper 5/02 and remarked that pending comments from members, this PowerPoint would be presented to senior

administration. The meeting noted that despite a few changes proposed to be made, members agreed to the content of the presentation."

First of all, page 14067 -- we see that's the paper referred to:

"(In English) Task force to investigate cause of excessive lead content in drinking water."

If you flip to page 14078, it's referring to "(In English) Taps" here?

A. Yes.

Q. (Chinese spoken) ... components?

A. Yes.

Q. So on top you see, "(in English) Hong Ching House Taps", and on the right-hand side we see:

"(In English) Kitchen tap.

Tap at washing machine.

Shower mixer.

Basin tap."

Then further down we see "(in English) Hung Hei House". My understanding is that it was unaffected. It was used as a control.

A. Yes.

Q. So please take a look at lead content:

"(In English) Lead content before cleansing.

Lead content in mass before cleansing.

[Percentage] lead mass (British Standard ...)."

So I would like to understand, "Lead content [micrograms per litre]", what does that mean? Is it a solid?

A. It's very hard to read this.

Q. When you are saying micrograms per litre of water, we are talking about that. We are talking about water.

A. At that time, you know, we have to do a leaching test, so the object is submersed in water and then we have to conduct analysis. The direct result from the machine is a concentration. It's micrograms per litre.

But sometimes we need to assess each component in the water supply chain, the so-called total lead percentage in the supply chain. So you have to convert that into mass. It's micrograms.

Q. It's a solid?

A. It doesn't have to be a solid. How to put it? I don't know -- I have to be a bit scientific. Let's say you have a fitting. Let's say there's a concentration of 10 micrograms per litre and that was done by submerging it in water.

So, in the fitting, the actual lead content, not the concentration, you have to multiply that by the volume, and mass per volume equals density, so you have to do the calculations and you have to convert each component.

Q. You don't have to convert from liquid into mass?

A. It's just a calculation. We have to calculate the mass, how much is the mass. Then I can make a comparison. Otherwise we have different concentrations.

Q. So this is a mass?

A. Yes.

Q. So here we have "(In English) Lead content in mass ... before cleansing" so that means it has deposits and there's lead in that deposit? Do you have remove the deposit?

A. Well, if you allow me some time, let me give you a detailed explanation. When we did the first round of leaching tests, we had to remove the component from the construction site, and we do not disturb the component. If you look at our protocol, it was very detailed. We have labelled everything and even the folders were labelled, and we do not disturb it until the first leaching test.

The results were surprising in that even with copper pipes, why did we have lead leach? We were surprised, because there should not be lead in the copper pipes. So we had to examine the interior and we found that there might -- we saw a white substance, very fine. It was visible.

Q. Was it thick?

A. It varied. Well, I did not inspect it personally, but I remember in the report there were some pictures.

So we had to prove we knew which component leached lead, so one thing we had to do was -- and we attempted to remove the deposit and submerse it again to see if any lead was leached.

Q. How do you cleanse it?

A. There were many methods. Initially -- we don't want to disturb the surface, because if you sand it down you might scratch the metal surface and that might affect the results, so we had to use a very fine brush. I heard from my colleagues, we had to use a soft toothbrush, it seems softer than a toothbrush. I heard my colleagues say they had to use an infant bottle cleaner. And after cleansing we had to do leaching again.

Q. So that's why you said it was partially cleansed?

A. Because ultimately we found we cannot achieve 100 per cent clean results, because even in the copper pipes we did different sets. We were in communication with the experts. We had to sand it down with a fine brush. We found that the concentration was so high in micrograms per litre, we said that was impossible.

So we had to do another test called the sand shake. We inserted sand in the tube and that brought it down.

But we still had to do elemental analysis, and we had to have a lab test, and the copper pipe had a lead content of 0.00-something per cent.

But you see the copper pipes -- you might not be able to see with the naked eye. It's different even when it's wet and dry. You will see some white deposits when it's wet, and I think the surface of the component is not as smooth as we imagined. There might be some coarseness on the surface. That's why some deposits were attached. It's very fine.

I remember Mr Chan Kin Man said that they tried to --

Q. Okay, we can set that aside. You feel that even after cleansing and without cleansing, there's a difference, so it would affect your calculation?

A. That's why, in our first-round leaching test, we did not disturb the fittings.

Q. Yes, that was before cleansing.

A. And after cleansing we had a selective test.

Q. So you would use a partial cleansing?

A. Well, it was misleading. Especially when you are dealing with fittings, if you imagine a valve, it's hard to cleanse.

Q. So, when you do partial cleansing, the partial cleansing, you are trying your best to clean it out;

right? You don't want to affect the surface?

A. First, we don't want to affect the surface. Second, if you want complete cleansing, we think it's impossible. But the partial cleansing has an --

Q. We are just talking about degrees.

CHAIRMAN: I would like to ask, Mr Lee, what's the purpose of your line of questioning?

MR LEE: I just want to understand their methodology, because it's very difficult to get a hold of these figures.

CHAIRMAN: Yes, I understand. You might not comprehend the figures. But what's the purpose?

MR LEE: I'll get to that later. I just want to ask the questions first of all.

CHAIRMAN: You have to tell me first what you want to do.

MR LEE: Well, they can do some calculations, and I feel, when you do the calculation, the comparisons are different.

CHAIRMAN: What's the purpose of that? What are you trying to express?

MR LEE: We don't know how much lead is in these components.

CHAIRMAN: Nobody knows.

MR LEE: But it does have some impact.

CHAIRMAN: If you want to express that, I can cut it short because you will recall, in Prof Lee's report, he said

the same. He said that these components leach lead, but what is the proportion.

Q. I understand. I still have another reason. We think --

CHAIRMAN: It's leading where?

MR LEE: I'm getting there.

CHAIRMAN: You are asking so many questions about testing. Why don't you go directly to the question? You want me to understand; right?

MR LEE: Okay. Let's return to another point. A1/19, internal page 31.

A. Yes.

Q. You are on internal page 31 at the bottom, at the very bottom? Further down. Okay. You see, in "(In English) Scenario 3 -- Lead leached solely from copper alloy fittings"; do you see that?

A. Yes.

Q. I'll come back to be that later. Let's go to the next page, "(In English) Before cleansing", and we have, in the diagram down below, "(In English) After cleansing", and at internal pagination 33 we have another diagram in the middle. So we see that is before cleansing, and we have before cleansing, after cleansing. This one is not indicated.

A. The reason is they don't have lead deposits.

Q. That's annex 2.7, "(in English) Before cleansing".

Then you talk about comparisons. After looking at this, after reading that diagram, it says in the subsequent paragraph:

"(In English) It was noted that the amounts of lead leached from the copper alloy fittings in Hong Ching House and Yuet Ching House of KCE and Luen Yat House of KLE2 (after cleansing deposits) ..."

So that's after cleansing.

The figures there "(in English) ... were comparable with the amounts of lead leached from the copper alloy fittings in Hung Hei House of HFE."

So that's before cleansing.

Were you referring to Hung Hei or before cleansing?

A. Yes.

Q. We find it strange, why would you compare before and after cleansing?

A. Because Hung Hei House doesn't have this problem, they have no deposits, so they don't need cleansing.

Q. So you could say that the results were the same before and after?

CHAIRMAN: Mr Lee, ultimately, I feel you don't need to investigate what's going on before and after cleansing, because some components, the lead content exceeded the British Standard. I don't think anybody denies that. We found some components that exceeded the standard.

MR LEE: Well, how much was exceeded, that's not important, because they need to be replaced.

But now you have only done three estates. You didn't dismantle other pipes?

A. Well, the expert had discussed that. After three estates, we had discussed whether we needed to dismantle all the other estates.

The experts' view was that as long as the other designs were similar, they were confident that the results would be the same. In other words, we have some prerequisites, they use copper pipes, they use solder joints, and we have to identify lead there. They also used copper alloy fittings; the numbers were the same. They felt -- I spoke to them directly -- "Should I go to other estates?" They said, "It's meaningless, unless you dismantle all the fittings", but given the time, it wasn't worthwhile.

Q. Because you were aware there were three estates that had problems, what were you going to do? As the chairman said, you have to do the whole estate.

CHAIRMAN: No. You have to understand, Prof Lee, one of his recommendations -- because you could identify one important job was to do the computational fluid dynamics, and after all those calculations he told us that the results were -- the leaching in this incident

was from solder. The components had some contribution but it was not significant, and the contribution of the fittings is insignificant, it has been learned. Although this was not explicitly stated, but the meaning was clear.

So the idea was, if you flush the tap by one minute, the level would go down significantly; and second, again, it was not explicitly stated. Lots of bends and Ts are found in the meter room. In the long run, they would all have to be replaced, but in the medium term, you can first replace everything in the meter room, including the bends, joints, and so on. This way, you can substantially reduce the level.

