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2015年11月16日

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上午10時03分恢復聆訊

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出席人士：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

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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

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王鳴峰資深大律師、陳樂信大律師及羅頌明大律師，由律政司延聘，代表水務署署長

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Mr Ian Pennicott 資深大律師及林定韻大律師，由孖士打律師行延聘，代表中國建築工程（香港）有限公司

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林國輝大律師，由孖士打律師行延聘，代表瑞安承建有限公司

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鍾建康大律師，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

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譚俊傑大律師及吳思諾大律師，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

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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

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主席：許律師。

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香港房屋委員會第四證人：伍達群（房屋署（啟晴邨和元州邨第二及四期總屋宇裝備工程師））宣誓繼續作供
許偉強先生盤問

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問：伍先生，我想話問一問你一啲背景資料先。

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答：係。

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問：就我睇番你證人口供嘅第 2 段，即係 B15.1 嘅 37647。第 2 段，你入面就講就係你係從大概 2013 年 1 月份開始就參與呢個啟晴邨呢個工程嘅，就係作為呢一個工程嘅總屋宇裝備工程師嘅。

答：係，冇錯。

問：我哋都知道呢個啟晴邨呢個工程嘅項目大概係喺 2014 年 4 月份就完成嘅。

答：應該係 2013 年嘅 4 月份。

問：啊，2013 年 4 月份，對唔住，係。所以你嘅參與，就喺呢個啟晴邨嘅項目，大概係三個月就已經完成。

答：係，冇錯。

問：你喺呢個三個月嘅參與入面，你都有牽涉喺一啲水務工程入面嘅？

答：有嘅。

問：係。我想知道你由幾時開始係正式擔任呢個房署嘅總屋宇裝備工程師㗎？

答：亦都係呢個 2013 嘅 1 月。

問：1 月？

答：28 號。

問：喺之前呢，你嘅職位係...

答：之前其實我有段時間係 acting 嘅，咁就大概係半年嘅。

問：係。

答：咁就再之前就係 Senior Building Services Engineer。

問：你作為高級屋宇裝備工程師，大概係做咗幾多年嘅？

答：應該係由 2005 年正式開始。

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主席：聽唔到，對唔住？大聲少少。

答：應該係由 2005 年正式開始。

主席：2005 年開始。

唔該。

許偉強先生：好，唔該。

問：我想同你釐清一下，你作為呢個係總屋宇裝備工程師，嗰個職責範圍，我想同你釐清一下嘅，因為你喺你嘅證人口供都有多處提到你嗰個職責範圍，咁我而家同你釐清一下先。喺你嘅證人口供嗰度都有講到就係...

主席：同我攤開個 box file。攤開個 box file，睇唔到...（聽不清）繼續。

許偉強先生：係。

問：喺你嘅證人口供入面亦都有講到，就係你有分開呢一個--有關呢個水泵，即係個泵房入面嘅工作，同埋一啲唔屬於泵房、其他嘅一啲例如喉管嘅工作，係咪？

答：係。

問：對於整個水務工程嚟講，就包括咗泵房同埋唔係屬於泵房嘅工作，你都係有負責喺嗰個我哋所謂嘅 design，即係個設計，同埋嗰啲--一啲嘅規格嗰啲細節，即係 specifications，你都有負責嘅；即係兩方面你都有負責。

答：係。

問：至於呢個--對於嗰啲物料呀，一啲嘅檢測，即係對於佢嘅樣本嘅檢測，

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我哋講緊樣本先，即係未係去到啲物料大批咁送到嚟現場，之前你哋會有個樣本去檢測嘅。咁個樣本檢測，就根據你嗰個證人口供講，就對於嗰啲有關泵房，嗰兩個泵房，入面嗰啲物料，事前對於佢嗰個樣本嘅檢測，你係個人直接負責嘅，係咪？

答：我諗要澄清就係話其實我哋嗰個樣本檢測方面，基本上喺個規格嘅要求係冇呢樣嘢嘅。我哋只係每一次當呢個承包商佢提供嗰啲資料，相關嘅資料，係文件上嘅資料嚟嘅啫。

問：係。等陣我再同你再探討一下嗰個真真正正去處理樣本或者嗰個樣本資料嘅時候個情況。我就想問一問你，首先，就係對於送嚟嘅樣本，即係總承建商送嚟嘅樣本資料，就住泵房嗰方面嗰啲咁嘅材料、嗰啲物料，你會負責㗎嘛？

答：係，冇錯。

問：嘎，去睇嗰啲樣本嘅資料，你會負責嘅？

答：係，冇錯。

問：就住嗰啲唔係泵房嗰啲，我哋講緊水管呀或者我哋講緊銅喉呀，即係唔係泵房嘅嗰啲物料，你嘅團隊，即係我哋所講，你嘅 Building Services 嗰個 team，...

答：係。

問：...係，嗰個團隊，都係你負責睇㗎嘛？

答：喺泵房以外嗰啲，我哋係冇睇嘅，...

問：你哋冇睇嘅？

答：...係由番建築嗰方面嘅同事負責嘅。

問：係建築方面嘅同事負責。我想睇一睇你講呢一度，你嘅口供第 10 段，即係 37650 嗰頁，嘅第 10 段，入面就講咗嗰個 project BSE，即係嗰位擔任 project BSE 嘅人士，即係佢所負責嘅項目嘅。

答：唔。

問：呢個 project BSE 都係你哋團隊--即係你哋呢一個屋宇裝備團隊嘅其中一員㗎喇，係咪？

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答：係，冇錯。

問：你睇睇第 10 段嘅細 d，羅馬--啲個-- sorry，個細啲個英文 d 啲度，就係 37651 最頂頂啲度，佢就講“the vetting and approval of plumbing materials installed outside water pump rooms ... submitted by the Main Contractor under the Main Contract”，即係話一啲對於泵房以外嘅一啲物料嘅檢測或者係個 approval，個核准，咁啲個 project BSE 都會負責㗎嘛。

答：呢度其實所講嘅係一啲文件上嘅審批，就唔係啲個所謂 sample 嘅審批。

問：係，得，冇問題。即係對於個文件，睇文件㗎，...

答：係，睇文件...

問：...定係睇 sample 啲樣嘢呢，我哋慢慢跟住講番會再討論嘅。

答：Okay。

問：我想問嘅就係個範疇先。即係話對於一啲總承建商攞嚟嘅一啲資料，係關於--我哋唔好理睇唔睇得到啲個樣本先。關於你啲--佢所講呢一隻物料，佢個樣本有關嘅資料，例如可能一啲文件嚟嘅，有啲 test report 呀，可能有啲係一啲嘅證明呀，等等嘅。

答：係。

問：咁啲啲呢，你哋嘅團隊，就住一啲泵房以外嘅物料都會睇㗎嘛？

答：係，啲啲文件上我哋會睇。

問：得，唔該。但係去到呢個地盤工程啲個監督嘅時候，就你所講就分得比較仔細㗎嘞。就住泵房，即係啲兩個泵房，一個喺地下啲個，即係 ground floor 啲個，一個就係頂頂啲個。

答：係，冇錯。

問：一個就係我哋所講嘅 up-feed，...

答：係。

問：...即係上去呢個。上面啲個就叫做個 booster pump，個 booster

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pump。

答：係，加壓。

問：咁就呢兩個泵房嘅有關嘅地盤嘅監督工作就係你哋嘅團隊負責嘅，...

答：係。

問：...係咪？所以咁講啱唔啱，就係就住即係水務工程嚟到講，泵房，有關泵房嘅工程同埋物料，你哋就處之為 building services 嘅一部分，即係屋宇裝備嘅一部分？

答：係。

問：而至於泵房以外，嗰啲水喉嗰啲，就係屋宇工程，即係 building works 嘅部分嚟嘅，building...

答：係。

問：我哋嗰日聽過嚴汝洲先生，即係佢係個總嚟個...

答：建築師。

問：...建築師，咁佢都有同我哋提過，佢話 building services，喺佢嘅認知入面，就係講話四樣嘢嘅，就係都風、火、水、電，四樣嘢嘅。

答：唔，唔。

問：係咪？你同唔同意？

答：一般咁樣講，其實牽涉嘅範圍係好大的。

問：係。呢個就係即係行內嘅一個俗稱喇，...

答：係，冇錯。

問：...俗稱嚟嘅啫。如果風、火、水、電，就拆個水出嚟過，咁個水，一般嚟講，就係講緊個水務工程。

答：係。

問：係咪？我想問一問，就係點解喺你哋嗰個工作範疇入面，對於呢個水

務工程就要分得咁清楚，淨係個泵房就屬於屋宇裝備，但係泵房以外嘅工作就係屬於呢個屋宇工程嘅，可唔可以解釋一下？

答：呢種分法其實係由來已久㗎嘞，咁佢亦都有佢個合理嘅地方㗎呢度。因為點解呢？就係泵房以外牽涉到嘅嘢，只係安裝一啲水喉，咁牽涉嗰個技術嗰個範疇相對係細嘅。但係係泵房入面，除咗呢個水喉之外，我哋要裝水泵，要畀電呢個水泵，亦都要做一啲相對複雜嘅控制線路，去控制呢啲水泵嘅運作，咁變咗佢牽涉嗰個範疇係相當--即係相對係廣好多嘅，咁係需要有一啲比較即係話技術性嗰方面嘅人去到負責睇呢方面嘅嘢。

問：即係你睇就係可能個技術性嗰個程度...

答：係。

問：...有唔同，所以咁樣分工，係咪？

答：冇錯。

問：咁我唔明嘅地方就係咁呀，喲，你對於一啲水務工程，就住水泵有關嘅，同埋水泵以外嘅一啲物料，就住佢哋嗰啲咁嘅樣本嘅資料，嘎，先講資料先喇，你哋都有作檢測同埋呢個核准㗎嘛，剛才你講過，喺你哋嘅團隊？

答：係喇，即係去到所謂 vetting 同埋去到...

問：Vetting 同 approval，可能係。

答：...approval 喇，嘎，嘎，冇錯。

問：咁你 vet 完，approve 完，到真真正正施工嗰陣時，喲，啊，你好怪就話「欸，喂，嗰啲唔關我事個喎，嗰啲；水泵以外嗰啲，唔關我事嘅。我淨係睇水泵嘅啫。」啊，又好似有少少係話大材小用呢？

答：我諗我要即係講清楚成個嗰個所謂 vetting 同埋 approval 個 process 嘅。單就呢個水泵房以外嘅物料嚟講，其實當呢個總辦商佢 submit 佢嘅資料嗰陣時，就其實係會先經我哋負責建築嗰方面嘅同事係睇咗先嘅。佢哋會睇咗之後，可能佢哋會有啲 recommendation 或者有啲睇法，然後先至會去到我哋屋宇裝備工程師嗰面，再去即係詳細睇一睇。

問：但係你哋都會詳細睇㗎嘛，係咪？

答：係，我哋都會嘅，係呀，嘎，嘎，嘎。

問：你哋都會詳細睇嘅。所以你係知道有關一啲泵房以外嘅工程，需要牽涉嘅物料入面，啊，需要啲乜嘢呀，佢啱唔啱呀，規格符唔符合呀；呢啲嘢，你嘅團隊係知㗎嘛，係咪？

答：係，冇錯，啱。

問：咁所以--但係去到現場監工嘅時候--噏，你有呢啲咁嘅資料，但係你又唔使去做呢方面嘅監工個嘢。即係你又淨係睇個泵房嘅啫？

答：唔噃。

問：係咪咁呀？

答：呢個其實係分工嘅啫。即係就算譬如話我哋泵房入面，我哋自己去做呢個 vetting and approval，但係工程師做完呢個 vetting and approval 之後，都係交番畀我哋地盤嘅 Building Services 嘅 inspector 去到負責去到監工嘅。Engineer 基本上係冇駐喺地盤嘅。咁其實呢個係類似囉。咁變咗如果喺泵房以外啲嘢，亦都係交番畀建築嗰方面嘅同事負責去到監督。

問：好。咁我又想問下，呢個分工，有時我哋睇文件上嘅分工，同埋實際情況嘅時候個分工，可能有時會有啲出入嘅。例如，你真係去到個地盤現場，即係監督嘅時候，我所講你嘅團隊，我知道你嘅口供入面就話，你都唔係話經常喺個地盤嗰度出現嘅。即係你可能唔同時段你會出現。

答：係。

問：但係你個團隊，喺監工嘅情況之下，有冇時候係話，喂，唔係淨係睇泵房，有時喺泵房以外啲嘢，可能 Building Works 嗰邊同你嘅團隊都一齊要負責，會唔會有咁㗎？定係真係分得好仔細，「喂，泵房以外，唔好關我事呀，唔好搞我嘞」，定係咁呢？

答：因為好老實講，而家譬如話人手係非常之緊張嘅，咁變咗我哋嘅分工，基本上，即係好少機會可以話「啊，我走去又睇下人哋啲嘢」囉，變咗就。

問：係。

答：即係呢個我嘅理解喇。

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問：所以你嘅意思就話當時去到現場，地盤真係嗰個實際情況，去監督嘅時候，都係仍然係用番呢一個咁嘅分工嘅情況？

答：係，冇錯。

問：好。喺你個證供第 16 段嗰度，我哋睇一睇。第 15 同埋 16 段都有講到，就話就住呢個泵房裏面嘅工作，有一個比較特別嘅安排嘅，就係我哋所講有一個即係指定嘅呢個二判商，嗰個情況。

答：係，分判商。

問：咁喺有啲例如其他泵房以外嗰啲，我哋就講緊係一啲即係自選嘅外判嘅情況，二判嘅情況嘅。我想問下嗰個--喺實際運作上面，就住呢啲咁嘅--我哋先講你嘅範疇，就係有關兩個水泵嗰個範疇。呢兩個水泵嘅範疇入面，嗰個 LP，即係我哋所講嘅 licensed plumber，即係嗰個持牌水喉匠，就同其他泵房以外嗰啲工作嘅水喉匠係唔同嘅，兩個嘍嘛，兩個係唔同。

答：係，通常會係兩個。

問：我哋先講你嗰個範疇入面嗰個水喉匠，同你哋嘅團隊大家嗰個日常嗰個關係係點呀？即係嗰個 coordination 係點樣嘍？

答：其實我諗就好睇嗰個 licensed plumber 佢本身即係喺嗰間公司，即係嗰個位置。譬如有啲老闆佢自己係 licensed plumber，有啲可能係打工嘅。咁變咗日常嘅運作嚟講，就因為主要我哋喺嗰個--我哋做咗個設計，啲圖出咗去，佢哋會譬如話再做一啲 working drawing，咁然後去到施工。除非係喺嗰個設計上有啲咩特別大嘅問題嘅，咁佢哋當然係會搵番我哋，即係 engineer 去到傾。咁就--但係好多時未必係相關法例上嘅嘢，咁變咗好多時佢哋有佢哋嘅 engineer，未必係嗰個 LP，係需要去搵我哋傾嘅，呢樣嘢就。

問：你剛才講嘅就係實際情況就係咁樣喇。

答：係。

問：喺你哋屋宇署，例如你哋有冇一個...

答：係，房屋署。

問：嘍，房屋署喇，嘍，房署喇，你哋有冇一個既定嘅一個守則，或者一個--即係好似一個 guideline 咁樣，就係話，喂，例如你哋同呢個

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持牌水喉匠，大家點樣去協調；例如佢幾時、幾時要同你哋匯報下個工作進度；喂，工人個情況係點樣；有冇呢啲咁嘅即係 standard 嘅 protocol，或者係一啲嘅即係 guidelines，一啲準則，係...

答：冇。

問：冇嘅？

答：冇，冇。

問：都係睇每一個工作，每一次進行係點？

答：睇個需要。

問：就係即係煮到埋嚟就睇下個情況係點喇？

答：係嘞，冇錯。

問：嗰個--有關工人啲啲，可能我遲啲再...