You wanted to find out the level of lead. My view is that of course, if you replace everything, then it will be all right, but in the meantime you can just replace some of them and flush the taps for one minute. When you look at the actual guidelines, if you are to solve this problem, a lot of time and money would be required and that's not something you can do immediately.

So, under the circumstances, even if you try to dig deeper into the issue, that has very little bearing on the final recommendation.

MR LEE: I agree. The problem is the integrity of this

task force report.

CHAIRMAN: In terms of integrity, you have looked at the reports of Prof Fawell and Prof Lee, so basically they said it's okay.

MR LEE: And they are relying on this report.

CHAIRMAN: That's correct. Of course, they would better interpret this data -- they would do a better job than you and me.

Yesterday, you paid a compliment to Prof Fawell, but today you are doing the opposite.

MR LEE: I have not put this question to him.

CHAIRMAN: I understand what you mean, unless you are telling me that this data are problematic --

MR LEE: I'm not saying that they are completely problematic.

CHAIRMAN: If it just says the lead content in these fittings are beyond the British Standards, or else we don't have to waste more time on this because it's generally accepted.

MR SHIEH: In the professor's report, on the review of the task force, paragraphs 29 to 35, it has been pointed out clearly that they agree with the isotopic analysis and there were a lot of control samples. Fittings without the use of leaded solder were used as controls, so the only difference is the leaded solder. They also noted

some mathematical models of the task force, but they have no bearing on the final results.

MR LEE: A lot of materials used are not British Standards-compliant, so how do we deal with these issues? If they don't see an issue, they wouldn't follow up on them.

CHAIRMAN: I think they wouldn't deny that some fittings are not compliant with the British Standards.

MR LEE: So how would they follow up?

CHAIRMAN: Now we are back to the question you asked yesterday. For the forms in the annex, WWO form 46, they must be certified by the LP, and after the certification you have to verify them, and so on. Now we are going back to the same problem.

MR LEE: They can make inspections on the components.

CHAIRMAN: I wouldn't deny what you said. I'm not trying to defend them. I'm simply looking at the WHO requirements.

According to the WHO, if water quality is affected by building materials, the prime objective is not to monitor water quality but to control material use. That's the primary consideration. I'm not saying that what you are doing is useless, but it might be costly and time-consuming.

Now, you have looked at all these issues yesterday,

by and large.

MR LEE: So how prevalent is the issue? How many buildings are affected?

CHAIRMAN: I agree. But the root of the issue is how significant the problem is. If it imposes significant health risks, of course we must go on.

MR LEE: I completely agree. But if there are irregularities -- now, they are a regulator, so what are their responsibilities?

CHAIRMAN: Now we are back to the same question we asked yesterday. Yesterday, we summarised the dispute. They are the regulator. They simply have to put a system in place. That's their position and that's the end of the story. If you ask the same question, they would repeat what they already said yesterday. So you can leave this until the submission stage and I would include them in my report.

MR LEE: New buildings, there are no issues with new buildings. What about old buildings?

CHAIRMAN: Again, back to the same issue I mentioned. Is it really significant?

MR LEE: If we don't check it, we have no way to tell. Assuming it's insignificant, maybe small quantities are leached into the water, but from an enforcement perspective, are we not going to do anything about it?

CHAIRMAN: They are the regulator, so they have to make prosecutions if they want.

MR LEE: They haven't found out the truth.

CHAIRMAN: Now they have to find out the facts. But this has nothing to do with me anymore.

You can ask such questions but you can put it to the next witnesses. You can ask them, over the ten years, whether they have carried out any prosecutions or issued summonses.

MR LEE: They said no. I asked the question yesterday.

CHAIRMAN: (Chinese spoken).

A. I agree with the chairman that the enforcement agency has to consider cost-effectiveness. For elemental analysis, of course we have a quick test, but it's not accurate. If we want accurate results, we have to remove part of the material and test it, but that's disruptive.

If you look at our expert reports, the lead content might be exceeding over standard but it is not significant. We have been talking about 6 to 9 per cent in lead content in the fittings, compared with 30 to 50 per cent lead solder and along the supply chain we only have a few such fittings. Compared with solder joints, the quantity is insignificant. So their contribution is extremely insignificant.

MR LEE: Does it mean they don't have to be dealt with?

A. So one of the task force's recommendations is to check the content of these samples, to ensure integrity of the batch. This is more about quality control.

Q. If you do take this approach and the sample is found to be substandard, are you going to prosecute them?

A. Well, that, we have to work with the trade.

CHAIRMAN: You cannot blame the trade. If you are to issue a summons or a penalty ticket, are you going to consult the driver first?

A. We might impose contractual requirements.

MR LEE: We can see your attitude. You are the deputy director. Now, we are concerned with enforcement. That's the same yesterday and you said you are going to ask them first, so how can you be the regulator?

A. To some extent, we have to strike a balance.

CHAIRMAN: Sometimes it's not a question of balance. If that's written in law, you have to enforce it, or else, even if you have the perfect law, if you don't enforce it, it's useless.

A. We agree that enforcement is important.

CHAIRMAN: (Chinese spoken).

MR LEE: Now, with this attitude you have, you are never going to prosecute anyone. Now the trade is listening to what you said and they will be very happy.

A. I would like to stress that enforcement is important.

Q. But your attitude shows otherwise.

CHAIRMAN: The WSD can issue a summons, and there's a time-bar of six months. After six months, you cannot make any prosecutions. Now you are going to say you will study it and think about it, and so on. Then the bar might have lapsed.

MR LEE: Who in your department is responsible?

A. The customer service branch is responsible.

CHAIRMAN: I think we are done exploring this issue.

MR LEE: I would like to go back to the original point.

I asked about page 14078. Let's look at the taps. For Hung Hei House, you said it wasn't affected; it was a control. You can see the first column is "Kitchen tap", the second, "Tap at washing machine", and at the bottom, "3.2 per cent".

Now, on the left, the British Standard is 0.5 to 2.5 per cent, so this is substandard, the sample. So what are you going to do about it? Have you done anything about it?

A. (Chinese spoken).

CHAIRMAN: Please don't repeat yourself. Did you do anything about it? If the answer is no, just answer "no".

A. No, we haven't.

MR LEE: On page 14058, paragraph 2.1, why was a PowerPoint presentation given to the senior administration?

First of all, senior administration, who was that?

A. It was the Secretary for Development. Because he appointed us, we needed to report back to him. We were appointed by the Development Bureau Secretary.

Q. Does it include the interdepartmental officials?

A. No, but we had to report the findings to the secretary.

Q. And who else was there?

A. This PowerPoint, we had to report back to the under secretary, the secretary, the PAS, that's senior administration.

Q. Why not the Chief Secretary?

A. Did I report? I don't think I presented a PowerPoint. I didn't present this PowerPoint presentation to the Chief Secretary. I don't recall that.

Q. Did you know that subsequently the record was deleted? In 3.2, the washing machine tap, that figure disappeared. That's the fifth meeting, and you had these documents where the lead level exceeded the standard. Then these records disappeared.

CHAIRMAN: What do you mean?

MR LEE: This was not referred to subsequently. It was not followed up. There was no further document referring to this.

A. You are aware we had a very short time frame. We had to find out the cause, and we were focused on finding the cause for excessive lead. Then you see we did a lot of work. The people queried, "Was it that?" Then we wanted to explore the different avenues.

MR LEE: Well, we now have found excessive lead, but you didn't follow up what you identified.

A. Well, the causes of excessive lead in water -- at the time, if you look at the terms of reference, the focus was to find out why there was excessive lead in the water, and we needed to find out, was it solder. The puzzling thing was, was it fittings or solder, because we found lead in fittings. So we had to use a lot of ways to prove that the culprit was lead solder. So we had conducted isotope analysis, the report referred to controls and so on. We used different methodologies to scientifically prove that.

Q. You mean even though you had reason to believe that the main culprit was solder, but you had to conduct other scientific analysis? It seems you have ignored that but you are trying to be scientific?

A. If you read the report, we had identified other components with lead, and if you look at the mathematical model, we did the calculations. We ruled out -- we assumed that if solder didn't leach, if there

was just leaching from copper alloy fittings, and even if you compare with other things.

CHAIRMAN: This comes back to the big question. Initially, when the components were given to you for certification to put on your approved list, as Mr Martin Lee said, the supplier of course would submit a perfect sample that complied with all the British Standards.

But the question is, subsequently, at the project level, you are now just relying on the LP/AP signature and you leave it at that?

A. Well, this pipe test, we submit a sample and we accept that. The UK use a similar system. The question is about manufacturing and quality control.

One way of handling quality control is certification. That is, aside from accepting your sample, I need to -- the certifying body needs to go to your manufacturing facility and observe your quality control. That's one way.

But Hong Kong is a small market. We cannot -- I don't know if the Consumer Council can do that -- but compliance costs are quite prohibitive as well. For example, say we have taps, they are not brand name. We have a sample, we approve a sample, and let's say you go to Australia, WaterMark -- we need someone to certify that.

CHAIRMAN: I'm not talking about complex issues like that. I'm saying, at the project level, how do you monitor the situation? You said so much, and you say that this is prohibitive, that is difficult, that is complex.

A. So one compromise that the task force came up with is that when the material is delivered to the construction site, we take samples.

Q. How?

A. The resident site staff --

CHAIRMAN: You can take a sample, then what?

A. If it doesn't comply, then you reject the batch. If you take a sample for inspection, and let's say in one batch they have a number of defects, then that batch has to be rejected.

MR LEE: Who takes the sample?

A. Usually, in construction, it's very common. We have reinforcement steel bars, and so on. We do similar stuff.

Q. Who does the inspection?

A. The resident site staff.

Q. You have to hand it over to the AP?

A. That should be the most effective. Then he can follow up. But that's in line with construction practice. That's what they do with all construction material.

CHAIRMAN: There's no problem with construction doing that,

but if you are telling us that if you don't do anything, that is not acceptable.

MR LEE: We can explore that in further detail.

A. It's hard to give you a simple answer right now, in one step.

MR LEE: It's not one step. It should have been in practice for a long time?

A. Yes, it has been in practice for a long time.

Q. If it was effective, we wouldn't be questioning you here.

CHAIRMAN: Then you can say, "We'll have to go back to our old stamping process." Well, you can see, self-regulation -- I can tell you, self-regulation in this world isn't that reliable; am I right? We have a lot of professions in Hong Kong. A lot of people are not happy with self-regulation.

COMMISSIONER LAI: Even in the US, we have this risk-based assessment, and are you saying that the components testing, you feel the responsibility should rest with the AP, but we are talking about water quality. The responsibility is with you. Of course, the AP needs to do some work. He has contractual obligations with the main contractor. But that does not mean that, when they do the work, the Water Authority can slack off?

A. I agree.

COMMISSIONER LAI: It doesn't mean that they do the work and there's no work for you.

As a matter of fact, your thinking, it's a bit biased. You are placing all the responsibility on the AP, on the contractor and other stakeholders, and you are relying on their testing, their certification, and if you don't even do a random testing.

A. I agree. We are still exploring other options, to see if -- let's say, in the market, I can purchase some material to verify if there's any difference.

CHAIRMAN: Well, essentially, you have to take these measures. If you ask the contractors, of course they object, it goes without saying, they will say they can handle it themselves. Of course that's what they will say.

A. When I approached them, that's not necessarily the case.

MR LEE: Another issue is, the water tap deposits, you are applying British Standards, and you also have an approved list, and if it complies with the approved list then it's okay; they can submit form 46.

After submitting the form, my understanding is it's valid forever; they can use it for ten years?

A. Not now.

Q. But in the past, it could go on forever?

A. I explained that a day or two ago.

Q. Then the British Standards will make some amendments every now and then, but then you don't follow up?

A. It's not that we don't follow up. Your thinking was that if there wasn't any significant change --

Q. Well, the first time they make some minor changes, but then, when you add them all up, it's cumulative?

A. Well, we've tightened our control. We can even withdraw the approval from the approved list.

Q. We are spending a lot of money, public money, to do this Inquiry. A lot of people and effort has been expended. So we now want you to come up with good measures and help us, help the chairman and members compile a report.

A. Well, you see that we have implemented some measures. We have a five-year plan.

Q. But then you have not followed up on a lot of good suggestions, such as Prof Fawell's suggestion. We have international experts. You decline their help. Your attitude is disappointing. So how can we move forward in the future? We are relying on you for water quality. Prof Fawell said you can do an excellent job. He says you are starting on a good footing.

A. Well, we are not rejecting --

Q. You have rejected a lot. Just the WHO standards -- the professor said it is not a health-based standard. You are ignoring him. He said you can achieve a level of

2 micrograms per litre, and that the WSD, you have also ignored his advice. So what you are doing? What can we do? The chairman has also given you some ideas. He said you should use the first-draw sample.

A. I don't want to repeat what I said yesterday.

Q. You have ignored us. You have declined --

A. I disagree. Yesterday, I said, Prof Fawell, we respect his views.

Q. You are respecting but you are not complying.

CHAIRMAN: We should not waste his time on this.

MR LEE: I would like to ask you, when you take water samples -- you have taken a lot of samples --

A. You are referring to the task force?

Q. You have taken samples from a lot of units. I feel it is not enough, but when your staff --

A. Are you referring to the Housing Department, the inspection? Yes, I know they took a lot of samples, but I don't have the figures.

Q. Did your staff attend as well?

A. We went. We did it. Yes, we were responsible.

Q. You were flushing for two to five minutes? The tap was turned on full blast?

A. I recall the protocol was that you had to turn it --

Q. You had to turn it on full blast? It wasn't trickling out?

A. Yes, I think it was turned on full blast.

Q. So it was a full blast for two to five minutes. Did you consider saving water? What did you do with this water that was flushed?

A. When my colleagues did sampling, it was very hard to conserve water.

Q. That's a problem. You should serve a good example, you should save the water, but you didn't do that?

CHAIRMAN: I understand what you are saying but it's not relevant. Next question, please.

MR LEE: Now, your department or yourself know that foetuses might be affected by lead and infants might also be affected, in terms of their mental development?

A. We know that after reading the reports. In the past, I knew that there were mental effects.

Q. As the infant grows up, the cells or tissues would develop and a lot of negative impacts are irreversible. Are you aware of this part? The impacts are irreversible.

A. I don't know the details, but I knew that they had negative impacts on children under six.

Q. A lot of people in Hong Kong would use the first draw from the tap, first thing in the morning. Are you aware of that?

A. Well, 5 per cent of the people would do so. They might

consume the first draw from the tap.

Q. Now, of these families, some of them would inevitably have children; right?

A. Yes, I believe so.

Q. Now, if these people drink from the first draw, irreversible damage might be done to the children?

A. We have always been talking about average drinking water quality.

Q. Let's not argue about that.

A. The water subsequently consumed would be of a different quality.

Q. (Chinese spoken).

CHAIRMAN: Now, lead is cumulative.

A. You cannot put it that way.

CHAIRMAN: You cannot look at the water consumed over the entire day and say the lead concentration would be diluted.

A. (Chinese spoken).

MR LEE: Now, do you follow my logic? If the family boils a kettle of water from the first draw and uses it for baby milk, then the development of the baby's brain might be affected; do you agree with that?

A. Some experts mentioned this and I have read their opinion.

Q. You have not seen comments from other experts saying

otherwise; right?

A. (Chinese spoken).

Q. If you test the first draw, that building might be affected, but if you don't test the first draw, this building would be unaffected, and the children living in these buildings might fall victim; do you agree with this possibility or scenario?

A. First of all, I am not a specialist in sampling.

Q. Me neither.

A. I have heard opinion from different experts, such as Prof Lee and Prof Fawell, or Mr Chan Kin Man. They gave different views. Mr Chan Kin Man explained at depth why the sampling protocol was used.

Q. Let's assume our two expert witnesses are wrong. But the fact is some people would drink from the first draw. This is a fact -- that's a fact you gave. 5 per cent of families would do so, and young infants would be affected. It's as simple as that. Do you accept this fact? Let's not consider whether that's normal.

A. I'm not an expert.

Q. You don't have to be an expert. By common sense and logic, you would understand what I am talking about. The question is, are you willing to answer this question?

CHAIRMAN: All right, now let's put it at that. Let's move

on to the next question.

MR LEE: Your department is still reluctant to test the first-draw samples; right?

A. We have been using the same sampling protocol.

Q. Now I would like you to look at A1/22. The internal pagination 10. Page 10. On the left, the first four lines, starting from the third line, it says:

"An interdepartmental meeting chaired by the Chief Secretary for Administration was held on July 11 during which decisions were made on crucial follow-up work and measures."

I asked you some questions just now. Would you report your decision to not test first-draw samples so that they would make a decision? Are you willing to relay that decision?

A. That's a rather professional issue. We have read the experts' reports. They have the expertise, and we would consider these views with our chief chemist.

Q. You did not answer our question.

A. That's their decision.

Q. The decision -- on the fourth line, it says it was decided to conduct "follow-up work and measures".

They can override your decision; Ms Carrie Lam can override your decision. Now, the decision to not test first-draw samples, can they overrule this decision?