答：Okay。

問：...大家再討論下。我先講一講有關呢個水務規則，或者我哋講水務條例先喇。喺你嘅證人口供第 21 段入面-- 20 同埋 21 段都有嘅，你就講就話整個 plumbing system，整個成個水務嗰個個工程，咁你哋都係知道係需要符合即係有關嘅法例㗎喇。

答：唔，唔。

問：尤其是你呢度講咗出嚟，就係講咗呢個水務嗰個規則。

答：係，冇錯。

問：所以，我咁樣講啱唔啱呢，就係如果同工程有關嘅，即係同工程有關嘅水務規則入面嘅一啲嘅要求，你都係認識嘅，可唔可以咁講？

答：係，冇錯。

問：或者我哋唔好就咁憑空去講「我認知」，我哋直情睇下嗰個規則，睇下佢講乜嘢，然後我哋再慢慢討論下。

答：Okay。

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問：嗰個規則嚟講，首先我哋睇一睇就係 C2，1160。如果我哋睇一睇第 20，第 20 條，入面都係講話即係有關嗰啲水喉呀同埋啲配件呀都要符合呢個英國標準嘅，呢個。

答：係。

問：係嘞。呢個你都唔係第一次睇㗎喇，我相信你一定有認知㗎喇，平時。

答：唔㗎。

問：喺做呢個啟晴邨個工程嗰陣時，你都知道有呢啲規則嘅存在㗎喇。

答：係。

問：至於呢個--有關嗰個所謂嘅英國標準，我哋睇番喺 1156 頁嗰度，我哋大家其實都睇過，不過我想問一問你嘅啫。

答：係。

問：1156 頁嗰度，我哋睇番 Regulation 2，就係嗰個規則 2，就係個“BS”，呢個，呢一個 BS 嘅，呢個 British Standards 嗰度，就係講話係一個係最近期嘅版本嘅，我哋要跟，一個最 latest 嘅 edition of 個 BS 嘅--嗰個即係我哋所謂嗰啲規格喇。

答：唔㗎。

問：我哋如果睇番後面有個附件，有一個-- 1172 頁嗰度，個 Schedule 2 入面嘅 Part 1。我哋喺 1172 頁，伍先生，你可以睇到第 17 段嗰度，...

答：係。

問：...係，就講緊呢個 capillary fittings 同埋 compression fittings 呀，等等喇，咁就要遵守 BS 864。咁我哋後起，喺呢個聆訊期間，我聽到呢個 864 跟住有啲演變嘅，...

答：係。

問：...就變咗呢個一二四...

答：1254，而家。

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問：1254 嘅，係咪？

答：嘅。

問：咁就--對於呢啲咁嘅規定，你喺嗰個做緊啟晴邨嘅項目嗰陣時你都係知道嘅，呢啲規定？

答：係，冇錯。

問：我哋跟住就睇一睇嗰個合約，同總承建商嗰個合約，B5.1，7849，呢個就係即係嗰本好大本嗰本書，即係我哋係抽咗啲頁數出嚟，咁影印擺喺我哋嘅文件檔案入面。呢個 Contract Booklet，咁我哋見到係關於啟晴嘅項目，呢一個。

答：係。

問：咁就如果你睇番，一路去到 7868 頁，係講個 specification，即係嗰個規格嗰個細節嘅要求。

答：係。

問：第 1 項都係講話個“Specification referred to in the Articles of Agreement”呀，即係呢一個 agreement 入面其中有啲文件入面，嗰啲有關合同嘅條款，咁就都會係包括咗 (a)，就係一個房屋署或者房委會--房委會，對唔住；房委會嗰個 Specification Library，即係佢哋有個檔案嘅，即係嗰啲規格檔案，...

答：冇錯。

問：...嗰個 library，2008 年嗰個 edition 嚟嘅，即係要用番呢個嘅。就所以就係如果我哋睇番 2008 年嗰啲咁嘅既定嘅標準，我哋就可以睇到究竟有啲乜嘢要求嘞，咁樣。

答：係。

問：係咪？如果我哋睇番 2008 年嗰個既定標準，就應該我哋可以喺呢度搵到嘅，就喺呢個 B2 嘅 584 頁嗰度搵到嘅。B2 嘅 584 頁，我哋可以睇一睇，就係我哋講緊 PLU1 嗰度。

答：係。

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問：我一陣間我同你再大家討論一下 PLU1、PLU2 嗰個唔同呀，嗰啲咁嘅嘢。

答：Okay。

問：PLU1，我哋見到“SOLDERING ALLOYS FOR COPPER”同埋呢個“COPPER ALLOY CAPILLARY FITTINGS”嗰度，就即係呢個都係同嗰啲焊料有關嘅，呢一個。

答：係。

問：係。

答：冇錯。

問：冇錯。就第 1 段，我哋都係睇到佢話講話“Comply with BS”，嗰個 edition 就係“1254”，就係剛才即係你提過我嗰個 1254 喇。

答：係。

問：第 3 段就好開宗明義講到明就係用不含鉛、無鉛嘅 solders。

答：係。

問：即係呢度你都清楚㗎嘛。

答：係。

問：所以對於呢啲規格，你當時都係知道嘅？

答：知道嘅。

問：係，好。咁就其實好明顯，即係我哋常理嚟到講，呢啲咁嘅規格，“1254”、“lead-free”，呢啲咁嘅規格，其實--即係當然最主要都係希望合乎嗰個法例嗰個要求，係咪？

答：係，冇錯。

問：咁你都係咪都知道呢，咁就係呢個--如果啲物料含鉛，呢樣嘢對身體有害；呢樣你都會知道嘅？

答：一般嘅認知，係有嘞。

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問：一般嘅認知都係咁。即係我哋常識嚟講喇，...

答：係嘞，冇錯。

問：...唔好理話你作為呢個總屋宇裝備工程師，你個資格入面知得更多，可能。但係常識嚟講，物料含鉛，有毒，呢樣嘢係知道嘅？

答：係，會影響，嘎，係知嘅，嘎，嘎。

問：會影響健康，呢樣嘢係知道嘅，嘎。我哋又係用番常理嚟到講，即係呢啲咁樣嘅 specifications 呀，話用無鉛呀，要用達到呢個英國個個標準呀，等等呢啲咁嘅嘢，其實個個目的都係想避免有啲有鉛嘅物料係用咗嚟做個個水喉嘅工程，...

答：係。

問：...係咪？嘎。亦都係咁講，你唔想啲物料擺嚟做水喉工程，都係希望確保你得出嚟嘅結果，即係我哋最後用啲水係安全嘅，啱唔啱？

答：唔，唔。

問：同唔同意？

答：當然係。

問：係。好，咁而家我就同你睇一睇啱啱我哋一開始講個 sample，即係啲啲樣本或者係樣本資料，啲啲咁嘅呈交個個程序先。

答：係。

問：我哋之前從其他啲證人都聽到，就係話個個樣本呈交嘅程序，PLU1 同埋 PLU2 係有唔同嘅。PLU2 就寫到明係要呈交嘅，PLU1 就有寫到明嘅。

答：我應該講就話 PLU1 係唔需要--即係大部分嘅材料係唔需要呈交 sample，但係需要呈交文件上嘅，證明佢哋係跟到我哋呢個規範，即係 specification 嘅要求。

問：好。我諗我哋睇一睇話有關個個合同啲 specification 先。

答：好。

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問：如果我哋首先就睇一睇 B2 嘅 607。等等先，我整理一下呢個先。607。

答：係。係，睇到。

問：607 嗰度，我哋就响 PLU2 嘅，“SANITARY APPLIANCES”，即係我哋所講嗰啲潔具嘅用品。PLU2，呢度我哋睇到，第一段，PLU2 嗰度，“2.M01” -- “010.5”，607 嗰度，“PLU2.M010.5”，“SAMPLES” 嗰度，睇唔睇到？

答：唔，係，睇到。

問：咁就“Comply with the requirements of PRE”，“PRE”就係嗰啲 preliminary 嘅嘢，嗰啲外一 set 嘅一啲 specifications，“9.410 by submitting samples of the specified sanitary fittings for Approval.” 即係你要擺個樣本出嚟 for approval。呢個就係 PLU2 就係適用嘅。

答：係。

問：我哋睇下呢個 PRE.B9.410 嗰度講咩嘢嘞。我哋睇一睇 B5.1，B5.1 嘅 7903 頁。搵唔搵到 7903 頁，伍先生？

答：係，有。

問：係。

答：係。

問：咁嗰個“SAMPLES”下面，我哋見到嗰個“PRE”，即係我哋講緊呢啲係 quality standards 嘅一啲即係 preliminaries，嗰啲“PRE”。咁就佢嗰呢個“SAMPLES”下面就寫“SAMPLES OF MATERIALS - GENERAL REQUIREMENTS”，入面就話“Submit samples of materials as requested by the CM”，即係個 contract manager，咁就通常都係個總嗰個建築師，...

答：係。

問：...咁就“and do not confirm orders until Approval has been obtained.” 即係「喂，唔好去買住吓，等你哋真係核準咗之後先至好去買。」

答：冇錯。

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問：係咪？跟住就“Keep Approved samples at the place agreed by the CM for comparison with materials used in the Works”，et cetera，咁跟住即係話你要睇完嗰啲樣本之後，咁就要擺好佢。

答：唔。

問：點解要擺好佢呢？因為你到時真係啲貨嚟到現場嘅時候，你就要喺嗰間房擺出嚟望一望，咦，喂，呀，原來係啱嘅、符合嘅，...

答：係。

問：...咁就可以批核嘞，咁樣。

答：唔，唔。

問：即係呢個就係 PLU2 嗰個做法。PLU1，就我哋剛才睇嗰個，話嗰個樣本嗰個需要，喺 PLU1 嗰度我哋就睇唔到嘅，因為 581 頁，B2；B2 嘅 581 頁...

答：唔好意思，係幾多頁？

問：唔好意思，係 B2 嘅 581 頁，嗰度我哋就搵唔到好似啱啱 PLU2 咁所謂嗰啲 samples 嘅一啲嘅即係需要嘅...

答：係，冇錯。

問：...--一啲嘅係規定。咁我就想仔細啲問一問你，PLU1 呢--應該咁講，喺個合同嚟講，對於樣本同埋樣本資料，冇特別有規定。

答：係，應該話大部分冇規定，少部分有規定。

問：噏，...

答：我舉個例。

問：係。

答：譬如喺呢個--如果喺 587 頁，如果睇番 586 頁嗰個 heading 係“Pipe brackets and sleeves”。

問：係。

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答：喺呢個 clause 嘅第 6 個 subclause 度，係有寫明嘅。

問：睇下先吓。

答：“Submit sample of the pipe bracket and anchor for CM’s approval prior to installation.”

問：哦，係，見到，見到。

主席：等我一陣。

答：就另外呢...

主席：等一陣先。

問：等陣。

主席：係，586 定 7 呀？

答：587 頁。

主席：587。

答：就喺頂頂個度。

主席：係。

答：第 6 個 subclause。

主席：係。

許偉強先生：好，唔該。

答：另外我舉多個例子。

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問：係。

答：就喺呢個 592 頁。

問：五百九十……

答：2。

問：……二，係。

答：Under “Draw off taps and stop valves” 嗰度。

問：係。

答：就 PLU1.M710.5 嗰度，第一個 clause，最後嗰句，“Submit sample for approval prior to installation”。

問：好。

答：噶，有呢啲例子嘅。

問：好。我諗我就住你剛才講嗰兩個材料，我哋又問一問你。呢度嗰兩個材料，剛才咁樣 submit sample 喇。

答：係。

問：咁就以你嘅理解，呢個咁嘅 submit sample，係講一--真真正正嗰嘢，定係淨係 sample material 呢？即係話例如啲 test reports 呀，資料，即係文件上面。

答：唔係，係直情嗰一件嘢。

問：直接係嗰嘢嘅，嗰個實物嘅，係咪？

答：噶。

問：好。

答：或者畀多少少時間我解釋下個情況，好唔好呀？

問：好呀，好呀。

答：如果睇番 581 頁。

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問：係。

答：PLU1.M110.5 嘅第 5 段，嘅寫法就話“Be approved by the Office of the Water Authority for the intended application. Submit type test reports/certificates issued by laboratories that comply with PRE.B9.570 for verification of compliance with this Specification.” 呢個又係一個好 general 嘅要求嚟，其實即係話喺呢個 specification 入面，係需要 submit 一啲文件去到證明佢哋係跟到我哋 specification 嘅要求去做。

問：係，我其實本來我跟住落嚟係想問你呢個範圍入面嗰個問題嘅。

答：係，嘎。咁...

問：就係我哋--係，你係咪有嘢係補充？

答：係呀。其實因為...

問：係，唔好意思。

答：...頭先講到啲 sample 咁嘛。

問：係。

答：其實我要解釋下個情況，即係點解喺呢啲地方係咁樣做，又有特別有一、兩樣嘢又特別要 submit sample，而唔係淨係即係呢啲文件呢咁樣。

問：係。

答：因為喺 PLU1 呢個 spec. 入面嘅材料，基本上佢哋係有一定嘅 British Standard，或者一啲 international standard，係 govern 住佢嘅要求。而呢啲要求嚟講，你話擺件 sample 嚟睇，其實係唔會睇得到佢啱定唔啱。譬如話嗰個物料，嗰個 chemical composition，佢受到幾大嘅壓力，即係會唔會因為壓力大爆咗呢？即係呢類咁嘅嘢，你擺 sample 係完全有辦法睇到。所以，即係我哋喺制訂呢個 specification 嗰陣時，就都要睇睇，究竟個 sample 嘅作用係乜嘢嘢。我講番 pipe bracket，因為喺呢個 specification 入面，我哋有特別有一個所謂設計上嘅標準寫咗喺度，當然，即係譬如話幾大喉，幾遠要落一個喉碼，我哋有嘅，呢個

就，但係本身嘅喉碼，佢嗰個設計係有一個特別要求。咁好自然呢，就係話每一次，或者每一單 project，都會係需要呢個 contractor 去 submit 一個--呢啲 sample 畀我哋去到睇，日後亦都可以作為一個辦去到對照。咁同樣道理，就係嗰個 draw-off taps，其實嗰個應該就係洗衣機嗰個龍頭嚟嘅。因為呢啲龍頭佢個外型，唔同牌子可以變化好大，個 finishing 亦都可以唔同，所以點解我哋係有要求佢要畀 sample，就畀 CM approval 嘅。

問：明白。或者我哋睇一睇，剛才你講嗰個 581 頁，就係第 110.5 嘅第 5 段，就話 submit test report 同埋 certificate issued by lab. 呀，或者 comply with 嗰個 qualification 等等，即係你啱啱講到呢一點喇。

答：係。

問：咁呢度我哋就係講緊--顧名思義，我哋講緊 test report 同埋 certificate，就唔係講緊嗰個實物嘅，我哋呢度就講緊個 test report 同埋 certificate。咁我哋如果睇 PLU1 入面嗰啲咁嘅物料--PLU1 入面所用嗰啲物料，你哋嘅團隊因為都會有 vet 呀，approve 咁樣㗎嘛？

答：係，冇錯。

問：呢啲 PLU1 入面嘅物料入面，邊一啲要擺樣本實際嗰個文件？邊一啲係淨係擺 test report？有冇邊個去決定㗎？

答：呢份 specification，基本上係一個所謂標準嘅 specification 嚟嘅，咁 central 係有一 team 人呢去睇住呢樣嘢嘅，咁係嗰個所謂 drafting 嘅過程入面係會有個決定。

問：咁我哋假設吓，即係而家我哋呢一度講咗就話 test reports 呀等等，就 PLU1，你剛才講，舉啲兩個例，即係話要即係真實嘅樣本擺嚟睇嘅咁樣。

答：係。

問：其實喺實際運作嘅情況，就住 PLU1 嗰啲材料，其實都有唔少係你要睇個真實嘅樣本，唔係淨係睇 test report 嘅。舉個例，舉個例，我哋呢一個 solder materials，呢個焊接料。即係我哋之前有睇過呢個有關“FRY”嗰個牌子嘅嗰個物料，我一陣間帶一帶你去睇嗰啲文件。

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答：唔，唔，唔。

問：呢個物料，就你嘅認知嚟講，喺個實際運作過程，你係需要睇嗰個文件吓，定係文件同埋嗰個實物你都要睇㗎？

答：如果根據個 specification 嘅要求，焊料嗰度，我哋係冇要求要擺個 sample 嘅，但係好多時就承辦商嗰面，佢哋會自己做一個決定，就話究竟畀唔畀即係我哋，呢個就。

問：我明。呢個我哋之前副署長嚟畀口供嗰陣時，佢都有講過，就係話雖然 PLU1 就有話定咗落嚟你一定要畀樣本嘅，咁但係有時個 practice 呢，可能個 main contractor 都會畀。

答：係。

問：我想知道嘅係，唔係個 main contractor，喂，佢個 practice 點樣畀呀？係你哋點樣界定邊啲嘢「欸，我要--我期望佢會畀我一啲實物去睇；邊啲嘢我係唔期望佢擺實物嚟睇嘅。」點樣有個界定呢？喺邊度呢？你哋署...