A. Of course, they can issue instructions, but this is an issue of expertise, so I have to discuss with our experts.

MR SHIEH: This answer has been answered many times. This might be a satisfactory or unsatisfactory decision. There might be a series of decisions.

CHAIRMAN: I know what you want to say. So please answer Mr Lee's question.

A. This is a question of expertise.

CHAIRMAN: He knows you have a view or decision. Can your view or decision be overruled by the Chief Secretary? Can she overrule your decision? Because she would have a lot of considerations.

A. (Chinese spoken).

CHAIRMAN: That's something else. Please pay attention to the question. "Yes" or "no"; can she overrule your decision? Whether she would do it is another issue. Now we are looking at two separate things.

A. She might consider advice from the experts.

COMMISSIONER LAI: At this stage, will the WSD raise any suggestions to the interdepartmental working group, or are you going to wait until the report is out before you submit to this task force?

A. (Chinese spoken).

COMMISSIONER LAI: So, in other words, you are going to wait

until the report is compiled; right?

MR LEE: For the record, the chairman asked if that's possible. You simply nodded your head. That's not on for the record. You can say "yes".

CHAIRMAN: So what's the significance of this question?

MR LEE: He nodded but he refused to say yes. Now it's not on the record. But I think that's all right because I said a lot already, and he didn't deny it, so I take it as a yes.

A. I think Mr Lai's question was more accurate. I can address that.

MR LEE: One out of three is better than nothing.

Yes, please go ahead and answer his question.

A. I answered already. We would look at all expert reports.

CHAIRMAN: So you will wait until our report is out?

A. But in the meantime, we will do something, until the report is out.

MR LEE: So, in the meantime, what are you going to do?

A. We will look at it within our departments.

Q. When the COI report is out and if deficiencies are identified on your part and areas of improvement are suggested, are you going to study them with the trade? Are you going to do something, or are you going to consider that?

COMMISSIONER LAI: That's if the government accepts our report. Now, our report is not submitted to him but the government, so if the government accepts then he will listen.

MR LEE: Is there any need for further studies?

MR SHIEH: He will probably say, "We will make a decision after considering the factors."

Now, we are wrapping up on a lot of issues and we are trying to predict what's going to happen.

MR LEE: I don't have a lot of questions left.

You came up with a questionnaire on the habits of water consumption in the morning. Now I have a few general questions for you. You don't have to refer to the documents.

Why did you launch this study before any conclusions were drawn at this COI and why did you forward these results to the Commission?

A. I have not been personally involved.

Q. But you endorsed this practice?

A. We conducted a Total Water Management or TWM survey and we wanted to know their habits.

Q. Why did you decide to do it at this time?

A. In his witness statement, Mr Chan Kin Man quoted this interim survey, and as such it was admitted.

Q. Are you trying to come up with some evidence or data for

Mr Chan Kin Man?

A. I don't see any direct relation.

Q. You said it might not have a direct relation.

A. I cannot answer this question.

Q. By now, we know the source of the problem. We have a lot of contractors -- the main contractors are here, the subcontractors are here, we have plumbers. Now you can see the names online. Are you going to conduct further investigation of the combinations? For example, the main contractor, contractor and plumber combinations -- are they involved in other contracts? Are you going to take this approach?

A. My colleagues looked at the issue, and more than one licensed plumber was involved.

Q. These people have not done a very good job for this project. Are you going to study or investigate other projects?

A. We have taken a look into it. It wasn't this Commission that discovered this. Before the Inquiry, that LP, or the contractor, and so on, they weren't singly responsible or they didn't have incidents occurring because of them.

Q. Did you do a meticulous follow-up because these people, we have so many waterworks projects in Hong Kong, were there any other projects that involved these people?

Did you do a follow-up investigation?

A. No. We looked into this and there was no conclusive conclusion. Given that combination of people, we couldn't identify any more projects that were affected or not affected.

Q. Then you have a methodology. You can conduct an investigation. Is there such a methodology?

A. Yes. You can follow up.

Q. Why don't you try that? Can you inspect other installations, other PRH? That wouldn't be very difficult.

A. Well, if you look at the scale of the problem, it's quite large.

I want to go back to your previous point. We have a first line in the screening, and the conclusion was that there wasn't such a scenario.

Q. As a matter of fact, we have 11 affected PRHs.

A. We also have priority. We have limited resources. We cannot do everything. We have finite resources.

Q. That tri-departmental committee, they can support you.

A. We have a budget.

Q. It's been announced there is a surplus again.

A. (Chinese spoken).

Q. You have 11 PRHs that are affected. You know that this combination of people -- we know that in that incident

they had run into a problem?

A. But there were also other projects where there weren't problems.

Q. You say you have advanced equipment, you don't need to take water samples. It doesn't have to be -- you don't have to take a first-draw sample?

A. I have already given you my perspective. I don't see the need.

MR LEE: Okay. I have no other questions. Thank you.

CHAIRMAN: What questions do you have?

MR G CHAN: (In English) Mr Chairman, I only have one question, but I would just like to just ventilate it with you, to see whether in fact you wish this to be put to this witness or whether this is something you are content to have done by way of submissions.

Back in the days of the Airport Core Programme works, the ACP works, there was the concept of an independent work checker, independent design checker. I am just wondering whether this concept of the use of an independent work checker is something that you would allow me to put to this witness, or are you content for it to be done by way of submissions?

CHAIRMAN: You can do it in the submissions. Thank you.

MR KHAW: Just now, Mr Lee had a discussion about the task force meeting minutes. There's one point I would

like to follow up. That is on the first meeting.

Further cross-examination by MR KHAW

Q. I would like to take you to C19.6, page 13898, paragraph 4.4. Mr Lee asked you:

"(In English) Members expressed that the procedures to collect water samples would affect the testing results of lead content."

Here, we refer to flushing tests and stagnation tests.

"(In English) ... are to be conducted at different time intervals so as to address the controversy over the procedures of taking water samples."

You are talking about minutes of a meeting. And WSD, you are the task force chairman, and other participants were Mr Chan Kin Man and Mr Leung Chung Lap, the secretary?

A. Yes.

Q. I would like to ask -- you discussed these water sample procedures. After discussion with the task force, did you have further discussion in the WSD?

A. No. The water sample, at the time, we wanted to find out the effect of stagnation and the effect of flushing on the content. At the time, there were people arguing that the figures were higher or lower, and I think we were trying to focus on the effect of stagnation, how

significant was that effect, and what was the effect of flushing. So we had reported on that.

Q. So you personally and WSD representatives at the task force, you did not object that flushing and stagnation tests should be applied?

A. No, no, that's not what our intent was. The stagnation and flushing tests, we wanted to just gauge the effect of flushing. We weren't trying to decide whether we should take flushing or stagnation samples. It's because when water flows through a system, after let's say 48 hours, how will it affect water quality, and then if you flush it, how would water quality be subsequently affected.

Q. In another meeting, if we take a look at the second meeting. Page 13919. It talks about "(in English) Testing of samples", Kai Ching and Kwai Luen Estates.

If you refer to paragraph 3.1:

"(Partially in English) Members' views on TF Paper No. 2/03 were sought. The paper was subsequently endorsed at the meeting."

If you look at paper No. 2/03, page 13944 and 13945, it refers to the flushing test and stagnation test, and page 13945 talks about testing methodology.

If you go back to page 13919, after discussion, you agreed that Kai Ching and Kwai Luen would adopt the two

tests, stagnation and flushing?

A. Not "adopted". We wanted, as I said just now, in Kwai Luen and -- we did testing in five units, and the water had stagnated and then would flush. So the whole testing protocol --

Q. So, after discussion, the conclusion was that samples from stagnation tests and flushing tests would be taken; that was discussed?

A. No. The whole investigation, during stagnation, we wanted to know how did lead content increase. So we had to stagnate one, two, four, eight hours and then take samples to check -- to gauge the lead content. That's how we would detect any changes in lead content.

Q. So you were in agreement that you cannot just look at the flushing test?

A. We wanted to get the curve and draw conclusions from that.

Q. Let's take a look at the fifth meeting. Page 14057. If you take a look at 14061, 3.2:

"(Partially in English) The secretary presented the paper titled 'Proposed Mitigation of Lead Contamination in Tap Water' prepared by the Advisory Committee on Water Resources and Quality of Water Supplies. The paper set out the overseas experiences in tackling lead contamination problem and proposed a number of

measures ..."

Let's take a look at "(in English) Short-term measures":

"(In English) (a) Flushing for at least one minute prior to drawing water for potable use."

That's what you need to tell the public. And:

"(In English) (b) Proper use of filter ...

(c) Standardising the water sampling methods."