答：Okay。

問：...入面點樣去界定呢樣嘢呢？

答：頭先其實我都已經講過，就係話主要係因為嗰個外型嗰方面，或者嗰個設計上嘅嘢，我哋基本上有--即係會要求畀 sample 睇嘅。

問：係。

答：咁而至於其他啲嘢，因為好似話齋，我哋喺呢個合約上嘅要求，就係要求係 submit 文件嘅，咁其實好多時文件入面係會有 catalogue，有相，其實係可以睇到嗰個--個物件係點嘅形狀。只不過呢就話，當我哋同事去到 vet 嗰個 submission 嗰陣時，如果譬如話睇啲相，睇啲嘢都唔清楚嘅，或者好似話齋，佢以往如果全新嘅一樣嘢嘅，以前未見過嘅，可能就會額外再去要求，就話再--佢哋畀呢個 sample 喇。

問：咁我哋好難話每一次你去到嗰個現場，你都係--即係當時去諗話，「喂，哦，呢嚟我就唔可以淨係睇 test report 嘞，我就要擺嗰個實物嚟睇嘞，嗰個我就唔使。」即係好難係當場作決定㗎，應該有啲既定嘅標準㗎，係咪？即係有個 list 呀，或者係--即係係咪有個

schedule 咁樣畀你哋可以參考下？起碼你真係落手落腳做 vetting，做 approval 嗰啲咁樣嘅職員，起碼佢哋會知道，「喂，諗呢嚟嘢--我係要嗰嚟嘢個嘢，嗰嚟嘢有嘢，」...

答：係，okay。

問：... 「我問過總承建商，總承建商去擺喇」咁樣，有冇呢啲咁樣嘅規定呢？

答：其實呢方面係牽涉到所謂 contract administration 嗰方面，咁就如果--因為我哋就負責番喺泵房入面嘅嘢，或者我用番泵房嗰個做法嚟到講。

問：好呀，好呀，好呀。

答：我哋係有一個 list 嘅，但係嗰個 list，係基本上係作為參考嘅。咁變咗嗰個 list，就我哋地盤嘅同事係會同 engineer 大家傾好咗，就係有邊一類嘅即係 sample 係需要 submit，咁然後就要求呢由 contract 喺一開始嗰陣時，就會大家定好咗。譬如話「幾時幾日，即係你唔可以超過幾時，係要畀到我哋。」因為可能喺早期已經需要用嘅，就要早啲 submit 咁解嘅啫。

問：嗰個 list 呀，你啱啱講嗰個 list。

答：係，係。

問：當然呢個 list 喺實際運作個過程之中可能會有更改呀等等。

答：係，一定嘅。

問：嗰個 list，係邊個去做嘍，嗰個 list？

答：我哋有個 standard 嘅 list 喺度嘅。

問：我知，係邊個去做嘍？

答：亦都係中央，中央嘅 team 去到做，係嘞。

問：中央嗰個 team，即係我哋係講緊係咪即係--如果你係咁講嘅話，係咪應該...

答：諗...

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問：...即係個 administration? 即係你講緊，...

答：諗...

問：...係咪主要都係總建築師佢哋個範疇入面嘅?

答：唔係，如果我講番，如果講泵房入面嘅嘢，其實我係身兼兩職嘅，我又要睇 project，我亦都要做中央 support 嘅。

問：係。

答：咁變咗有部分嘅嘢，就係我係亦都要去睇埋嘅。

問：我哋而家就講個 list 先喇，我哋...

答：Okay。

問：...唔好又開咁多先。我哋暫時就咁睇個 list，嗰個 list 嚟講，對--你嘅認知，係邊個部分負責去 compiling 嗰個 list 㗎? 即係話邊啲物料係需要遞交嗰個實物作為樣本嘅，呢樣嘢?

答：呢個參考嘅資料喇，係好似話齋，有個中央嘅 team 去到負責，咁呢個中央 team 其實有不同嘅人去到做嘅。咁如果 BS 嗰一部分，講番我哋水泵房嗰部分先，嗰部分呢，就係 contract administration 嗰面，就會我另外一個 chief building service engineer 去到睇住。

問：即係你係講緊--因為我哋聽「中央」兩個字，覺得好高層咁樣。咁究竟--即係你所講嗰個中央呢樣嘢，係講緊即係其實係另外一個 building service 嘅 team 去 compile 呢個 list 嘅，係咪咁嘅意思?

答：或者我簡單講，就因為呢一類嘅資料係係不同嘅 project~~~都可以用得著，所以變咗即係嗰個所謂 resource 嗰個運用嗰方面，只要搵一 team 人去到做咗呢樣嘢，咪所有 project 都可以用得到囉。

問：係，我知。即係梗係有一 team 人去做㗎嘞，其實我想知嘅都係話...

黎先生：會唔會係簡單啲，就係係啟晴邨嗰個個案嚟講，嗰個 list 係邊個係定出嚟呢?

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許偉強先生：唔該。

答：哦，如果係 project，project 會根據嗰個 reference list，就由自己定出嚟嘅。啟晴邨嘅同事自己定出嚟。

問：即係我諗我問題就係，個同事呢，係邊個 team 呀？或者係邊一啲同事呀？你知唔知呀？

答：我頭先提過，就係如果泵房嗰方面，總嗰個所謂 reference 嘅 list 嘅，就係由我另外一位同事--由另外一個 CBSE 喇，佢就去睇住呢方面嗰個制訂嘅。咁但係...

問：即係佢負責做嗰個 list 出嚟，係咪呀？

答：係，當然有同事幫佢手喇，即係成 team 人做嘅。

問：得。

答：咁就而喺 project basis，就會攞住嗰個 reference list，就去到呢再決定究竟呢間 project 需要--即係根據呢個 list 嘅，未必樣樣都係 applicable 㗎嘛，咁變咗就會去決定。

問：泵房以內，你講咗喇，剛才。

答：係。

問：泵房以外，因為你個團隊都會有 vetting approval 㗎嘛。

答：係。

問：泵房以外所睇到嘅 list，嗰個 list 又係邊個制訂嘅？

答：泵房以外嗰個 list，呢個我唔係好肯定，因為變咗我即係有牽涉喺呢方面。

問：好，唔緊要。但係你嘅認知呢，泵房以外，即係對於話物料送嚟，作為一個核准，vetting approval 呢一個要求，係都有個 list 㗎嘛，係咪呀？你係咪知㗎？

答：應該係會有嘅。

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問：嘎，好。我哋咁樣講啱唔啱呢？就係話你對於邊一啲物料，你係需要睇個實物；邊一啲物料，就要睇文件就得嘞，咁係睇個需--視乎需要喇，係咪呀？

答：係，嘎。

問：好似一啲好--即係好--我哋講比較有咁重要嘅嘢，假設好似螺絲呀--平時用開螺絲呀，螺絲帽個啲呢，你就唔會話需要佢擺一個 sample 畀你去驗證喇，係咪呀？

答：冇錯，冇錯，甚至 submission 都有喇。

問：嗰啲我哋所謂「小五金」個啲呢，就唔需要啲喇，係咪呀？

答：係，啱。

問：咁例如呢個焊料就係需要嘅，即係喺你哋嚟講，係需要去睇嘅？

答：係，我--即係喺個 submission 嗰度我哋係有睇過嘅。

問：Vetting approval，焊料需要嘅？

答：Vetting approve 有，係。

問：你喺你嘅證人口供都有講過呢就係話，就住泵房嚟講，有邊啲物料係需要總承建商擺個啲實際樣本畀你哋睇，可能都視乎好多種情況嘅，例如有啲好大件嘅，你就未必真係...

答：啱喇。

問：...叫佢擺嚟嘅時候，...

答：係喇。

問：...成部即係打斜咁樣車落嚟，咁樣唔掂㗎，係咪呀？咁嗰啲你就睇文件喇，係咪呀？

答：係。

問：又或者有啲--你入面所講嘅一啲可能一啲唔係話好大量去用嘅嘢，都未必需要去睇㗎，係咪呀？

答：啱。

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問：或者我哋睇一睇呢個 5.6--等我一陣。我哋睇一睇 15.1 嘅 37811。

答：唔該晒。

問：呢度就係--我哋睇到，就係對於嗰個焊料，當時吓，即係因為我知道你係負責泵房，但係你嘅團隊因為都會睇呢啲嘢嘅。

答：係，有幫手嘅。

問：我想問一問你，呢一個就係當時房署就收到呢一個總承建商，就住呢啲焊料攞嚟嘅一啲樣本同埋啲資料，就作一個核實嘅，我哋睇到喇，我想同你睇一睇呢一個表嗰個內容先。37811 嗰度，我哋見到上面就係啲日子，個 contract title 等等，嗰啲我哋唔好再詳談嘞。
“General information”， “Materials Description”， “FRY”，睇到嗎？

答：唔噃。

問：“FRY”喇。如果我哋揭去後面嗰幾頁，都睇到--37820，我哋都睇到嗰啲 catalogue。即係嗰啲材料嗰啲資料。

答：係，冇錯。

問：係咪呀？跟住亦都睇到一個係--應該係個 supplier，即係個供應商，係，有啲資料喇。37821，就有一個 Prosperity Building Materials Company 嘅攞出嚟嘅。去番嗰個表嗰度，嗰個表入面，即係 37811，我哋就講“FRY”，跟住“Location”，即係我哋應該就係講話即係攞嚟用喺邊啲地方嘅，...

答：係。

問：...個 location 就係，係咪呀？跟住我哋係睇到下面第二個一欄嗰個表，就寫住“Submitted Sample”，咁就係“FRY”，跟住就你見到佢嗰個--邊個國家製造呀，荷蘭呀等等。咁我哋睇到後面 F 嗰一欄，見唔見到？最下嗰度。

答：係。

問：“Appearance”， “sample attached”。

答：係。

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問：“Sample attached”呢，即係話一定係表示佢有擺過個 sample 嚟，先有得 sample attached 㗎？

答：係。

問：我想知一知，就係個流程係咁樣嘅，係咪呀？例如好似呢啲咁樣嘅材料，總承建商擺咗嚟，你哋睇咗嗰個實物，睇咗嗰啲咁嘅文件，核准咗，咁就會做呢一張表格。

答：係。

問：係咪呀？佢核准咗喇。通常--你睇到呢，喺前少少呢，見到最頭個頂嗰度，“Detail of submission”下面呢，寫住“The enclosed sample and catalogue”，睇唔睇到？

答：邊一頁？

問：即係對唔住，喺(1)上面嗰度。第1段嘅上面。

答：(1)上...

問：即係“General information”嘅上面。

答：係。

問：“The enclosed sample and catalogue”，同埋“product certificate”等等，“test report”等等，“as described below have been checked”，見唔見到？

答：係。

問：咁通常個同事就應該如果有嗰啲資料，就會喺上面剔一個剔嘅。

答：係，係。

問：例如有“sample”，剔一個剔；“Catalogue”，剔一個剔。

答：係。

問：係咪呀？我--因為我想你睇完呢個之後，我哋去比較一下，比較一下嗰啲有 sample 嘅情況。哦，唔好睇有 sample 情況住，我未搵到，因為。我同你再睇一睇嗰個--呢一個表，制訂咗之後，如果個實物呀，

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你哋就會--我聽番阿嚴先生講，即係你哋總建築師講呢就會擺喺一個鎖咗嘅一個房間裏面嘅，即係擺喺嗰度。即係佢係以供第二時如果啲材料嚟到嘞，咁就即係真係施工之前喇我哋講，即係啲材料大批咁樣運嚟嘅時候，就作為一個即係驗證嗰個過程。即係你要睇番入面係啲咩嘢料嘅--係啲咩嘢資料，咁我就核准番嚟嗰啲貨，係咪都係符合嗰個要求。

答：唔，唔。

問：咁呢個對於泵房以內，同埋泵房以外啲啲咁嘅物料呢，都係同樣嘅做法嚟嘞？

答：我唔敢講泵房以外嗰個做法係點樣樣，因為我哋係冇牽涉在其中。咁但係泵房以內我哋係咁樣做嘅。

問：好。如果我哋再睇一睇呢一個表格入面，最下底，我再睇一睇，呢一個 37813。37813 嗰度呢，睇一睇最底嗰度，2 嗰度。

答：係。

問：“Track records in BMD for building materials under C&M's surveillance is checked.”我想知道呢個係咩嘢意思？嗰個 C&M 個 surveillance 呢，係咩嘢嚟嘍？

答：C&M 係我哋房署入面另外一 team，係負責--即係呢個又係所謂中央嘅 team，係負責做一啲所謂 surveillance 嘅工作。即係譬如去地盤抽查一啲物料，睇睇佢合唔合符規格咁樣樣。

問：係。即係係咪咁--跟住呢，你就講“The alerts issued and test failures recorded in the Laboratory Test Reports is not attached”咁樣。嗰個“alert”，係咪即係你喺證人口供入面，有講過一個即係 material 個 quality 嗰個“alert”呀？係咪就係呢個？

答：係，冇錯，係。

問：我想理解多少少嗰個運作，你哋睇完啲啲物料，或者睇完個樣本，個物料個樣本，亦都睇完啲啲咁嘅文件之後，咁你哋嘅同事都會翻查下舊帳嘅，翻查下「喂，之前呢一隻物料有冇衰過先」。

答：係，冇錯。

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問：係咪呀？即係應該係咁樣--即係俗啲嚟講就係咁樣。

答：冇錯，啱。

問：如果有衰過嘅，咁就應該喺個 alert system，呢個警報系統入面呢，就會--你哋會察覺到。

答：係，冇錯。

問：例如，如果假設“FRY”係以前係衰過嘅，咁你就會唔批嚟喇嘛，係咪呀？

答：係，冇錯。

問：我想知呢啲咁嘅警報系統，嗰個制度係點嘍？即係例如你係每一次做咗個工程之後，衰咗嘅物料整一個 list 出嚟，「喂，呢啲嘢呢，係喺現場我哋察覺到呢唔妥嘅。」整個 list 出嚟，加入嗰個通報嗰個機制入面--嗰個警報系統入面吖，定係點做呀？我想知道，你可唔可以解釋下畀我聽？

答：其實呢啲所謂 alert 嘅來源係多方面嘅，當然喺個工程入面，如果喺譬如安裝或者完工期間，發覺係有問題嘅，咁而核實咗，呢啲 alert 係會通報晒畀所有我哋嘅同事嘅。