If we look at this report, this paper, page 14111, relating to the sampling methods I talked about just now, page 14117. Point 3 says:

"(Partially in English) WSD should standardise and educate the public on the proper sampling methods and protocols for drinking water and the analytical method in order that the water quality results by WSD and outside parties are comparable. At present, the practice of WSD is to flush the pipe leading to kitchen taps for 3-5 minutes before sampling ... However, as shown in appendix 1, other countries and places have adopted different protocols. Notably, the Lead and Copper Rule requires a first draw sample ..."

CHAIRMAN: (Chinese spoken)?

MR KHAW: The third paragraph, paragraph 3.

Then in the middle:

"(In English) Notably, the Lead and Copper Rule

requires a first draw sample ... that is taken after water has been standing for at least 6 hours and from an interior tap typically used for consumption -- cold water kitchen or bathroom sink in residences. The EU 'Guidance on sampling and monitoring for lead in drinking water' recommends random daytime sampling with no flushing for inventory monitoring, while a different protocol is recommended for investigative monitoring. It is understood the Legislator Wong is adopting the LCR protocol.

We recommend that both pre-flush, ie allowing water to stand in pipework for at least 6 hours and post flush sampling, ie after flushing for 2 minutes, should be drawn from the kitchen taps and that ICP-MS ..."

That's spectrometry analysis.

"(In English) ... should be used for analysis in a HOKLAS accredited laboratory."

So I would like to ask, Mr Wong, this short-term recommendation, that is that you shouldn't just take a flushed sample, you might need to consider other jurisdictions' advice -- they recommend you should use pre-flush and post-flush samples. So, in your meetings, did you discuss this issue?

A. As far as I recall, we didn't.

I will give you some background. Our terms of

reference -- one of our terms of reference was to give recommendations. Back in August, we collected suggestions. We had to assimilate. We had to provide some food for thought for our task force members, and one of our members, Dr Chan Hon Fai, he also had a paper, and we said, "What kind of recommendations would the task force consider in the future?"

It wasn't very detailed. We just listed some ideas, for example lead phosphate; the task force could consider these.

Q. If you look at page 14061, Mr Shieh asked Mr Chan Kin Man -- 3.2, it says:

"(Partially in English) The secretary presented the paper ..."

Wait for me to ask the question. "(In English) Short-term measures" and "(in English) Medium-term measures". Then 3.3:

"(In English) Members were invited to propose measures to prevent recurrence of similar incidents in future."

Did you read the ACQWS report that I showed you just now, where it talked about "(in English) Short-term measures"?

A. I didn't read it in detail.

You talked about 3.3. We offered views and we

invited members to offer recommendations. So this is similar to the way the task force works.

At that time, we did not discuss this paper in depth. We only talked about the measures.

Q. The meeting served to stimulate views from different people, to prevent repeats of the same incidents?

A. We wanted to stimulate members to come up with proposed mitigation measures.

Q. Now, the ACQWS is an important body for monitoring water quality?

A. Yes, they are an important body.

Q. This is an important paper for task force members' consideration; do you agree?

A. I would not say that it's very important, but of course the input is valuable. The paper is very long. The key was to ascertain the cause of excessive lead, and it was time for us to map the next step, and as such we secured this information and briefed task force members on those, to stimulate their thoughts.

The key was to get them started on thinking about the mitigation measures.

Q. You said you did not pay too much attention to this report, and you obtained this information from the task force. Did you discuss the issue with the director or Chan Kin Man? Did you discuss these recommendations

with him? You should have considered them.

A. The primary purpose is to make recommendations from the task force. That's the purpose of the whole thing. Our focus was on the task force.

Q. The goal of the task force is to come up with recommendations but at the same time you have to consider other people's recommendations as well; do you agree?

A. Now, on the ACQWS recommendations, I did not take this to the WSD.

Q. And as far as you know, the WSD did not consider the recommendations of this paper; right?

A. I'm not sure. Some of my colleagues work with the ACQWS. I'm not sure.

MR KHAW: (Chinese spoken).

COMMISSIONER LAI: I am a bit surprised, because you merely took note of the ACQWS documents. You only noted the papers. But there was no discussion. And every time during the meetings, there was no conclusion.

A. The stagnation test and flushing test -- the purpose is not to derive a sampling protocol. The lead levels might be high for first-flush samples, so members decided to look at the lead content after stagnation.

Now, if we obtained -- if we draw too much water, the stagnation might be affected. We want to see the

trend, and in section 2.9 we offer the curve or a graph of the trends of lead content.

The focus of the task force should be on the effect of stagnation on lead content. We do not want to devise a sampling protocol.

COMMISSIONER LAI: But this doesn't seem to be the case. When you look at page 14061, the protocol referred to "(in English) short-term measures" and "(in English) standardising the water sampling methods".

Now, the ACQWS came up with this recommendation.

A. The task force has two main duties. One is to find out the cause of lead.

COMMISSIONER LAI: That's important, but that's not saying that you can ignore other people's recommendations.

A. When you look at the terms of reference of the task force, our main job is to prevent recurrences. The ACQWS came up with such suggestions but we did not take them on board. Our primary purpose was to stimulate thoughts from task force members to offer recommendations in the future. These were covered in the report.

Re-examination by DR WONG

DR WONG: Mr Wong, when we asked questions of the Housing Authority, one of the questions was about the role of the AP.

I would like to take you to one of the documents. It was inserted into the documents bundle last Sunday. C21, page 19095.

A. Yes, I see that.

Q. This document was dated 1995. It was adopted in 1985, around ten years or so before it was enforced, in 1985. It was dated 16 May 1995.

"(In English) It is proposed to designate an appropriate group of qualified persons to take care of the design and installation of water supply plumbing work and the correct use of pipe material in building projects. This group of qualified persons shall be registered by this department as registered persons for the specific purpose."

So at this time there was this concept of registered persons proposed by the director of Water Supplies. Mr Ho took you through the HKIA document, and in 1995 the WSD proposed this idea of registered persons.

At that time, the focus was to "(In English) take care of the design and installation of water supply plumbing work and the correct use of pipe material in building projects".

So the focus was correct use of pipe material. Did it refer to functionality or did it include water quality?

A. By 1995, water quality must have been covered. As I said yesterday, there were requirements on water quality as well as chemical composition, and all these have to do with water quality.

Q. Let's look at the HKIA response to this proposal, on the next page.

It was dated 29 August 1995. It was a reply from the HKIA. In the second paragraph, it says:

"(In English) Under the current practice, the authorised persons, who act as the co-ordinators of buildings works under the Building Ordinance, are the qualified professionals who look after the design and installation of water supply plumbing work and the correct use of pipe material in building projects.

We therefore recommend that authorised persons under the Building Ordinance should be recognised as qualified persons to be registered by Water Supplies Department for this specific purpose."

That was the response from HKIA at that time.

After the lead in water incident, if the APs now say that they do not have adequate knowledge because they are only APs, they might not be familiar with waterworks -- now, if they are certified persons, it might not make a lot of sense.

A. They are qualified professionals in construction, as

I said. They have good knowledge of plumbing works, and they are site co-ordinators as well. Even if they are not experts, they would certainly know how these works can be put into the system, for proper functioning.

Q. Now let's look at the final paragraph:

"(In English) Members of our institute that have qualified for the list 1 of the authorised persons would have acquired the basic knowledge of design and installation of plumbing system in their university education and professional training. They would have supervised periodically the carrying out of plumbing installation as part of their inspection duties on building works."

Now, the WSD continued to allow APs to carry out their function of allowing compliance. Is there any impact?

A. No. We feel that they are competent and they are able to carry out this function.

Q. As Mr Ho asked, he talked about risk assessment and for hazard verification second risk assessment control method and for rectification. In view of this letter and response by HKIA in 1995, before the incident -- let's not talk about hindsight. Before the lead in water incident, did you identify any hazards, namely --

CHAIRMAN: Well, is this a hazard?

DR WONG: Some people might not follow the law.

CHAIRMAN: Why would this be a hazard? Would you consider this a hazard? This is a control measure. Now, whether this control measure is effective is another issue.

DR WONG: I'm not saying the architects are a hazard.

Now, I would like to about talk about the risks. With legislation and contractual obligation, some specifications are important and, if I don't know the specifications, it might mean something else. In terms of this letter, the WSD did not identify such risk, that some people might violate the law.

Why was the WSD not aware of the legislation, namely that someone will not follow the rules?

CHAIRMAN: I don't understand your question. What did you want to know?

DR WONG: Now, the question was the WSD should be aware of such risks, that some people might not follow the law or contractual requirements. So my question is, why was the WSD not aware of the situation and why was no assessment done? Why did they not do anything about that risk at that time?

A. Having read this letter, if the authorised persons or HKIA said that they couldn't ensure that the materials comply with the regulations --

CHAIRMAN: This question is basically meaningless. In any

Ordinance, there are a number of statutory duties on a specific person. For example, for doctors, when they order dangerous drugs, they must follow a register. Now your question is would you anticipate that this doctor -- so your question is, you assume that all doctors would fulfil this duty, that they would fill up the register. But this is not a perfect world.

DR WONG: No.

CHAIRMAN: Are you saying that the Department of Health would not need to send inspectors to see if doctors comply with this requirement? Is this what you mean?

DR WONG: No, this is not what I mean.

CHAIRMAN: This is what you mean precisely. Since you delegated the duties to the AP, you wouldn't expect the AP not to follow the laws and regulations. What's the difference?

DR WONG: At that time, Mr Ho put this question as well. I am merely clarifying that point.

CHAIRMAN: So there's no difference at all? You have delegated the work to the AP. Now, you put in a control measure, to avoid wrong materials from being used. That's a control measure.

MR SHIEH: I think what he meant was that before you merely place your confidence in it, so the main source of APs, the HKIA, said, "You can trust us", would that enhance

your confidence.

CHAIRMAN: That was one of the factors in a control measure. Because they are a qualified person, will you place more faith in them? That's what he means. But ultimately, it goes to the next question.

A. Chairman, I'm not sure I can comment here. Non-compliance is a risk.

CHAIRMAN: We are now talking about water quality.

A. It doesn't matter. We are not talking about --

CHAIRMAN: Non-compliance, water quality, hazards -- he's talking about a different set of hazards. You are talking in different contexts. You are talking about apples and oranges.

A. (Chinese spoken).

CHAIRMAN: Let's break now.

(11.48 am)

(A short adjournment)

(12.14 pm)

DR WONG: Chairman, I have no further questions.

CHAIRMAN: Thank you, Mr Wong. You may now leave.

The next witness, please.

DR WONG: Mr Leung Wing Lim.

CHAIRMAN: Now I have something to say. Evidence-wise, the COI Inquiry will wrap up by the end of February, unless you have a lot more questions to ask. So, by the

beginning of next week, it should be wrapped up.

Please be seated, Mr Leung.

For the COI on the Lamma Island marine incident, the evidence-taking wrapped up on Friday, submissions were given on Sunday, and the final address was delivered the next Monday. So I would just like to give you a preview. This is how it works. But I'm not going to do it this way.

What I want to say is that there is not much time left. You would not have weeks or months. I'm just warning you in advance, if work is to be done, please get it done as soon as possible.

I will issue a direction later on, on how many pages you can file in your final submission. I also will tell you how much time you will have to speak.

But I can also give you a heads-up: the order of submission will be in reverse order. The WSD will go first; then the LPs, the licensed plumbers, if they have any; and then plumbing subcontractors, the main contractor, and then the Housing Authority. So it will go in reverse order. So the HA, they will have some more time.

Similarly, I will set a time frame. You will have to hand in all your submissions together, before I disclose them. So you cannot cross-reference each

other's findings, and in your last oral submission you can supplement whatever material you wish.

So that is my thinking. So you will have time to prepare your final submissions. Okay?

DR WONG: Okay. Thank you, Chairman.

MR LEUNG WING LIM (affirmed)

CHAIRMAN: Please take a seat, Mr Leung.

Examination-in-chief by DR WONG

DR WONG: Mr Leung, you have provided us a witness statement, and I will read it into the record.

(Statement read in English)

Can you confirm that the contents of your statement is true and correct?

A. Yes.

Q. Do you want to adopt the content of this statement as part of your evidence?

A. Yes.

CHAIRMAN: We will continue after lunch.

(12.58 pm)

(The luncheon adjournment)

(2.32 pm)

Cross-examination by MR SHIEH

MR SHIEH: Mr Leung, before you gave your evidence, other staff from the WSD have already testified, including the director and deputy director. A lot of questions with

regards to your witness statement are similar to what have been asked of your colleagues, so I won't have a lot of questions for you, so perhaps that's good news for you.

The first part of your witness statement is the official line of your department, which is the stakeholder approach. I will try to summarise what the stakeholder approach means.

The WSD has finite resources and, as such, it has to assign priorities. So that's your line; right?

A. Yes.

Q. In an ideal world, the WSD should do everything, but due to finite resources, you have to establish priorities. Another approach is to turn to the stakeholders and rely on their roles. You identify different stakeholders, and from the WSD's perspective, in terms of legal and contractual frameworks, or due to the contractual obligations of the developers, at the end of the day, everyone has to follow the WWR and British Standards; right? Although the WSD has a role to play, you reasonably expect these stakeholders to work with each other, to comply with the British Standards with regards to the content of lead; is this a fair description?

A. I would like to add something. It's not just about establishing priorities based on finite resources.

Q. The 12th paragraph of your statement emphasises finite resources.

A. We will first identify possible stakeholders, and then we will see what roles these stakeholders should play, in order to meet the contractual requirements with regards to the internal plumbing system, so that the WSD requirements can be met.

So this is a key factor of consideration, appropriate allocation of responsibility.

Q. One assumption is that all stakeholders would discharge their legal and contractual duties?

A. Yes, that's an assumption, but that's not the sole assumption. We adopt a multi-barrier approach. Let's say in terms of, as an example, three parties are responsible for monitoring the project: the LP, the developer and the AP.

All three parties must discharge their duties, or else they cannot fulfil the contractual obligations. So we won't just trust one party, we will trust all three, but first of all the LP must do his job; second, the developer; and third, the AP, or authorised person.

There are resident site staff, for example clerk of works, building services inspectors, and so on; they would be stationed at the site.

I want to emphasise the importance of in-process

supervision, over the course of construction. They can see whether soldering strips or wires should be used, and they can see how the packaging looks like.

Q. Are you referring to the main contractor?

A. No, I'm talking about the site staff. In other words, the team of the AP. They are independent of the contractor or the LPs.

As an engineer, I look at a lot of contracts. They emphasise in-process supervision, because it makes it easier for me to detect non-compliant installations or materials.

Q. You talked about the concept of risk assessment. In simple words, if you have experienced a problem, then you will learn from the experience. Once you run into a problem, you will know that all the assumptions were wrong, and as such you would play the role of goalkeeper. But how do you guard against these risks? Even if the risk is small, the effects are detrimental; did you consider that?

A. Yes. We would consider historical events. Even in case of problems, we have to imagine the possible scenarios. A risk assessment will identify all those scenarios, and history is only one of the factors.

Q. If the consequences are serious, even if the risk level is low, you would still have to give it a higher

priority?

A. There are two elements in the risk, likelihood and consequences. If the consequence is serious, for instance if lives are threatened, no matter the possibility, we should give it high priority. Now, we have to try to minimise the likelihood of such consequences occurring.

Q. In your witness statement, you mention two stakeholders. One is the AP, one is the LP.

Let's look at paragraph 13 of your witness statement:

"(In English) Based on the above understanding, one of the steps taken by WA is to ensure that the plumbing works comply with statutory requirements is to require the LP (ie the qualified person ...) and AP ..."

And on the sixth line:

"(In English) LPs are qualified personnel specifically trained in the construction of plumbing works and their performance is regulated by law."

That's how you describe the LPs; they are qualified personnel.

"(In English) APs are professionals hired by developers to supervise, among other duties, the construction of the works, including plumbing works ..."

So you described the APs as professionals.

So how did you choose those words? Was it intentional? Do you feel that APs are professional and they are of a higher rank, in your eyes?

A. The two of them have different roles. So I cannot describe their importance in this way. If they can carry out their duties in a competent manner, whether it's a trade or professional, it's equally important. If you ask a professional to solder, it's inappropriate. So the key is not to consider their position. There's no hierarchy. I think he is able to competently perform his duty.

Q. Let's not talk about professionals first. Now, the LP is the person who does the hands-on work. Of course, the LP can consider whether or not to take it up. But for professionals, whether AP or LP, they can only carry out supervision. In terms of the choice of materials and the use of materials and the actual work, the LPs would be responsible?

A. On the choice of materials, of course the contractor would choose the brand they like.

Q. Or the plumbing subcontractor might decide it.

A. Yes.

Q. But between LP and the AP, for the LPs, it's licensed plumbers, so historically the LP would sign those forms for before adding -- the AP would subsequently sign.

So the LP is the person actually doing the work. According to -- the form has to be signed by both the LP and AP, for WWO46 -- do you call it 046 or 46?

A. We call it 046.

Q. Part of the form has to be signed by both, starting from the 1980s. Sometimes, documents require signature. In terms of risk assessment, have you tried to find out how people do it? Do they just close their eyes and sign on it, or do they actually conduct a test? Has that been done at the WSD?

A. (Chinese spoken). Eventually, the professionals are usually denoted by capital E, and the equivalent is called A, or architect. The most important point is to put in place a supervision system, by hiring qualified clerk of works, building services inspectors, to inspect the sites. They have to make sure that all contractual obligations are met.