問：係。

答：咁就其他亦都會譬如話，喺--就算唔喺我哋房屋署嘅工程入面，如果我哋出面係聽到有即係問題嘅，而我哋又即係經過核實嘅話，我哋都會係通知番啲同事嘅。咁亦都係會譬如我哋保養嘅同事喺啲--即係期--即係之後用嘅期間係出咗問題嘅，咁亦都會有呢個資料通知我哋，我哋亦都會做呢方面嘅嘢。

問：係。其實我想知喺嗰個處理上呢係點樣。例如你話你哋覺得有唔妥嘅物料呢--即係喺成個工程入面有唔同嘅物料，你係話你哋做過測試覺得佢唔妥吖，定係話「啊，喂，我本來要求佢可能係要送呢一隻物料嚟嘅，係 A grade 嘅，佢最後送咗 B grade 嚟，唔符合。」係點樣去到制訂邊啲嘢會跌入去呢一個警報系統入面？

答：我諗我一定要澄清就話，我而家講緊，我用番我哋做即係 BS 嗰面嘅做法。因為可能譬如 actual 方面同事嘅做法會有出入，不過我只可以用番即係話 building service 嗰個做法嚟到講。咁就如果譬如

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話純粹係喺 project 嗰度，project 要求，或者批咗物料 A，A 嘅牌子，佢送咗 B 嘅牌子嚟，或者 A 嘅牌子第二隻型號嘅，呢個純粹係喺嗰個 project 嘅層面，就基本上係唔會有一個 alert 嘅。咁有呢個 alert，通常就係話，我哋 spec.入面有某一啲要求嘅，但係佢送到嚟，或者安裝期間發覺，或者員工，或者甚至喺用嘅期間發覺，「咦，譬如話啲掣，成日都漏水喎，唔止一次喎。」咁變咗我哋就會有呢個 alert 出去。咁我哋同事亦都要去搵番，譬如話搵番個原因點解會有咁嘅情況呢？因為譬如話個掣漏水，可以有不同嘅原因，可能係因為我哋用嗰啲水質多雜質，導致到佢門唔緊；或者本身因為佢嗰個掣出廠嘅 quality control 做得唔好，而嗰個物料有嗰個所謂 deterioration，而之後有咁嘅問題；或者甚至根本就係製造過程已經做得唔好。咁所以係會有不同方面嘅考慮。

問：係。咁我想知係咪每一次工程，即係做緊嘅時候，或者完成之後，都會有一個 compile 一個 list 㗎？即係話喂，邊啲物料衰咗嘅，就會跌入去呢一個警報系統，係咪都會有個 list 㗎？

答：基本上就唔係話每一個工程之後就做呢樣嘢，而係就靠，第一，我哋會有啲所謂 regular 嘅 surveying，喺~~~不同嘅 project~~~抽樣嚟去抽查嘅。另外，亦都--我一路有提到嘞，包括埋譬如我哋保養嗰面嘅同事，用緊嗰陣時發覺問題，通知我哋，我哋就去做嘅。所以就唔係話每單 project 之後就一定做呢樣嘢。

問：我想知--我哋制度就係盡量去完善㗎喇，即係...

答：係。

問：...每次精益求精，希望...

答：係，冇錯。

問：...即係將以前唔好嘅嘢就即係摒除咗去。

答：唔㗎。

問：例如你話，好似响呢個 project，例如有十樣嘢，好似你剛才講話係衰咗嘅。

答：唔㗎，唔，唔。

問：即係唔合乎規格嘅。

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答：係。

問：唔合乎個 specifications 嘅。

答：係。

問：你話 for 下一個工程，可能「咦，等啲人都知道㗎，喂，曾經有過呢啲事情出現㗎」咁，有冇一啲咁嘅資料呢，例如你話，啊--或者一個咁嘅制度，係呢個工程出現咗呢啲問題，有呢啲材料嘅問題嘅時候，會--喂，下一個工程啲人都會知道有呢啲咁嘅情況會出現㗎？

答：會，會，嘍，嘍。

問：即係你有個...

答：有嘅。

問：有資料嘅？

答：有呢個機制，亦都有呢啲資料。

問：好。我想問一問你，就係嗰個--我哋啱啱睇完有 sample 遞上嚟嘅，即係有真實物料遞上嚟。

答：係。

問：我哋睇一個情況係冇 sample 嘅，睇下你係咪同意係咁嘅情況？

答：Okay。

問：如果你睇下 B5.6 嘅 10961，10961。

答：係。

問：呢個都係同樣嗰個屋邨工程嘅。

答：唔㗎。

問：人面亦都係你哋嗰個 vetting approval 嘅過程之中就有睇過某啲嘅材料之後制訂出嚟嘅。

答：係。

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問：我哋見到呢度就有個“Cast Iron Gate Valve”，就係應該係啲閘掣嚟嘅。

答：係，冇錯。

問：我哋睇下個表，下面嗰個表，“Submitted Sample”，第 f 嗰行，“Appearance”，“Appearance”。

答：係。

問：如果佢話“See attached sample photo”，呢啲情況係咪話即係佢就畀咗嗰張相你嘅啫？

答：係。

問：就有畀到個實物你嘅？

答：應該係嘞。

問：係咪？

答：嘅，嘅。

問：嘅。但係喺填表嘅過程，就算有冇實物畀過，你都當佢為一個 submitted sample 咁處理嘅，個表。因為個表係寫住“Submitted Sample”㗎嘛，就唔係--就有分到話 sample 定係 sample information㗎嘛。

答：哦，因為呢個係一個所謂 standard form。

問：係。

答：嘅，嘅，咁所以...

問：所以我哋就要靠睇例如--如果係講個 photo 嘅，...

答：要睇內容嘞，變咗就。

問：...咁就通常都係講緊有實際嗰個材料。

答：係，冇錯。

問：得，唔該。唔該。如果我哋就住呢個焊接--啲焊料嚟講，我哋睇咗嗰

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個 vetting approval 嘅過程喇。即係佢畀咗實物，畀咗嗰啲文件你，亦都係核准咗。

答：唔，唔。

問：你將嗰啲材料擺喺間房度，嗰啲我哋亦都講咗，都係 for 係以後嚟到--即係啲材料真係到現場嘅時候，作為一個核實喇喇。

答：係。

問：但係如果呢啲材料擺咗喺--即係呢啲樣本擺咗喺間房度，如果你真係喺施工過程係唔需要再核實嘅，...

答：唔噃。

問：...即係話貨嚟咗嘅時候唔需要再查喇喇，基本上其實嗰啲 sample 擺喺間房度冇用喇喇嘛，喺成個施工過程嚟講冇用喇喇嘛。

答：係喇，可以咁講。

問：係咪咁講呀？

答：噃，噃。

問：我哋知道就係真真正正喺個現場，當啲貨嚟到，啲物料，啲貨嚟到嘅時候，要真係去核對佢係咪符合呢一個 sample 嘅要求，我哋知道有張 form 叫做 6210 嘅。

答：唔噃。

問：即係我哋睇過，或者我畀你睇一睇嗰個 6210，嗰個 B1，240。呢個表你都睇過喇呵？6210 呢個表，都知道喇呵？

答：最近睇過。

問：最近睇過。

答：噃，噃。

問：咁你以前，即係喺嗰個啟晴邨個工程嘅時候，你知唔知有呢個表存在咗？

答：唔知道。

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問：哦，唔知嘅？

答：唔知。

問：哦，但係呢個都係...

答：因為我哋冇牽涉喺呢方面嘅即係 administration 嘅。

問：哦，okay，明白。咁你而家知道喇，我亦都想同你睇一睇，就係呢個 6210 個表就係講就話，你邊啲物料嚟到個地盤現場嘅時候，即係話大批物料嚟到，唔係淨係講樣本吓，而家。樣本嗰度已經過咗嗰個階段嘞。

答：唔，唔，唔。

問：而家係講大批物料嚟到場嘅時候，...

答：係。

問：...你要做一啲核實呀、去檢查呀咁樣，...

答：係。

問：...嚟到證明嗰啲物料係符合規定。

答：係。

問：呢啲嘢呢，就住水泵房嘅物料嚟講都係你嘅團隊需要做㗎喇。

答：係，冇錯。

問：呢啲所謂嘅 site supervision。

答：㗎喇。

問：係咪？

答：嘍，嘍。

問：所以你應該係知道 6210 即係嗰個運作個嗰，係咪？

答：我...

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問：如果唔係，你點知--即係你個團隊點知道，喂，呢...

答：我哋另外有一套制度做嘅，呢方面。

問：另外一套制度？

答：係，嘎，嘎。

問：即係又唔係跟呢個㗎嘞？

答：唔係跟呢個嘅。

問：係咪？

答：嘎。

問：好。我哋睇一睇呢一個先喇。

答：Okay。

問：我哋睇 240 嘅時候，就不能不睇埋 239 嘅。239 就寫得好清楚，就係一個“On-Site Delivery Verification”。

答：唔㗎。

問：即係係一個現場 deliver 嘅時候，即係貨物送到嘅時候嘅一個驗證嘅過程。

答：唔㗎。

問：6210，240 頁嗰度就係講出邊一啲嘅物料係需要做呢啲咁嘅驗證嘅。咁我哋--我自己就數過，應該總共係有三十二隻--三十二樣嘢係需要驗證嘅。

答：唔㗎。

問：我想知道就係--其實呢度淨係得--我哋講緊水喉工程，唔好講泵房先。泵房你話有另外一套㗎嘛。

答：嘎，嘎。

問：就咁講其他水喉工程喇。

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答：係。

問：呢三十二隻物料，淨係得呢三十二隻，根據呢個表格，淨係得呢三十二隻係需要現場 deliver 嘅時候，送到嚟嘅時候去驗證㗎嘛？

答：唔。

問：呢個表係咁寫，係咪？

答：如果根據呢張表就係咁。

問：以你嘅認知，係咪咁呢？因為--當然我哋睇 vetting and approval of 嗰啲 samples 就一定多過呢三十二隻。

答：係。

問：一定多過，係咪？

答：啱，啱，係，係。

問：即係我當佢可能超出佢一倍喇，可能佢有六十幾隻畀你去驗喇。

答：唔，唔，唔。

問：你知唔知大概有幾多隻要驗呀？即係講緊水喉--即係嗰個水泵以外嗰啲，有幾多種物料係需要你去 vetting and approval 㗎？

答：我有 idea。

問：你有 idea？

答：嘎。

問：得。即係--但係一定多過呢三十二種喇？即係驗咗嘅，同你...

答：你係講緊我哋自己做 vetting，定係講話要睇個 delivery？

問：你如果自己--我哋自己--你個團隊做 vetting and approval，關於嗰泵房以外嘅工作嘅物料嘅，一定係多過，即係你 vetting 嘅--即係 vetting 咗同 approve 咗嘅物料一定多過呢三十二樣㗎喇？

答：又未必㗎。

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問：吓？

答：我相信未必有三十二樣咁多，嘎。

問：唔係喎。

答：即係淨係泵房以外咁嘛？

問：以外。

答：即係講緊仲係水喉嗰方面咁嘛？

問：水喉，冇錯。

答：我諗應該有三十二樣咁多。

問：應該冇，唔。因為呢度就包括埋即係水喉以外嘅，呢度。

答：係呀。

問：但係--我哋首先講水喉工程以內嘅先喇，就泵房以外，但係喺--涉及水喉工程嘅。

答：Okay。

問：嗰啲咁嘅物料，你哋 vet 咗、approval 咗嘅，擺咗喺嗰間房度嘅，...

答：唔，唔。

問：...係咪都有唔少係唔會再擺出嚟用㗎嘞，因為唔會去驗證㗎嘛，喺現場？

答：嗰部分我唔知道。

問：你唔知道？

答：嘎。

問：Okay，得。我哋而家睇一睇嗰個--關於嗰個 site inspection 嘅過程。即係我當然知道你係主要負責嗰個泵房。

答：係。

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問：但係嗰個 general 嘅 site inspection，其實我都想同你討論一下。我哋亦都知道 site inspection 我哋都聽過之前有啲證人都講喇，我哋有啲 manual 去跟嘅。

答：係。

問：係咪？我哋所講有啲 DASM 嘅 manual，同埋有啲係--我哋睇一睇呢個 B1，34；B1，34。好，我哋先睇下 B1，78 先。

答：係。

問：呢個你都知道嘅，係咪，即係呢啲 manual？

答：我會知我哋 building services 嗰邊嘅 manual。

問：係。

答：因為呢類我哋唔係負責嗰個 contract administration 嘅，基本上我哋平時係唔會即係特別去到涉獵到嘅。

問：明白。但係我想知道嗰個 site inspection 個 guide 呢，...

答：係，係。

問：...即係一般嚟講我哋嗰個守則喇，係咪？

答：係。

問：我想知道就係你個泵房所要遵守嘅守則呢，就同呢個係唔同嘅，定係都係類似呀？

答：因為我--我真係之前冇機會睇過呢樣嘢，我而家唔可以咁樣講，究竟有冇分別。

問：好。或者我帶你去睇一睇呢一個 DASM-202 呢度。

答：係。

問：78 頁。

答：係。

問：咁佢入面就講話“CATEGORIES OF INSPECTION”，就有三種嘅。

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答：係。

問：一種係 Category 'A'，就係 100 per cent 去檢測嘅。答：係。

問：另外一種，Category 'B'，10 個 per cent；Category 'C' 就 random，即係隨機抽去驗，就起碼每一座有三次咁樣；或者每一件物件有三次；或者每一個 trade 有三次咁樣。呢個你有冇認知呀，對於呢樣嘢？呢個 categories of inspection 呀？

答：似乎同我哋 BS 嗰面嘅做法係唔係好同嘅。

問：唔同嘅，係咪？

答：嘎，嘎，嘎。

問：你哋嗰個做法係點呀？

答：我哋基本上就有分咗唔同階段嗰個 inspection 嘅。

問：係。

答：當送貨去到地盤嗰陣時，就 contractor 係需要就將佢送咗嗰啲貨，做咗一個叫做 material delivery inventory record，就交界我哋，當然要包括埋相關嘅 delivery notes。

問：係。

答：交咗畀我哋地盤嘅同事之後，我哋地盤嘅同事就會揸住呢啲 record，同埋之前 building services engineer 已經批咗嘅嗰隻物料嘅資料，咁就攞住就去做--就實地去做一啲 sample check 嘅。做呢個 sample check 之後，就會將佢哋 check 過呢啲紀錄就寫番喺佢哋嘅 site record book 入面，就譬如話邊隻牌子咁樣樣。

當然只係 sample check，唔係即係 100 個 per cent。但係個數量嗰方面，譬如話 delivery order 入面講話幾多數量，都會照札低嘅。因為個數量對於我哋即係所謂 monitor 成個 project 嗰個進度係好重要嘅。

問：Okay。

答：即係如果譬如唔夠料嘅，咁就會--我哋會主動去追嘅，呢樣嘢。

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問：呢個--如果我哋睇下--如果你唔知嘅話，你都可以同我講。

答：Okay，嘎。

問：即係去到 80 頁喇，佢哋列咗啲例子出嚟，就例如邊啲要 100 個 per cent check 呀、10 個 per cent check 呀、random check 呀，呢度列咗啲例子出嚟。即係啲啲都唔係屬於你哋嘅團隊嘅範圍入面嘅？

答：唔係。

問：好，得。你之前都有睇過嘅，呢啲？

答：冇。

問：跟住我想同你睇一睇就係啲啲我哋所謂入--啲啲水紙呀。即係水務署係--一開始去申請嘅時候，例如有啲 form 46 啲啲，我都想同你睇一睇啲度嘅。我都知道你就係負責係有關泵房啲個申請喇，咪呀？

答：係，冇錯。

問：我睇一睇個--可能有啲唔同嘅地方就去睇一睇，就係呢個泵房啲個申請，同埋一般嚟講係 for 即係 fresh water supply...

答：唔，唔。

問：...啲個申請，...

答：Okay。

問：...有少少唔同嘅，我都想同你睇一睇啲個情況先。首先我哋睇一睇 B5.5，10597。

答：係。

問：睇到嘛？呢個就係啲個 form 46，即係 WWO 46。

答：係。

問：即係向水務署申請去 for 個 construction 呀咁。

答：係。

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問：呢度我哋係講緊啲 fire service 嘅，係咪？即係你睇一睇...

答：係，冇錯，啱。

問：即係話“down stream FH”，即係講緊啲消防喉，係咪？嗰啲咁樣嘅申請喇。

答：冇錯，嘎，嘎，啱。

問：我哋見到嗰個持牌水喉匠下面簽名喇。

答：係。

問：呢個我哋都係講緊嗰啲--即係同啲既定嘅二判，嗰啲咁嘅工作喇，即係。

答：係，冇錯。

問：跟住就係 AP 簽名喇。呢個就係講緊啲你嘅範疇之內嘅嘢，即係...

答：係，冇錯，啱，啱。

問：...fire service 呀、water pumps 呀嗰啲咁嘅情況。

答：係，嘎，嘎。

問：好嘞，如果我哋講緊 fresh water 嘅 supply 呢，如果我哋睇下 10617。

答：係，睇到。

問：係嘞。呢個我哋睇到都係同樣一張 form，46 喇。

答：係。

問：呢個就係講緊--我哋直情可以睇到中間，前少少，上面啲喇，即係講緊嗰個“Plumbing covered by this Form ... please specify”，咁我哋見到“Fresh Water Supply”咁樣嘅，water supply 咁樣。

答：係，冇錯。

問：呢個就係我哋講緊個泵房或者係個消防系統以外，就係對於--向水務

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署嗰個申請喇。

答：係。

問：係咪？呢度我哋就見到嗰個 licensed plumber 就另外一個人嚟嘅，林德深先生。

答：係。

問：即係呢個就同之前嗰個 licensed plumber 就係兩個人嚟嘅咁樣。

答：係，冇錯。

問：好。呢度我想問一問你嘅，就係--我哋通常--你都知道，就住你嘅範疇先喇，...

答：唔，唔。

問：...water pumps 呀、fire service 呀嗰啲咁樣嘅。

答：係。

問：我哋遞呢張表嘅時候呢，都要遞一個附件㗎嘛，係咪？

答：係，冇錯，嘎，嘎。

問：即係附件就係入面會有列明你用啲咩嘢物料呀。如果我哋睇呢一個--我唔知佢呢一個--我哋睇一睇呢個 10589。

答：係。

問：呢一個都係講緊 fire service water supply 嘅。

答：係，冇錯。

問：即係都係你嘅範疇...

答：係，冇錯。

問：...以內嘅，係咪？呢一個就係講緊個持牌水喉匠呢係林德深嘅。

答：嗯？咁得意。哦，呢個可能係講緊由個 site boundary 入到去到泵房嗰一節。

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問：係。

答：因為如果泵房入面嘅嘢，唔會由即係 building contractor 嗰個 licensed plumber 去簽嘅。

問：好，明白。噏，唔好理喇。如果我哋純粹睇呢啲咁嘅申請，通常都有個附件交去喇。

答：啱。

問：附件就列明用咩嘢材料嗰啲喇。如果喺個工程進行當中，嗰啲附件入面嗰啲材料如果有改動嘅話，係邊個向水務署再提交一啲更新嘅資料㗎？

答：如果根據水務署，應該係二--我唔知有冇記錯，應該 2004 年有個通函㗎，應該就係話有任何改動，有關個 licensed plumber，應該當然佢只係 minor 喇，minor 嘅改動，有關 licensed plumber 呢，就去到即係更正番嘅。

問：即係你嘅意思就話，即係由個 licensed plumber 就同水務署去申請嘅，係咪？

答：係，冇錯，嘎，嘎。

問：好嘞，有兩個文件我想你睇一睇，即係--你可能未必有直接嘅認知，但係我都想你睇一睇，因為佢涉及你哋個部門嘅。

答：Okay。

問：即係你哋個團隊嘅。第一個就係有個持牌水喉匠林德深嗰個證人供詞入面，有一段我想畀你睇一睇咗先嘅，係 Q1 嘅 17，第 4 段，見唔見到有個「會面內容」呀？呢個係--呢個就係林德深同埋呢個--就住呢一個鉛水事件就同佢有個會面嘅，其中會面嘅內容入面第 4 段就咁講嘅--或者我讀一讀出嚟。

答：Okay。

問：佢話「林先生稱就啟晴邨同埋呢個葵聯邨所使用嘅水喉配件嘅更改，作為負責該項目的水喉匠的他就曾向該工程項目的註地盤屋宇裝備工程師提出需向本署申報」，佢呢度應該係講緊水務署喇。

答：唔噃。

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問：「惟該工程項目的註地盤屋宇裝備工程師曾向他表示無須修改及再次遞交有關的水務表格 WWO 46 第一同埋第二部分，由房屋署與署方的相關人士溝通即可，故林先生並冇向本署提交有關更改水喉配件的水務表格。」我又想知道，你嘅認知嚟講，第一，就住呢一件事，啱啱所講嘅，你知唔知道？

答：我就覺得冇乜可能。

問：係。

答：因為我哋基本上就有駐地盤嘅屋宇裝備工程師嘅。

問：除咗呢樣之外呢，...答：係。

問：...大家嗰個協調係點嘅呢，就話當真係 WW46 (?) 遞交咗之後，喺整個工程施工嘅時間，入面對於嗰啲物料可能有更改咗之後，你哋都係期望嗰個持牌水喉匠去向水務署更新資料嘅？

答：係，冇錯，嘎。

問：係咪咁呀？

答：係，冇錯。

問：你哋個部門會唔會曾經有過個做法，就係話「喂，持牌水喉匠，你自己唔使同佢哋講嘞，你同我哋講得嚟嘞」，會唔會曾經有啲咁嘅做法呢？以你嘅理解嚟講。

答：我印象之中冇。

主席：呢個駐地盤屋宇裝備工程師，除咗你哋冇呢一個工程師，就你所知，嗰啲總承建商呀或者啲分判商有冇呢個駐地盤嘅屋宇裝備工程師嘍？

答：總承建商應該有嘅。

主席：總承建商應該有嘅？

答：嘎，嘎。

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問：或者我哋又睇一睇另外一份文件，就係何標記。

答：係。

問：何標記嘅證人口供，K1，42 頁。呢個就係何標記，即係佢個老闆，何文標先生，佢就住呢一個聆訊所提交嘅證人供詞嚟嘅。佢入面都答咗我哋委員會問佢有啲問題喇。

答：唔，唔。

問：其中你會見到第 42 頁，“Answer (a)”個中間下面嗰度少少，你唔睇到“The LP”嗰度開始呀？“The LP was also responsible for...”

答：睇到。

問：見唔見到？

答：睇到。

問：“The LP was also responsible for complying with the statutory requirements imposed by the WSD.” 即係佢需要符合水務署所訂落嚟嗰啲標準喇。

答：唔噃。

問：“This included submission of revised WWO46 for the alternative materials.” 即係話如果佢有啲用料可能轉咗嘅，...

答：唔，唔，係。

問：...或者用咗第二啲物料嘅，佢都要呈交番一個更改咗，一個 revised 嘅 form 嘅。

答：係。

問：呢度係咁講。咁跟住“Thus the LP would co-ordinate with the HD on the submission of revised WWO46.” 即係話佢會同你哋協調嘅。即係作呢個更改嘅時候，佢會同你哋協調咗先嘅。

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C 答：唔㗎。

D 問：“This would usually be done by the LP checking with
E the HD whether resubmission of” 呢個 form “was needed.”
F 呢個就似乎同啱啱林德深佢所講嘅有少少啱合嘅地方，就係話「喂，
G 唔係我自己去交個㗎，係我要同你協調咗先，咁然後先去諗下，喂，
H 需唔需要交呢，咁呢個 revised form。」

I 答：唔㗎。

J 問：即係你對於呢個有冇咩嘢回覆？

K 答：以我嗰個理解就係話，submit 呢啲咁嘅 WWO form，基本上就係話
L contractor 佢搵咗佢嘅 licensed plumber，整好晒之後，就 send
M 過嚟畀我哋嘅同事，咁我哋個同事覺得 okay 嘅就簽名，然後我哋係
N 會 send 番畀佢哋，就由佢哋去到交嘅。

O 如果講係有一啲物料喺早期即係已經遞交咗畀水務署，而之後有
P 更改嘅，如果根據呢個 2004 嗰個通函呢，應該佢哋係--已經--因為
Q 唔需要再我哋同事簽名嘅，佢哋就已經可以直接就上水務署去到做呢
R 個更改嘅。

S 問：唔好意思，我想搞清楚一點先，就係你剛才話，如果個持牌水喉匠佢
T 知道係施工過程入面有更改，例如，本來係五種物料，五種物料入面
U 有三樣嘢係用咗唔同嘅牌子呀可能，或者唔同嘅 specifications，
V 假設吓，或者唔同嘅 model number，假設，...但係都係用咗嚟作
為嗰個工程入面施工所用嘅。

答：係。

問：你嘅意思係話佢去交呢個更新嘅表格之前，其實係會同你哋傾下先
嘅？

答：應該話因為佢有任何嘢嘅改動，就需要我哋批㗎嘛。

問：係。

答：咁當然佢會就畀佢改動嘅嘢我哋批喇。

問：係，係。

答：我哋批咗之後，因為根據嗰個通函，我哋即係 expect 佢哋就跟住就

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去做番呢個手續，就係上番水務署去到改番嗰個 form 嘅。

問：唔。你嘅意思即係話佢改動咗之後，即係例如佢--佢知道有啲咩嘢要改動喇，...

答：係。

問：...就同你哋會傾咗先。而要得到你哋嘅准許，...答：係。

問：...然後佢先至可以去水務署嗰度呈交嘅？

答：諗噏...

問：佢又唔可以自己走去...

答：唔係，唔係，唔係，應該咁樣講，...

問：嘎，嘎。

答：...得到我哋嘅准許，係我哋批准佢改嗰隻料。

問：係。

答：佢當然--我哋絕對唔會話唔准佢去水務署更改嗰個紀錄嘅。

問：我唔係好明呀，我搞清楚先。你話更改，...

答：係。

問：...做嗰陣時要更改㗎喇，已經。即係施工過程嗰陣時要更改㗎喇，有呢樣嘢喇？

答：係喇，嘎，嘎，嘎。

問：係喇。即係你嘅意思係話施工過程，如果五樣嘢，有三樣要改嘅，施工過程嗰陣時，要同你哋講咗先，係咪？

答：係，冇錯，啱，啱。

問：你哋要准許佢用嗰三樣嘢先得㗎？

答：係嘞，嘎，嘎。

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問：冇理由你哋唔准許之下就亂咁用一樣嘢㗎？

答：啱，啱，唔㗎。

問：好嘞，咁我哋--做到咁上下嘞，咁知道呢啲嘢係驗咗，已經安裝埋添嘞，佢可能就會呈交上去水務署，就話「喂，呢啲嘢我改咗嘅。」答：係。

問：呈交呢份表格之前，仲使唔使同你哋核准下，「喂，唔該你哋睇一睇，喺，五樣嘢，我而家改咗三樣嘞，我遞上去㗎嘞」，仲要唔要呢？

答：應該就唔需要，唔需要㗎嘞。

問：Okay。

答：其實喺呢件事上高，我曾經問過我啲同事嘅。個同事舉咗一個例子畀我嘅，就喺我哋水泵房入面都有改過啲材料，而係個 licensed plumber 係有上到去水務署改過，上高係有簽名，就話「我改過邊啲材料嘞」咁樣樣。

許偉強先生：唔。我可能會轉去下一個問題，或者我哋...

主席：好呀，或者我哋而家朝頭早休息廿分鐘先。好。

上午 11 時 35 分聆訊押後

上午 11 時 58 分恢復聆訊

出席人士如前。

香港房屋委員會第四證人：伍達群（房屋署（啟晴邨和元州邨第二及四期總屋宇裝備工程師）宣誓繼續作供
許偉強先生繼續盤問

問：仲剩番少少問題，我想同伍先生你澄清一下嘅啫。

答：好。

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問：就係你證人口供第 42 段，37658。

答：係。

問：係。嗰度你就其實講緊嗰啲施工過程嘅時候，個 work execution 嘅時候，有嗰啲情況嘅。我哋而家睇一睇呢度，42 段呢--或者我哋睇下 41 段先，“In respect of solder this was used primarily for joints between copper pipework”等等。即係話你而家講緊啲焊料，即係你都有講到，就話一般嚟講就係用嗰啲銅喉，即係去接駁銅喉嗰陣時所用嘅。

答：唔，唔。

問：而呢啲焊料，你就講“it did not apply to the water pumps and associated pipework installation inside water pump”，即係話呢啲焊料就唔會擺嚟做嗰啲泵房入面...

答：係。

問：...嗰啲工程嘅咁樣，因為泵房入面我哋就用啲你所講嘅 ductile iron pipes 嘅，咁嗰啲就唔需要焊料嘅。

答：冇錯。

問：咁 42 段嗰度你就講，“Notwithstanding the above, short lengths of copper pipe and fittings were installed by”呢一個既定嘅 subcontractor “inside the fresh water up-feed pump rooms of Blocks 1, 2 and 3.” 咁即係你就特別提出有啲短啲嘅、短嘅一啲嘅銅管。

答：係。

問：我嘅理解，應該就係嗰啲短管就係即係佢係有接駁到去啲 water pumps，係咪？即係應該係嚟住嗰啲泵嘅，係咪？

答：唔係。

問：唔係嘅。你解釋畀我聽下，呢個你講緊係咩嘢？

答：因為個 water supply，當喺個 boundary 入到嚟泵房，基本上，就主要嘅，係先入咗一個我哋叫做 sump tank，個乾槽，應該；然後就有個水泵就佢打上天面嘅水缸，咁然後利用即係 gravity 就砸

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番落嚟，或者如果唔夠壓，我哋就要加壓喇。

問：加壓，係。

答：但係亦都其中有一啲喺地下嘅設施，可能就會直接、就唔需要經過水泵，即係打上去天台再砸番落嚟嘅，就只需要直接就喺嗰條 mains 嗰度就駁番出去。

問：係。

答：咁而家講緊呢截即係銅喉，就係由個 mains 嗰度...

問：Mains 嗰度直接？

答：係嘞，即係喺水缸之前直接駁番出去嘅。

問：呢度係水缸之前直接駁番出去嘅，係咪？

答：係嘞。

問：好，明白，明白，唔該晒。咁入面你都有解釋，你話“*These short lengths of copper pipe and fittings served to connect the plumbing installation installed by the Main Contractor outside the water pump rooms of these domestic blocks.*”即係因為確實其實呢啲咁樣嘅你所謂短嘅銅喉都係呢個泵房以外嘅嘢嚟嘅，係咪？

答：係，冇錯。

問：你亦都有講，“*The inspection of these short lengths of copper pipe and fittings was conducted by the Buildings Services Team*”。呢度你就講出咗，就係呢一部分雖然係講緊泵房以外嘅一啲銅喉，但係都係屬於你嘅團隊嗰個即係監督嘅一個範圍嘅。

答：唔係，應該就係話泵房以外嗰啲唔係，但係喺泵房入面嗰一截仔就係我哋嘅。

問：係，就係泵房嗰一節嘅嗰個短嘅銅喉？

答：係嘞，冇錯。

問：得，明白。你呢度就話--後面你就話“*Due to the limited extent*

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of works involved”，即係話因為唔係好多，呢度，所以”
inspection of copper pipe joints and
soldering/brazing materials was not included in the
plan”咁樣。

答：係嘞。

問：咁其實多與少我即係其實就並唔係個重點嚟嘅，因為我哋都知道其實
個焊料一路都有驗到嘅，係咪呀？

答：係，係。

問：所以其實根本同個--即係...