The engineer or architect would not make inspections every day. That's impossible. The architect is an individual.

Q. But as we know, the architect does not take up all the work himself or herself. There would be a lot of people in the firm.

A. And according to the engineer, if we grant the contract to a firm, then that would be the manager. So there's

the role on their part. By the time of substantial completion, this person must sign off the work, and they are already doing the work, and for the avoidance of doubt, we want to certify the plumbing works, to make sure that they comply with the WWR or the Ordinance.

Now we want to tell you that this is solemn, this is serious; I'm a professional. If I sign on the form, then I might not have personally been involved, but I trust the system. And it's about teamwork.

Q. You talked about professionals. We know that APs, they are architects. They might have taken architectural engineering at school. Basically, APs, they are one of these three types of persons?

A. Well, I'm not sure. I cannot confirm that.

Q. So regardless, they are the traditional professionals, they have academic qualifications, they have an undergraduate degree, they have to belong to professional bodies. The architects belong to the IA, engineers belong to the IE, and each professional body have their codes of conduct. There might be some professional -- there might be some mandatory continuous professional development. So these are the traditional professional features. You place your faith in them, but you -- well, you refer to LPs, licensed plumbers, as the relevant people, so in the training structure, it's

not as rigorous as APs; right?

A. Well, depending on the curriculum and the work experience, if they are not as academic -- I'm not sure whether that term is correct or not, intellectual -- they are more hands-on. The skill is more important.

Q. We know that for new entrants, they have to go to the VTC. For the older batch, they might have to enter the profession from a different channel. So they would have really diverse backgrounds. They really have diverse backgrounds. They might not be so concerned with theory. They might know something but they don't know what the reason is.

The training is also different. We have people getting qualifications from the 1970s and 1980s and things have changed. Those who are diligent might want to catch up with developments, but some people do not worry about these things. There is no mandatory continuous professional development?

A. Well, it's voluntary. I know that there are some refresher courses but they are not mandatory. There are opportunities for them to upgrade their knowledge. On-the-job training is also very important. If we have new developments, those who are conscientious, they might read the user manual or they might ask the salesperson. But it's not systematic.

Q. Yes, I know. So APs and LPs -- under the LPs, we might have skilled workers, semi-skilled workers. So, as the LP, you have indirect supervision of them; is that correct?

A. Yes.

Q. Since the APs are not under your direct supervision, are you aware that the APs or people in the AP position, in the Housing Department they are called chief architects, they might have a bias? They would have to rely on the LPs to ensure compliance, and they would only deal with the major issues, and they would have to delegate. Are you aware that there's such an attitude amongst the APs?

A. Well, prior to this incident, I wasn't aware, because that's not the way we practise. Let's say there are contractors, they have a system to manage people. For example, in my case, I don't deal with LPs. We don't have LPs in our work. But we require a management plan. That doesn't mean that I am placing all my faith in them. But there is a certain degree of trust.

So why do we have an AP and a team? They are independent. They are not related to the contractor. They are recruited to watch and inspect the works carried out by the main contractor. They have to be independent.

So how much trust you place in the LP, AP and the

main contractor, that's your own consideration. You might say the contractor has a good track record, therefore you might not have tight monitoring of them. But if you feel that the contractor's track record isn't that good or their tender price is very low, then you might have to deploy more resources and you need to have resident site staff to watch them, to anticipate where they might make mistakes. You have to see whether there are incentives or where there might be areas where they might make errors.

Q. You talked about individual contractors, so some APs, they might be familiar with each other's work, but systematically -- well, pardon me for having this thinking -- but the work done by the LP, I'm not talking about drawing schematics, there might be some intellectual input, but the hands-on part -- for example, monitoring what solder material is used, the craftsmanship -- theoretically, the AP has to watch over that; but as an engineer or architect, do they have a module on soldering, to know how it's used?

A. I've never taken those courses. If I'm familiar, then there's a problem. Assuming I'm familiar with that work, I might not be able to monitor that work, so I have to delegate someone. But if I'm not familiar with that, it depends on how much I can pick up.

It's like -- I will give you an analogy -- a football commentator and a football player. The commentator might not be a good player, but he could be very good --

Q. Well, even the coaches might not be good footballers.

A. I may have given you a wrong example.

Q. So coaching, actually playing football and commentating are different?

A. Well, commentating is easier than actually doing the job.

If you ask me to do grouting, I might not be able to do it, but I could ascertain whether the grouting was done well or not. But I don't think it's a matter of pass/fail.

Q. Well, that's theory. Let's say in practice I'm working in an architectural firm, I'm a trainee, I'm part of the team. In general, if you really want to check on the use of solder, theory aside, in practice, if I want to become a professional, I'm working in a firm, there isn't really a big incentive to check this stuff. If I took the academic route, I'd only be looking at schematics, plans, but I think they would have some sort of --

A. I think they would place their faith in the LPs. You still need to have an independent system, to see -- you

might not be familiar with the works. There are so many disciplines, even as an engineer, I might not be familiar with the mechanical and electrical engineer, but as a team collectively we can discharge our responsibilities, and look at all the works, the materials. And if you can't cover that, then you would have to appoint an expert. You can't say, "I'm not familiar with it, I'll just leave it at that; I'll just leave it to the contractor." Otherwise, it's meaningless to have a multiparty system.

Q. That's exactly what I want to explore. Theory is theory, but when it comes to actual hands-on work, you rely on me and I rely on you. So that risk, that actual risk, the actual risk, we know that codes of practice are stated in a certain way but people's actual work might be different. So is there any inclination where -- for minor details, for solder material, for example, a lot of times the APs might be negligent or they might place their faith in the LPs. So are you aware of this possibility?

A. Well, previously, I did not explore this in depth. As far as I am concerned, regarding engineering work, my observation -- I won't base whether it has deviated from the contractual requirement based on the size of the object. If you look at the risk, I would say potable

water, if it comes into contact with the material, and if you consume this water, and if this material is problematic, that might lead to severe consequences. So anything that deals with potable water -- so I think those consequences are significant, high-risk.

Q. "High"?

A. H-I-G-H, high-risk. It's serious, with serious consequences. So you need to take all possible measures to minimise that deviation, chance of deviation.

Q. So the relevant people need to have the knowledge? They have to understand the contractual requirements, they have to understand the WWR requirements. We heard just now that there's so much wording in the contract, and as you said, you have to understand the consequences relating to health.

But the relevant people, APs or LPs, they need to be aware that it's health-related. Then they would know, "I need to pay special attention to this"; do you agree?

A. Yes. Yes.

I think I have to put it this way. People who work in engineering, they know they have to comply with the contractual requirement. If they say British Standards, we have to comply with British Standards. It doesn't say which ones you have to comply more fully and which you comply less fully. I'm worried that if you say such

and such is important, then people will start neglecting other stuff. I want to say everything is important. But if there are health consequences -- well, this is actually just common sense. You don't need higher education to know that you shouldn't consume contaminated food. That's just common knowledge. You might not be aware of the risks. You might treat everything equal. But you still have a responsibility as an engineer, to comply with the contractual requirement. That is the material specifications. There is no compromise there.

Q. Yes, that's theory. You know that there are some lead content requirements in the British Standard?

A. Well, and waterworks, we know that there are lead content requirements.

Q. And the health-wise requirements?

A. That's just part of general knowledge.

That pipes cannot contain lead is a legal requirement. In Hong Kong, it has nothing to do with the British Standards.

Q. You said that was part of your general knowledge, but in terms of the system, the WSD has no systemic or structural stipulation. In terms of the system, the WSD would not focus specifically on health and remind the stakeholders?

A. Yes, that part I'm very sure.

Q. Now I would like you to have a look at a paragraph of your witness statement. Well, it was a statement from the HA. B15.1, page 37708.

This is by the chief architect of Kai Ching Estate, Mr Yim. He is the chief architect of Kai Ching Estate. Legal requirements on licensed plumbers sometimes do not apply to public housing, but in this estate, the architect played the role of the AP. So we assume that he was the AP.

Now let's look at paragraph 28:

"(In English) The roles and responsibilities of the licensed plumber are stipulated in the Waterworks Ordinance and Waterworks Regulations."

Now, this paragraph is about his legal responsibilities.

Paragraph 29 says:

"(In English) I relied on China State to monitor the service of the LP and would expect the LP to execute his duties under the Waterworks Ordinance and Waterworks Regulations. This was reinforced by the 'point penalty system' administered by the Water Authority which provided a positive incentive for the LP to carry out the task professionally and accurately."

Now, no one accused him to completely rely on other

people. If he had said that, he is attracting criticisms. So he would rely on the main contractor, China State, to monitor the LP.

At the same time, the WSD has a point penalty system in place, to monitor the LP.