答：喺，喺。

問：...你話驗唔驗，睇唔睇啲啲焊料，就喺呢一方面同個多少就有七分
別喇？

答：喺，喺。但係啲啲本身，就我有問過啲啲同事嘅，佢哋係有睇過，係跟
到，批咗佢啲啲料嚟到做嘅。

問：好。跟住我想同你講一講就係啲啲工人，或者係首先講咗個 licensed
plumber，同埋即係你哋啲啲個協調個工作喇。

答：Okay。

問：我最初啲陣時問過你嘅，而家返番轉頭問你啲詳情先。

答：嘎，嘎。

問：就住泵房啲啲工作，我哋知道有個 licensed plumber 喇。

答：係。

問：咁佢就會同你哋個團隊有一個溝通嘅，應該咁講，喺個施工過程。

答：唔，唔，有需要啲陣時喇。

問：就住你喺啲三個月喺呢個啟晴邨，嗰嗰我哋講呢三個月，即係 2013
年 1 月到到 4 月呢三個月嘅時間，你見過個 licensed plumber 幾
多次呀？就住泵房啲啲個 licensed plumber 嚟講。

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答：我有見過。

問：哦，你有見過佢嘅？

答：嘍，我有見過。

問：三個月都有見過嘅？

答：係。

問：有冇同佢溝通過嘅？即係電話呀，或者...

答：冇，冇，冇。

問：冇嘅？

答：嘍，嘍，嘍。

問：咁通常係你團隊入面啲同事會見過佢嘅？

答：係嘞，即係如果有需要，佢哋就會。

問：好。佢嚟到嗰個工地嗰個現場，咁同你啲同事溝通呀，傾下「喂，啲
泵房嗰個運作係點呀？啲工人施工進度係如何呀？」嗰啲呢就係你嘅
團隊會有某啲嘅職員同佢去溝通嘅，係咪？

答：係，冇錯。

問：咁你又冇紀錄呢？例如佢喺個工地上面同你哋溝通，話關於「喂，
老細，點解泵房呢啲咁樣嘅情況、進度喇。」佢每次嚟都--即係嗰個
地盤，有冇紀錄㗎？

答：我諗應該就有特別個紀錄，但係...

問：冇嘅？

答：個原因就係因為其實喺個安裝個過程入面，其實本身嗰個指定嘅分包
商，佢亦都有佢嘅 engineer，有佢嘅 supervisor 睇住。

問：係。

答：咁就變咗嗰個 licensed plumber 個角色，主要我相信會係即係條
例上嘅要求嚟㗎。

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問：條例上嘅要求，好。

答：嘅，嘅，嘅。

問：我哋講到條例上嘅要求呢，咁我可以講一講，條例嘅要求，我相信你都係講緊水務條例嗰個要求喇。

答：係喇。

問：水務條例嘅要求，就係話有關呢啲水務工程，都係要由嗰個持牌水喉匠嘅監督底下去做嘅，呢個你同意嗎？

答：係，係。

問：咁所以持牌水喉匠個監督，我哋先撇開嗰啲 subcontractor，嗰啲二判佢自己有冇代表嚟到去監督先。

答：係。

問：我哋先講持牌水喉匠嘅監督，持牌水喉匠嘅監督都好重要，你同意嗎，...

答：唔噃。

問：……對於個水喉工程？

答：係喇，如果法例上都有啲咁嘅需要。

問：即係除咗法例之外，而確實佢喺成個工程入面我擔當個角色，就係去監督嗰啲工人做嗰個水喉工程係咪做得好，同唔同意？

答：原則上係。

問：咁你哋作為房署，你哋點樣去到睇話，「喂，呢個持牌水喉匠，喂，佢係咪真係有嚟現場睇嘍？定係喂，佢淨係簽個名落張 form 度嘅啫，咁跟住就走咗嘍嘍？定係佢真係定期喂，每個禮拜，兩個禮拜嚟睇下，喂，同啲工人傾下，喂，點呀？做成點呀？嘅，有冇問題呀？」佢個監督，咁而你哋嘅做法又點嘅呢，我想知道？點樣去保障持牌水喉匠根據法例對工程作監督，點樣去做呢？

答：我諗喺個工程嗰個監督嗰方面，因為譬如話 CIC 嗰方面，喺工人嗰方面，係有一個註冊嘅即係制度喺呢度。咁而我哋喺我哋嘅合約入面，

亦都會有要求到一定--譬如話做呢類嘅工程，有啲大概幾多個 per cent 嘅呢類註冊咗嘅工人去到做。咁而因為我諗大家都知道，譬如話持牌水喉匠嘅數目係有限嘅。

問：數目...

答：數目係有限嘅。

問：...有限？係。

答：咁而家香港咁多工程嘅話，其實即係佢個角色係咪完全可以即係話樣樣嘢都有去睇過呢？咁樣樣，即係呢個真係唔知道。但係我哋最低限度就係話，我哋喺嗰個用工人，包括熟練，半熟練工人嗰個要求，我哋係規定咗嗰度，而係不斷有監察住嘅。

問：係，呢度我知道，我哋因為之前嗰幾日呢，我哋都有睇過啲表格，係寫咗話某一個時段，幾多係呢個即係應該係--即係 fully qualified 嘅 workers。

答：係。

問：即係有邊啲係 skilled 嘅 worker，邊啲係 semi-skilled 嘅 worker，即係我哋都有睇過啲表格係寫咗出嚟。呢個我明白，即係你哋對於每一個時段係有幾多工人嗰度呢，你哋有紀錄嘅。

答：係，冇錯。

問：我係想知嘅，就係就住--暫且唔好講工人先，淨係講持牌水喉匠嗰位人士。佢嚟到，作為--就講你哋泵房嚟講，咁你哋有啲乜嘢規條呢--有冇話畀啲咩嘢要求呢，佢係做啲咩嘢嘍，喺現場？

答：冇。

問：冇嘅，係咪？

答：冇。

問：咁以你嘅認知，呢個持牌水喉匠其實係咪都好少嚟現場去睇嘍？

答：可以咁講。

問：係咪呀？

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答：嘎，嘎，嘎。

問：即係因為你都係牽涉其他工程㗎嘛。

答：係，冇錯，冇錯。

問：即係我哋講下概括啲，講下我哋平均嚟講，即係每一件工程，你真係去見到個持牌水喉匠呢，個時間係好少嘅啫？

答：係。

問：有冇啲時候係成個工程，你作為總屋宇裝備工程師，或者你之前係高級屋宇裝備工程師，喺成個呢個工程入面，個施工過程入面，你係冇見過個持牌水喉匠㗎？有冇啲咁嘅情況？

答：試過嘅。

問：都有嘅，係咪？

答：係。

問：唔少添㗎，係咪？

答：又唔可以咁講話唔少，係有咁嘅機會。

問：係。咁...

答：因為持牌水喉匠最低限度譬如驗水嗰陣時，佢哋一定會出現。

問：佢哋喺度，係，驗水嗰陣喺度。咁我想知，即係法例我哋知道，即係要持牌水喉匠監督喇，去嗰個工程喇，咁你哋署方，有冇曾經諗過--有一刻諗過話，「喂，喂，冇理由個持牌水喉匠㗎，咁又唔喺度，又唔喺個工地度，喂，其實要唔要同佢傾下，點樣可以先確保佢真係可以監督啲工程呢？」有冇諗過呢啲嘢？

答：喺之前係冇諗過。

問：冇諗過，好。咁我就想知道，嗰啲工人，即係每次入嚟做嘅時候，因為可能你牽涉到有二判呀等等嘅。

答：係，冇錯，啱。

問：咁我想知做水喉工程嗰啲工人，一般嚟講，係個水喉匠佢自己帶嚟

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嘅工人吖，定係會係水喉二判佢帶嚟嘅工人呀，通常？以你嘅認知，知唔知？

答：其實...

問：定係大家都有啲班底㗎？

答：我諗有不同嘅做法嘅，即係譬如如果啟晴，我所知，就呢個指定分包商，佢本身係有佢嘅直接工人，所謂 direct labour 嘅。

問：係，係，係。

答：咁就只不過好似喺電器嗰部分，佢就再即係分判出去咁解。

主席：只不過係咩嘢話？

黎先生：電器。

許偉強先生：電器嗰部分...

主席：電器嗰...

許偉強先生：...要再分出去。

答：嘎，嘎。

問：唔。

答：咁啟晴嘅時候咁嘅情況喇。至於其他 project，我相信係有不同嘅情況。

問：係。咁就啟晴嘅 project 嚟講，你睇下你知唔知，就係做水喉嘅工人，我哋都講緊即係每段時間都有唔少喇，即係當然趕工嗰啲時間特別會多啲喇。

答：係，喺，喺，喺。

問：咁嗰啲嚟到嘅工人，以你嘅認知，係大概全部都係水喉嘅分判商帶嚟嘅工人吖，定係亦都夾雜咗一啲係持牌水喉匠佢自己嘅班底入面嘅工

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人，你知唔知？

答：呢個我真係唔知。

問：你都唔知。以前呢，以前其他項目呢，除咗啟晴之外，咁你嘅認知就係，會唔會有啲情況係持牌水喉匠係自己帶班底嚟去做，咁分判商，水喉分判商佢自己有啲人嚟做嘅，你知唔知？

答：如果個持牌水喉匠本身係老闆嘅，咁我相信佢就會有佢自己班底。但係如果持牌水喉匠只係打工，咁我相信就未必有咁嘅情況。

問：好。即係你都有見過啲情況係持牌水喉匠，因為佢自己都係老闆嚟嘅，佢就帶啲人嚟，係咪？即係係咁嘅情況，係咪？

答：係，冇錯。

問：咁至於唔好理啲工人喺邊度嚟嘅，係邊個團體嘅，邊個帶嚟嘅，你哋都會有紀錄㗎，係咪？

答：有嘅，有紀錄。

問：最後我想問一問你，就係我知道啟晴呢個項目，我哋之前都有聽過其他啲證人講，係有關啲預製組件。即係一啲係對於例如個浴室同埋個廚房，有啲廚房同埋浴室嘅預製組件嘅。即係話去咗第二度做咗先，跟住再返嚟安裝嘅啲。嗰啲預製組件嘅安裝呢，屬唔屬於你呢個屋宇裝備工程嘅一部分？

答：如果水喉呢方面就唔屬於嘅。

問：就唔屬於嘅？

答：嘅，但係因為預製組件入面有啲燈喉，即係叫藏燈喉，嗰啲就同我哋有關。

問：好。咁呢啲預製組件嚟講，你哋知唔知佢哋喺邊度做㗎？

答：會知嘅。

問：咁就住啟晴邨個項目呢，你都知道佢喺大陸做嘅，係咪？

答：係，冇錯。

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問：咁至於你話佢哋做嗰啲工程，燈又好，水又好，佢哋做嘅時候--做預製組件嘅時候，所安排嗰啲工人，邊啲工人，例如係咪 skilled worker，或者 semi-skilled 呀等等，呢個你哋唔知嘅，係咪呀？

答：唔知。

問：即係管唔到呀？

答：唯一--我又講番即係我哋 BS 嗰方面，即係譬如話入面要藏啲燈喉嘅，咁就根據法例，就其實佢哋完工之前，就應該要搵一啲所謂 REW，registered electrical worker 就睇過，簽番紙嘅，咁呢方面佢哋係有做到番嘅。

問：你講嗰個簽紙嗰個人呢，係你哋--屬於你哋？

答：唔係，唔係，係主承建商嗰面嘅人嚟嘅。

問：係。但係至於你哋，我就以房屋署個角度嚟講，呢啲咁嘅預製組件，無論燈又好，水又好，咁佢會搵啲咩嘢工人去做嘅話，就唔需要同你哋去交代，係咪？

答：唔需要。

問：因為喺我哋早上小休之前，我咪問過你個問題，就關於即係如果改咗嗰個 form 46 呢，咁應該係嗰個持牌水喉匠佢自己去做呢樣嘢呀，定係話透過你哋先至去做呀呢個問題嘅。咁我記得，因為鄭大律師又提一提我，就話你答我問題嗰陣時呢，都應該提過有一個水務署嗰個 circular 嘅，係咪呀？

答：係。

問：咁個 circular 呢，就我哋而家睇番呢就 C3，2305。C3，2305。呢個就應該係水務署喺 2004 年嗰陣時就作出咗一個 circular 嘅，入面呢都係講話有關呢個呈交 WWO46 嘅 submission practice，咁佢呢度基本上都係講咗話呈交嘅過程係點呀等等。我最想你睇一睇嘅，就係 (g) 嗰點。

答：係。

問：就係“Whenever there is any minor alteration initiated by the LP”。即係話如果有啲小改動，咁呀“LP can mail or fax a copy of previous WWO46 with his/her signature and

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date on each entry of such alteration. This needs to be done before staff of the Water Authority conducts inspection”，即係呢個就係你剛才--我哋提到嗰個 circular。

答：係，冇錯，啱，啱，啱。

問：就係話即係如果佢作改動嘅--佢 initial 有改動嘅，咁就要佢呈交番。

答：係，冇錯。係，係，冇錯。

問：不過你喺早上小休之前，同我講嗰個情況就係話，當改--實際改動嘅時候，佢會同你哋擺咗核准先。

答：係，冇錯。

問：但係真係佢要改張 form 嘞，就係佢去做嘅，係咪？

答：係，冇錯。

問：好。

許偉強先生：我有其他問題，唔該。

主席：唔該。請問有邊位想--邊位律師想問？Mr Pennicott.

MR PENNICOTT 盤問

問：Good morning. So there's no misunderstanding your part, I represent China State, who were the main contractors for the Kai Ching Estate.

答：唔好意思，因為我啱啱擺起個 headphone，變咗可唔可以麻煩你講多次？

問：I apologise. Just so there's no misunderstanding on your part, I represent China State, the main contractors for Kai Ching. You understand?

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答：明白。

問：I have just a few questions for you. I won't be very long. First of all, could I clarify with you your involvement on Kai Ching? I would like to do that, please, by reference to page 37729 of bundle B15.1.

Mr Ng, this is a helpful schedule attached to Mr Yim's witness statement, which sets out the project team information of the Housing Authority for the Kai Ching project.

If you look under the heading "Group" and you travel down the page, you will see a subheading, "Chief building services engineer"; do you see that?

答：係，睇到。

問：And to the right of that we see highlighted in green, "CBSE/2 (acting)", I assume that stands for, and then do we see your name?

答：係。

問：So is it correct that from January 2013 to August 2013, you were the acting CBSE/2 for Kai Ching?

答：係。

問：Then underneath that you will see "CBSE/2", then your name again, and from August 2013 to the present you have been and still are the CBSE/2 for Kai Ching?

答：係。

問：So does this follow, Mr Ng: that you have been involved as the CBSE/2 throughout the maintenance period, that's the two-year maintenance period, on the Kai Ching project?

答：係。

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問：If you look up the same page that we are looking at, to the project architect, you will see highlighted in brown the second entry, "A/23, Elaine Wong"; do you see that?

答：係，睇到。

問：Can you confirm that Ms Wong is and has been the project architect for Kai Ching and still is the project architect?

答：係。

問：Could I then, lastly on this page, for the purposes of the question coming in a moment, ask you to look right at the foot of this page. You will see the entry under "Project building services engineer", highlighted in brown, "BS E/C2, HM Yeung"; do you see that?

答：哦，HM Yeung，係，即係最靚嗰個。

問：Does Mr Yeung report to you, Mr Ng?

答：係，佢 report 畀我。

問：We see, as you have seen, that your name is highlighted in green when you were the acting CBSE/2, and if you look at the legend at the bottom of the page, Mr Yim has told us that means "Officers who signed the completion certificate of domestic blocks"; do you see that?