Now, effectively, you are looking at one another. You would rely on the LP, and they would feel the LP should have an incentive to do the job well, or else points would be docked. So that's the thinking.

How many licensed plumbers out there do you think would rely on the AP? And the WSD says you have a point penalty system.

A. I seldom approach APs and LPs. I am not sure if this is being too honest or a slip of the tongue.

Q. Well, all in all, they are not saying -- you know, he didn't say these words to absolve himself of responsibility. But the point is, the idea is, "Don't blame me"?

A. This is so-called independent supervision, and we are very clear on that. We would rely on the contractors, but we would not speak those words out. We would redeploy resources to monitor contractors with works performances. The key is to be independent. You cannot rely on them.

I'm not sure if this is a common scenario in the

architecture field, but in the engineering field, everyone is very independent in terms of supervision. We have an in-house supervision team, and independence is always stressed.

Q. But in terms of the system, as we said, do you feel that the WSD lacked a holistic and specific focus on requirements, and that they didn't remind the stakeholders?

Now, let's not call this a deficiency, but in retrospect, something can be done better. Health is important, so it should be given a higher priority. But public health has never been mentioned or focused, in terms of construction materials.

Do you feel that this is an omission and in retrospect such omission is regrettable?

A. Well, I feel that it's nice to have, it's good to remind one another, but I do not feel that it's an omission. Now, we are talking about construction professionals, and everyone should know that contractual requirements must be met. They cannot blame others for not reminding them. This is not the sole risk.

Construction projects are complicated. The installation of windows -- of course that's not under our purview. The list is very long, so we cannot remind them on every single point. We can remind them, but you

cannot say that I will not deal with anything that you didn't remind me of. So this is a moral hazard.

Q. That's my concern as well.

I have one more question for you. From a layman's perspective -- the law says everything must be done, but from a layman perspective, construction professionals usually ensure that the building would stand properly, and in terms of waterworks, the safety of water quality is something the WSD has the biggest responsibility on, from a layman perspective. I know you are a professional, but let's say you are just an ordinary resident or citizen.

On public-health-related requirements, from a layman's perspective, the WSD should have a bigger role to play than the Housing Department?

A. That's a subjective perception I have to deal with. With the exception of my wife, most of my friends would think that the WSD would be held liable for waterworks-related issues. That's understandable, because they have no knowledge of our division of work. We would not absolve ourselves completely of blame.

Now, we designed the internal plumbing systems, but we are not the only player, we cannot do everything. We delegate some responsibilities to other stakeholders. But a layman would not understand such division of work,

and this is understandable. But I'm obliged, and I hope the Commission would educate the public on our division of work. But I completely agree with the issue of perception.

Q. Now I would like to talk about another topic. The same part of your witness statement, starting from paragraph 17, "(In English) Inspection and approval", and you talk a lot about perception. I'm not talking about any specific line.

When we look at different witness statements, different concepts are mentioned. We are very familiar with them already. For example, the eight parameters, sampling at the connection point, annex 1 and so on. We have heard a lot of things.

To put these pieces back into the jigsaw, now we know when different steps would happen. At the beginning stage of the project, the annex of WWO46 would be submitted in order to commence the works, and eventually part IV of WWO46 has to be signed by the LP, and the locations of the water meters must be correct, and the LP would be invited to check the water meter.

Now, this part involves the WSD when the water certificate 1005 is issued, the WSD might be involved as well; do you know that?

A. Yes.

Q. 1005 is pursuant to form 132. The WSD would issue a water certificate 1005, under the Buildings Ordinance, and eventually an occupation permit would be issued.

A. It might not be under the Buildings Ordinance, but this certificate says that an OP can be obtained according to the law.

Q. So we can see that the WSD is involved at two separate junctures.

Now I would like to learn about the timeline of such events. WWO46 requires inspection. Would you carry out that inspection first or the inspection according to water certificate 1005 first?

A. I'm not an officer of this subject. This is not first-hand information. But I am happy to answer this question.

As far as I know, according to part IV, we would conduct an inspection. By that time, the plumbing works would have been completed, and we are invited for an inspection. If we do not detect any irregularity, we would report that no irregularities are found in part V.

Q. Does this part include the testing of eight parameters and the sampling of water at the connection points?

A. Excuse me, I cannot say for sure because I am only recalling from my memory.

Q. You said so in your witness statement, all right, but it

doesn't matter.

Now, you are invited for an inspection for part IV, and subsequently part V would be issued. Would you inspect the materials in the annex?

A. We would look at the annex and check whether the brands are correct. That would be done before signing part V.

Q. You would look at the annex and check the brands and functionalities of the parts?

A. Yes, that's for sure. After the testing, part V will be issued if no irregularities are found. A water inspection would be subsequent, at a later stage.

Q. So you are not sure about the timing, when they will take water samples?

A. Well, they have to inspect the physical part first and sign part V, and then they would inspect water quality. But the availability of water supply certificate 1005, it should be before 1005. But when do they inspect the water? I'm not sure.

Q. So, chronologically --

A. It's after part V. How much later, I have no idea.

MR SHIEH: That's okay. I know you will have other colleagues giving evidence on that.

Let me see what other questions I have.

That's okay. I don't have any further questions. We will follow up the stakeholder approach with your

other colleagues. I won't repeat myself.

Thank you.

MR HO: I would like to raise a point, that the stakeholder approach, regarding roles and responsibilities -- as Housing Authority counsel, I had asked Prof Fawell, I had asked the assistant director and the director. If I need Mr Leung's -- if I need a further discussion with Mr Leung about risk-based management, I think I will be repeating a lot.

So I hope, even if I don't ask any questions, WSD counsel would agree that I don't agree about the delegation of roles and responsibilities. If he feels that I'm not asking questions on it, it means there would be no opportunity for the witness to object, then I would like to defer it to my submission.

CHAIRMAN: Okay. You have placed a marker here. We know your position.

Cross-examination by MR HO

MR HO: I just have a simple question. I would like to clarify one point in your witness statement.

Can you refer to paragraph 14 on page 10716. I would like you to clarify the wording, what you mean in the fifth line. You say:

"(In English) ... non-compliant pipes and fittings installed but remaining unnoticed is slim because the

control measure of legal prohibition of lead pipe and leaded solder, coupled ...", et cetera.

You have said "(in English) legal prohibition of lead pipe". I would like to clarify, what do you mean by "(in English) legal prohibition"? Because if you look at the law, the law says the material has to comply with British Standards. But regarding prohibition, you refer to a legal prohibition, but the law doesn't refer to penalties.

CHAIRMAN: Are you referring to leaded solder?

MR HO: Yes.

I want to focus on lead pipe and leaded solder. I might be reading too much into this sentence. Do you understand? Let's say, when we look at WWR, sections 19 and 20, they have to comply with the British Standards, and one item would include solder material.

CHAIRMAN: But what Mr Hui referred to -- I think you are reading too much. If you could substitute with "restricted"?

MR HO: I just want to point out that the law does not say that if you don't comply, let's say LPs -- a non-LP doing the work doesn't lead to a sanction.

So when you say "legal prohibition", do you have any special inference?

A. If you read the previous part, 10713, if we talk about

the historical development, lead pipes have been prohibited for a very long time.

Q. If there's no special reason, then I don't want to struggle on the terminology.

Thank you.

CHAIRMAN: Anybody else? Any questions?

Thank you, Mr Lam.

Let's take 10 minutes and continue.

(The witness withdrew)

(3.23 pm)

(A short adjournment)

(3.39 pm)

DR WONG: Chairman, the next witness would be Mr Lam Ching Man.

MR LAM CHING MAN (sworn)

CHAIRMAN: Thank you.

Examination-in-chief by DR WONG

DR WONG: Mr Lam prepared two witness statements for the purpose of this Inquiry.

I will read them out for your confirmation.

(Paragraphs 1 to 18 of 1st statement read in English)

(In English) Chairman, I will skip the footnote.

"1.1.4(b)(i) Application on plumbing proposals".

(Paragraphs 19 to 47 of 1st statement read in English)

(In English) Chairman, I propose to skip the table.

"(4) Inspection and testing of water in respect of inside service (from the perspective of the Quality Water Supply Scheme for Buildings)".

(Paragraphs 48 to 52 were read in English)

(In English) Chairman, I propose to skip the table.

(Paragraphs 53 to 61 were read in English)

"Dated this 11th day of November 2015."

Mr Lam, this is your 1st witness statement. I will now read out your 2nd statement.

DR WONG: It's now 4.40. Shall we wait until tomorrow?

CHAIRMAN: Let's leave it until tomorrow. It's now 4.40. Let's continue at 10 am tomorrow.

(4.40 pm)

(The hearing adjourned until 10.00 am the following day)

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