答：係 sign 呢個 complete service certificate for building services installation 喺呢一度 domestic block。

問：Yes, and is it correct that you signed that form or that certificate?

答：係我哋內部一啲 memo 嚟嘅，就係話喺呢啲 domestic block 入面嗰啲 building services installation 係 complete 咗。

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問：Did you sign the certificate or the internal memo that gave rise to the certificate?

答：我唔係好明你意思。

主席：Personally, 你自己親身簽名, 係咪?

答：係。

問：And prior to signing, what steps did you take to ensure that the building services works had indeed been completed to your satisfaction?

答：基本上就係簽呢個 memo 之前, 我哋一定我哋嘅同事係會將佢哋過往, 即係做過一啲 inspection 嘅紀錄, 包括一啲 final inspection, 同埋一啲 testing and commissioning 嘅紀錄, 就會擺喺個 file 度, 然後就通知番我, 就話佢哋做過晒呢啲應該要做嘅紀錄嘞。另外--要做過晒呢啲 test 嘞。另外, 就因為我哋 building services 係需要係搵唔同嘅政府部門係做一啲 inspection 嘅, 譬如轉--escalator, 係需要搵 EMSD 嚟到做; 消防, 我哋亦都係需要係搵呢個消防處嚟到 inspect; 當然水, 就由水務處嗰面嚟到做。咁就我哋係需要係擺晒呢啲即係佢哋係 confirm 咗 inspection 係 satisfactory 嘅呢啲 confirmation 之後, 我哋先至會簽呢張即係 complete memo。

問：So does it come to this, Mr Ng: as far as you are concerned, you had in front of you a body of documents gathered from various sources upon which you relied to then sign the certificate?

答：係, 可以咁講。

問：Mr Ng, could I then take you to a slightly different topic. Could I ask you please to be given file B5.1, and could you go, please, in that file to page 7871.

答：係。

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問：That should be the front sheet to the PRE preliminaries forming part of the specification to the contract.

答：係，見到。

問：I see everybody's screens are blank. Oh, we are okay. If you go over the page to page 7872, Mr Ng, you will see a table of contents for the PRE preliminaries; do you see that?

答：係，見到。

問：If you would go, please, to page 7874, there is an item towards the top of the page -- it's the fourth entry down I just want to look at with you briefly. It's "PRE.B7.150.P, Environmental consultant"; do you see that?

答：係，見到。

問：I apologise, I am afraid these documents are all in different files, but if you can go, please, to file F1, because I think it's the only place that this appears. If you go, please, in that file to page 120.

答：係。

問：Mr Ng, for your benefit and for the benefit of the Commissioners, if I can just make the point that this is an attachment to one of the witness statements served on behalf of China State, but as far as I am aware it's the only place that this sheet appears anywhere else in the bundles. I may be wrong about that.

You will see the last entry on page 120, Mr Ng, "PRE.B7.150.P" that we were just seeing in the index:

"The environmental consultant is Messrs Scott Wilson Ltd", and their address is given.

Were you aware that an environmental consultant had been appointed by the Housing Authority in relation to Kai Ching?

答：如果你話係特別邊個 consultant，我當時未必係知道，但係 in general，我係知道呢，就因為做呢個 BEAM 嗰個 assessment 呢，Housing Department 係有請到 consultant 做㗎。

問：Yes. The Kai Ching contract, Mr Ng, was awarded to China State in June 2010, and the formal contract was entered into in May 2011. Do you know whether it was common practice for the Housing Authority to appoint an environmental consultant, or was this a bit of a one-off, because of either the BEAM requirements or because of the special challenges of the Kai Ching project?

答：一般我哋 department 係會特別 commission 一啲 consultant 去做呢方面嘅工作。

問：So far as I'm aware, Mr Ng, and I will be corrected by others if I am wrong, the Kai Ching contract is the only contract of the 11 affected estates with which we are concerned that has the HK-BEAM requirements in it. Are you aware that an environmental consultant has been appointed on any other of the 11 affected estates?

答：我唔敢肯定，但係如果再早期啲就有機會就有做呢樣嘢，因為當時 HK-BEAM 都未係咁即係普遍，但係後期啲啲啲，我唔敢肯定。

問：Yes. I've only had an opportunity to look at, so far, the Wing Cheong contract, which is, if I can put it shortly, a Paul Y affected estate. There is no provision in that contract for an environmental consultant, and that contract was entered into after the Kai Ching contract. So that's why I am asking the question as to whether or not it was standard practice. But I think your answer is you are not sure, you don't know?

答：我唔肯定。

問：In your answer to one of my questions a little earlier, you connected, if I can put it that way, the appointment of the environmental consultant to the HK-BEAM requirements. Is this right, that your understanding is that the environmental consultant was engaged because of the HK-BEAM requirements, or that was one reason for their appointment? Is that right?

答：係，我嘅理解係咁。

問：We heard some evidence last week that the Housing Authority made an application for HK-BEAM accreditation, that is platinum accreditation. Were you aware of that application?

答：知嘅。

問：Were you involved in that application in any way?

答：有，因為喺嗰個 BEAM 嗰個 assessment 入面呢，有一部分嘅 item 呢，係同 building services 有關嘅。

問：What was your involvement in the application, Mr Ng?

答：主要就係我嘅同事去幫手做呢方面嘅嘢喇，即係因為我哋有個 consultant，我哋要提供資料畀呢個 consultant 去幫我哋去做有關嘅 assessment，同埋一啲 application。咁變咗就我嘅同事係會將我哋同 building services 有關嘅資料呢，係提供畀佢哋嘅。

問：My understanding is that Mr HM Yeung, the gentleman that I mentioned earlier who we saw on the sheet, was primarily involved in the application so far as building services is concerned. Is that correct?

答：佢有參與，但係其他同事，因為喺呢單 project，我有兩個同 --building services engineer 嘅，咁另外嗰個同事有冇參與，我暫時唔敢講，因為可能多多少少都有。

問：My understanding is this, Mr Ng, and please confirm

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or otherwise, if you know this to be correct: that the environmental consultant was the person or company that determined the nature of the tests that would be done; is that right?

答：如果我所理解呢，佢哋會 advise 我哋做啲乜嘢 test。但係佢哋係基於乜嘢嚟到 advise 呢，我相信佢哋係會再 consult 番呢個 BEAM Society 嗰方面，即係去攞番即係話嗰方面嘅意見嘅，如果有啲咩嘢喺個--譬如話要求上唔係寫得咁清楚嘅。

問：So it's your understanding that there would have been discussion between the consultants and the HK-BEAM Society, to come up with the test or criteria that should be tested?

答：我相信係咁樣樣，我哋亦都希望佢係做到呢樣嘢。

問：And so far as the locations of where the tests were done, again was that a matter for the consultant or for the Housing Authority or for somebody else?

答：或者可唔可以麻煩你再講一次。

問：Yes. Obviously, certain tests had to be done.

答：唔㗎。

問：Therefore, locations had to be decided upon as to where they could be done.

答：唔㗎。

問：Was that a matter for the consultant or the Housing Authority or somebody else?

答：我諗我哋一定會諮詢過個 consultant 嘅。當然中間嗰個決定嘅過程，可能我哋都會有即係話參與嘅。

問：Did you see, Mr Ng, the results of the various tests that were carried out which led to the accreditation being successful?

答：最近我有睇，但係之前冇睇過。

問：If we still have in front of us -- perhaps we've gone somewhere else -- file F1 again, page 158. You should have there a letter of 17 June 2014 from China State to chief architect/2 but sent for the attention of Mr HM Yeung, BSE/C2; do you see that?

答：係，見到。

問：We also see, at the foot of the page, that the letter was copied to A/23, Ms Elaine Wong, the project architect that we identified earlier?

答：係。

問：Then, just by way of example, if we look at page 159, we see a test report, and it appears that the tests have been carried out by ETS-Testconsult Ltd; do you see that?

答：見到。

問：And we can see various information given, and then in particular we see the result, and then under the heading "Customer sample ID", we see the location of where the sample was taken; do you see that?

答：係，見到。

問：Then without going into any detail -- and no further questions for you -- we see the type of tests that were carried out, the method that was used, and the results; do you see that?

答：係，見到。

問：We have a series of pages, we don't need to look at them, that follow this, which record the results of the tests carried out by ETS-Testconsult Ltd.

And Mr Ng, can you confirm that it was on the basis

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of those documents that the Housing Authority applied for and successfully obtained the platinum accreditation from HK-BEAM Society?

答：呢個應該指係喺 HK-BEAM 入面其中一個要求嚟嘅啫。當然要有其他嘅即係範疇嘅嘢係需要 submit 去到攞到呢個 platinum 嘅。

問：I understand that so far as water quality are concerned, these are the documents that were relied upon by the Housing Authority?

答：應該係嘞。

MR PENNICOTT: Thank you very much. I have no further questions.

主席：Thank you。有冇人？係，Mr Wong。

王先生：係。

王先生盤問

問：伍先生，我代表水務署，有幾個問題想向你請教嘅。

答：係，唔好咁講。

問：你就係負責個泵房㗎嘛？

答：係，冇錯。

問：其他啲啲其實就唔係你嘅主要係負責嘅內容？即係泵房以外嘅工程，就唔係你主要負責嘅範疇。

答：係，但係個設計同埋嗰個 specification 就係我哋負責嘅。

問：明白，明白。我就想問一問你，如果睇你嘅證人口供嘅第 13 段，喺 37651 頁。

答：係，見到。

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問：我哋知道泵房入面嗰啲水喉工程就係由特定嘅 subcontractor，即係 FSWP 嘅 nominated subcontractor 係施工嘅，啱唔啱？

答：係，冇錯。

問：咁呢個就係有別於泵房以外嗰啲水務工程，係由呢個承建商自願請番嚟嘅二判或者三判嚟做嘅；呢個係有個分別嘅？

答：係，冇錯。

問：好嘞，呢度就話“The FSWP Nominated Sub-contractor was selected and nominated by the HA and overseen by the CBSE.” 咁 CBSE 即係你而家，係咪？

答：係，冇錯。

問：好嘞，我想問你，一般嚟講，你哋係點樣，根據咩嘢嘅 criteria，根據啲乜嘢嘅水評或者係咩嘢嘅原則，去選定呢啲特定嘅 subcontractor 嘅呢？

答：如果喺消防水泵方面，就其實我哋 Department 就有一個 contractor list 嘅。咁就當然即係佢哋要入到呢個 list，係有特定嘅要求喇，即係無論佢哋嘅經驗，財政嗰方面，或者嗰個人手嗰方面，個 set-up，嗰度都有一個特定嘅要求嘅。

我哋每一次出呢個消防水泵嘅標，就會喺呢個 list 入面就去到就揀番一啲 contractor，嚟到即係畀佢哋落標嘅。咁嗰個揀法嚟講，其實係會每六個月就會有--首先，當然喇，我哋係有啲 contract，譬如話嚟緊呢六個月，我哋會有啲咩嘢 contract，咁就 Department 就會--我哋 Procurement 嗰面嘅同事就會問呢個 list 上高嘅 contractor，佢哋有冇興趣落。咁如果佢哋係有興趣落，佢哋會要 indicate 埋佢哋嘅 preference 嘅，譬如話可能係一、二、三、四。即係譬如 A project，佢係第三 preference，B project 係第一個 preference 咁，呢類嘢咁，咁會 indicate 咗嘅。咁由-- indicate 咗之後，就跟住我哋嘅同事就會去決定，就係話每單 project 有適合數目嘅 contractor 去到落標，咁就然後到時就會 invite 佢哋落標。

問：好嘞，咁你喺--佢哋完咗落標嘞。咁你喺篩選嘅過程入面--即係你落咗標喇，咁要揀嘍，係咪？

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答：嘎，嘎，嘎。

問：Alright。咁你喺篩選時候，對於呢啲特定嘅 nominated subcontractor，你係根據啲咩嘢原則或者根據咩嘢標準，就話「我要揀呢一啲特定嘅 subcontractor，就係愛嚟做泵房呢一方面嘅工程嘅」？

主席：唔係，點解我哋需要知呢一方面嘅資料呢？唔係，我想知道點解我哋需要知啫？

王先生：係。

主席：係。我唔需要知啫。

王先生：哦，好。

主席：嘎。

王先生：或者我...

主席：係喇。

王先生：...move on 另外一個問題。

主席：唔。

王先生：係。

問：或者咁講，伍先生，你知唔知道點解喺泵房入面，嗰個程序要同泵房出面做水管嗰個程序要有唔同呢？

主席：頭先講咗喇，因為泵房裏面有其他嘅嘢，唔係淨係水管咁簡單，仲有啲泵呀，仲有啲 electrical 嘅嘢咁嘛，係囉。

王先生：Okay。

主席：唔。

王先生：係。

問：咁我第二個範疇，就想你睇你嘅第 42 段-- 41 段，唔該，41 段。

答：係，見到。

問：41 段，嗰度你就話 "In respect of solder this was used primarily for joints between copper pipework and its fittings but it did not apply to the water pumps and associated pipework installation inside water pump rooms where ductile iron pipes and stainless steel pipes were used and hence there was no risk of having leaded soldering joints." 我只係想同你 confirm 一下，因為個泵房入面嘅用料就係用 iron pipe 同埋 stainless steel pipes 嘅。咁係咪因為頭先主席所講嗰個理由，因為入面嗰個設備唔同，所以個選料都唔同呢？定係有其他嘅因素而令到...

答：其實點解我哋會喺泵房用 ductile iron pipe 同埋 stainless steel pipe，主要就有兩個原因嘅，第一，就喺泵房嘅環境，譬如當啲工人入去做維修嗰陣時，好多時係會踭上踭落。因為泵房唔會話有好寬敞嘅地方，我可以即係有條好闊嘅通道，方便佢哋出入嘅。咁變咗如果會踭上踭落嘅話，就銅喉嚟講相對係容易就踭凹咗嘅，而不鏽鋼喉同埋呢個 ductile iron pipe 係嗰個 mechanical strength 係會好啲嘅。

另外一樣嘢，就係因為呢個 ductile iron pipe 同埋呢個不鏽鋼喉基本上都係用一啲叫做 mechanical joint。譬如 ductile iron pipe，我哋用一啲 flange joint，上螺絲嘅。呢個不鏽鋼喉就係用一啲都係類似上螺絲呀或者一啲 -- 即係唔需要燒焊嘅 jointing。咁變咗就方便我哋做維修嗰陣時需要拆落嚟，就會方便我哋拆，亦都方便之後裝番嘅，所以有咁嘅設計同埋要求。

問：唔，明白。而呢啲考慮，就喺出面喉管就有呢啲考慮，所以就係用 copper？

答：係嘞，因為基本上出面嚟講唔需要冇啲咩嘢特別嘅即係維修去到做嘅。

問：我想了解下價錢嘅問題，係咪 copper 係一定平過呢個 iron 同埋呢個 stainless steel 嘅呢？

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答：唔係。因為 copper 喺個世界性個 market 嚟講，其實有個浮動嘅，因為呢個係一啲所謂期貨個類嘢嚟嘅，咁就所以有時有機會係貴過不鏽鋼嘅，亦都有機會平過不鏽鋼嘅。

問：Okay，好，唔該。咁你呢度最後個句就係話由於係用咗呢個 ductile iron pipes 同埋呢個 stainless steel pipes，所以就有 risk of having leaded soldering joints。咁就係因為如果入面嘅嘢都有用到呢個 soldering material，所以鉛嘅存在風險就等於零喇，所以你...

答：係，冇錯。

問：呢個就係你嘅認知，係咪？

答：係，冇錯。

問：所以亦都--因為你用嘅物料係呢一個種類嘅物料，所以亦都唔需要驗鉛嘞，...

答：係。

問：...冇呢個風險，啱唔啱？

答：係，冇錯。

問：好，唔該。

答：當然--我要補番，就入面有啲掣，其實可能都有鉛嘅成份，咁當然呢個係根據水務署個個要求，係准許嘅。

問：Okay，好，唔該。係，我最後一個問題，我想請你睇睇你嘅 43 段，唔該。你最後個句，就係 43 段個度，就係“However, a dedicated Building Services Team was resident on site for its duration.” 你見到嘛，最後個句？

答：係，係。

問：我想問你嘅“resident”嘅意思係--係可唔可以解釋一下呢？即係譬如佢駐喺個場度，佢駐幾耐，佢做啲咩嘢呢？

答：呢個 Building Services Team 就係講我哋啲 inspector，而佢哋係 full-time 喺地盤嘅。

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問：你所謂“full-time”嘅意思係咩嘢呢？

答：即係話...

問：即係朝九晚五？

答：係嘞，冇錯。

問：係。佢哋喺個地盤嗰度，一般嘅工作係會做咩嘢，關於 inspection 方面？

答：其實佢哋嘅工作係嗰個類別相當之多嘅。如果你話 inspection 嗰方面嚟講，就會包括譬如話當有啲 material 係送落地盤嘅，我頭先其實都有提過，就話需要去 sample check 喇。咁而喺譬如話安裝期間，我哋叫做 in-process 嘅 inspection，佢哋會去做喇。到安裝起之後，我哋會做一啲 final inspection 或者 witness test。咁而佢哋亦都需要--譬如話做完晒呢啲之後要 report 番，畀番我哋嘅 engineer，而最後嚟到我度，去到決定係咪可以 certify 個 completion。

王先生：Okay。係，主席，我有其他問題嘞。

主席：唔該。仲有冇人有問題問？係。或者你用住 Mr Lam 嗰度先喇。

譚先生：係。

主席：唔該。

譚先生：唔該晒，林大律師。

譚先生盤問

問：係，你好，我姓譚嘅，我就代表三位喺啟晴邨同埋啟聯邨嘅三位嘅住戶嘅，係。吳（伍？）先生，咁我淨係得兩個問題嘅啫，咁最主要--請你睇下你嘅證人供詞嘅第 20 段，係，去到第 20 段，係。

答：係，見到。

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問：嗰度就講到其實成個呢個咁嘅 plumbing 嘅 system 亦都有一啲關於--即係你哋內部亦都有一啲嘅--即係好似有一啲嘅指引咁樣㗎，係咪？

答：係，冇錯。

問：係。咁跟住--同埋我亦都想畀你睇埋第 28 段嘅；係，28 段，唔該。你亦都有話，即係就住嗰一個計劃嘅一個嘅屋宇嘅裝備工程師，佢亦都會即係有一啲嘅--會做一啲--某一啲特別嘅檢查嘅，係咪？

答：係。

問：“checked the relevant test reports”，等等。

答：係文件上嘅。

問：係。其實係點樣去做呢個檢查，去確認㗎？

答：因為就我哋其實喺嗰個 specification 入面亦都寫得好清楚，呢個承建商佢哋 submit 呢啲咁嘅資料嗰陣時，要包括一啲 test report 或者一啲 certificates 嘅。譬如，有啲可能係佢哋自--嗰個 supplier 自己搵一啲認可嘅 laboratory 做嘅一啲 test，或者另外有啲因為有--其中一啲材料，水務署係會做一個批核嘅，咁變咗就會有啲嘅相關嘅資料就擺嚟畀我哋。

問：即係簡單啲嚟講係對文件嘅，係咪？

答：係，冇錯。

問：即係佢畀咗一啲嘅報告畀你，或者一啲特別嘅表格畀你，咁跟住之後你哋就會睇番，係咪符合番嗰個嘅 British Standards，係咪？

答：係，冇錯。

問：另外我就想問一問你，就其實你哋有冇任何嘅做法，係去肯定係去跟住番最新嘅一個嘅英國嘅標準嘅？

答：有㗎。因為我哋內--即係會--所謂 regularly 係會做一啲 review 嘅，即係究竟我哋現有嗰個 specification，入面提到嗰啲，無論係 British Standards 或者一啲國際嘅標準喇，即係究竟係咪 update 嘅。

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問：咁你哋會唔會因此而更新自己嘅部門內嘅一啲嘅 guidelines 呢？

答：會嘅。當然可能時間性未必即係同步，可能要即係譬如話做咗一樣之後做第二樣。

譚先生：唔該晒。我有其他問題。

主席：唔該。

鍾先生：主席，我有一個問題，...

主席：好呀。

鍾先生：...好短嘅。

主席：好呀。

鍾先生盤問

問：我代表有利嘅。伍生，我想問一問，就早前委員會嘅律師問你嘅問題嘅時候，就係關於嗰啲 solder material，嗰啲焊料嘅問題。

答：係。

問：咁都問到嗰啲焊料係需唔需要 submit 畀房署去審批嘅時候，你嘅講法就係話合約上就有咁嘅要求嘅，就只不過好多時嗰啲承建商佢自己會主動呈交。

答：應該講就話合約上有要求係要 submit 相關嘅文件，sample 就有特別講到要求嘅。

問：好嘞，咁我想問一問，跟住就提到就係話關於小五金嗰啲 sample，就你嘅講法就係無需要呈交畀房署嘅？

答：譬如好似螺絲嗰啲就根本完全冇--冇即係呢個步驟嘅。

問：係嘞，係嘞。咁跟住嗰條問題就係話「咁嗰啲 solder material，啲焊料嘅 sample 需唔需要 submit 呢？」你嗰陣時嘅講法就話需要嘅。你可唔可以解釋一下呢度？

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答：我頭先已經講過就係話我哋合約上高，文件上就一定需要嘅，就有話 sample 一定需要，但係...

主席：你講資料就一定需要。

答：係嘞，資料，係嘞，嘎。

主席：係，唔。

問：係。即係我只不過想同你澄清下，就係因為嗰個問題係問你嗰個焊料嘅 sample。即係而家你嘅答案其實係 sample 本身，焊料本身嘅 sample 係唔需要...

答：唔。

問：...submit 嘅？係，得。

答：我哋文件上--即係我哋合約上有話一定要畀 sample，但係習慣上係有呢個 submission 嘅。

問：Okay，唔該晒你，唔該。

主席：有冇覆問㗎，你哋？

何先生：有幾個短嘅問題。

主席：幾個短嘅問題？

何先生：嘎。主席想...

主席：我想問一問先。

何先生：好呀。

主席：我問完之後，晏晝你如果有需要再覆問。

何先生：好呀。

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主席：好唔好？

我想問一問--其實都係老問題嚟嘅。我想你睇一睇 B2，第 779 頁。B2，779 頁，行落少少就見到--再行落少少，得，停，“SUP1.W320.3”，呢度係呢個你哋 2000 年版本嘅 specifications 嚟嘅，喺你哋嘅 Specification Library 裏面搵到嘅。

答：係。

主席：你見到就講到“LEAD BASED MATERIALS”嘅時候，就跟住有好多 reference，跟住就寫住“Do not use jointing materials based on red lead.” 係應該係你哋嘅 2000 年嘅 edition。

答：係。

主席：Okay。

答：係，見到。

主席：好嘞，咁我哋而家睇下你哋下一個嘅 edition，就係 2004，就係都係 B2，就係 646。褪落啲喇，或者；褪落啲喇。好嘞，呢個我哋就睇到就係“M150.4”。

答：係。

主席：Okay？跟住再落，就係“M160.4”。喲，我哋停咗喺度。

答：係，okay。

主席：150.4 同埋 160.4，咁呢度就係講緊 BS 1254，就講緊啲啲 capillary joints 啲啲 solder 嘅嘢。

答：係，冇錯。

主席：咁你見到 2000 年個 edition 同 2004 年嘅 edition 係有一個好大嘅分別嘅。

答：係。

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主席：我想知道，第一，就係喺你哋房署裏面，呢個 Specification Library 裏面即係有 -- 無論佢嘅 compilations 同埋佢嗰個 amendment，係咪你哋 chief building services engineer 負責嘅呢？個 com...

答：2000 年嘅版本應該唔係嘅。

主席：2000 年嘅版本唔係？

答：嘅，係嘞。

主席：得。

答：咁喺二零...

主席：咪住先。咁嗰陣時個版本係邊一個負責寫落去嘅呢？

答：我唔係好肯定，可能係 Architect 嗰面負責嘅。

主席：唔，okay。好嘞，咁去到 2004 年嘅版本，係邊個負責寫落去嘅呢？

答：應該係 Building Services 嘍嘞。

主席：係嘞，就係你哋 building services engineer 寫落去嘅？

答：係。

主席：咁應該係唔係一位 chief building services engineer？可能唔係佢自己親手，不過佢一定係下面有啲人幫佢手嘍喇。

答：係，應該係。

主席：咁跟住就話畀阿 chief 聽，咁然後就擺咗落去嘅？

答：係。

主席：咁阿 chief building services engineer 使唔使話畀阿 chief architect 聽，「我想擺落去」呢？

答：呢度嘅歷史其實我都有個 involvement 喺度嘅。

主席：哦，你有 involvement，得。

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答：嘎，嘎。

主席：你有 involvement，咁我哋一點鐘之後再聽你講。

好，我哋兩點半再繼續。

2015年11月16日

下午時正聆訊押後

下午2時30分恢復聆訊

出席人士如前。

香港房屋委員會第四證人：伍達群（房屋署（啟晴邨和元州邨第二及四期總屋宇裝備工程師））宣誓繼續作供

主席：今朝早，伍先生，你就話你有 involvement 嘅，咁或者我哋而家聽下你講，點解會有呢個咁嘅轉變先。

答：或者方唔方便即係畀...

主席：哦，你想睇番...

答：相關啲文件。

主席：...2000年嗰個咩，抑或係...

答：係嘞，2000年同埋...

主席：好呀？

答：...2004我都想睇住。

主席：2000年嗰個就係 B2 嘅 779。2004年嗰個就係 B2 嘅 646。646同埋 779。

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答：係，646，另外仲有一份嘅。

主席：睇咗 646 先喇，我哋，好唔好？

答：睇咗 646 先，好吖，好。

主席：646，就係 2004 年嗰個...

答：係。

主席：...specifications，咁我相信 08 同埋 2012 都係一樣嘅。

答：係。其實我之前我都提過，我亦係有份參與即係相關呢啲 specification 嘅 drafting 嘅。咁就當時我參與嗰部分就唔係呢個 2004 嘅版本嚟嘅，就係 2002 年嘅版本嚟嘅。

主席：哦，2002 年有另外一個版本嘅？

答：係嘞，嘎，嘎，嘎。咁就當時都仲係叫做“SUP1”。

主席：係。即係 2000 年嘅版本，不過有改良？

答：有改良，係嘞，冇錯。

主席：咁我哋去睇 2000 個版本，就係 B2，779。好嘞，咁我哋停咗喺呢度。

答：Okay。

主席：咁就係 2002 年嘅時候，咁 2002 年嗰個版本同而家我哋睇到 2000 年嘅版本有啲乜嘢唔同呢？

答：都有幾大分別嘅。

主席：係咪？

答：就反而嗰個版本係會類似 2004 年嗰個版本嘅。

主席：哦，得。咁 2002 年嘅版本，請問你又有冇一個副本呢？

答：我應該帶咗喺身邊嘅。

主席：嘎，係，好呀。

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答：或者我...

主席：好呀。

答：畀少少時間我，我哋一啲。

主席：好呀，好呀。

我哋個 bundle 冇嘍嘛，係咪？有冇呀？冇嘍？

黎先生：有嘍。

主席：有嘍？

黎先生：係，咪 B 囉，係。

主席：2002 呀。

黎先生：哦，2002 冇。

主席：得。

何先生：我哋遲啲提供番。

主席：你而家有就而家影喇。

何先生：係。

主席：係，如果佢擺到出嚟，我哋即刻可以影印嘍。

答：係，搵到嘞。

主席：好呀，係，畀個 copy。好嘞，咁除咗呢個 2000、2002 同埋 2004，
喺呢四年裏面，仲有冇其他嘍版本嘍？

答：我唔敢好肯定，因為我主要淨係喺--參與咗 2002 嗰個 drafting。

主席：得，好。畀我望一望。我擺咗去影印，嘎。

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答：嘅，唔該。

主席：想請問你，我手頭上就有嘅版本就每四年就一個喇，00、04、08、12。

答：係。

主席：實際上你哋係定時每四年出一個吖，抑或不時其實都--如果有需要嘅時候又會出一個嘅呢？

答：其實我哋原則上係半年，即係如果係有任何改嘅，...

主席：每半年都應該有嘅？

答：...就可以即係做修改嚟嘞。

主席：嘅，okay。即係一年會出兩個？

答：係嘞，嘅，嘅。係，或者我補充少少。

主席：唔，好呀。

答：即係個版本嗰方面，就當係好大量嘅變化，咁好多時就會--譬如話好似2000年有一個版本，然後04年就有一個版本。

主席：係。

答：即係到時係會直情成份...

主席：換晒？

答：...係換咗出嚟嘅。

主席：如果唔係...

答：咁但係中間呢，即係如果只係有部分，即係少量去到改呢，我哋就經過其他途徑通知番啲同事嘅。

主席：「經過其他途徑就通知同事」嘅意思即係點樣樣？即係...

答：我哋有啲叫做 DCMBI，“Development and Construction Management Board Instruction”咁樣樣嘅。

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主席：嘎。

答：嘎。但係其實我而家啱啱吵番出嚟嗰份，就亦都有一張呢啲 DCMBI 喺度嘅。

主席：好呀。

黎先生：咁或者可唔可以講下呢個 board 嘅組成係點樣樣嘍？

答：個 board 嘅組成主要係由番 Development and Construction Division 入面嘅，由 DD, deputy director, 一直去到啲 chief 嘅，就都會係喺呢個 board 入面。

主席：去到 chief architect、chief building services engineer, ...

答：係, chief structural engineer, ...

主席：...同埋其他...

答：...通知相關嘅 chief, 嘎, 嘎。

主席：...chief quality surveyors, ...

答：係。

主席：...geotech -- 即係嗰啲 geologist 嗰啲咁樣。

答：係, 嘎, 嘎, 係。Geotechnical 亦都有。

主席：咁呢個 board 係每半年開一次會？

答：唔係, 而家係每一個月開一次。

主席：每一個月？

答：係。

主席：嗰陣時呢？二--即係...

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答：嗰陣時，我唔係好記得，嗰陣時。

主席：唔係好記得？

答：嘎，嘎。

主席：唔。2000年嘅時候你係乜嘢嘅 rank 或者咩嘢嘅 post？

答：Engineer。

主席：一個普通嘅 engineer？

答：係。

主席：2002呢？

答：2002，我可能係 act 緊 senior 嘅。

主席：Act 緊 senior？

答：嘎，嘎。

主席：得。

畀埋你哋先問喇。每行派住兩份先，佢哋 share，每行派住兩份。
派咗畀後面嗰啲先，後面派番上嚟，再後面喇。好喇，我哋可以開始。

或者你解釋一下畀我哋聽下。

答：係，喺 2002 年--你想我解釋係呢一份吖，定係直情頭先你講主要嗰
兩部分，關於 brazing 同埋 solder？

主席：如果你知道成個點解轉變嗰個歷史過程，你就講晒畀我哋聽。

答：Okay，好呀，好。

黎先生：你最好可以講到 2000 年嗰個版本同 2002 年嗰個版本之間嗰個

變化係點樣樣。

答：Okay。

黎先生：最好可以講到。

答：我嘗試。就其實因為 2000 年嗰個版本，即係今朝其實都有問過我即係邊個負責睇住嘅咁樣，我其實再翻 check 過，應該就係我哋 architectural 嘅同事睇住嘅，但係去到應該 2002 年之前就開始就話會搵番我哋 building services 嘅同事做一個 support，咁就而當時就傾緊就話之前係用開 uPVC-lined GI pipe，就用喺食水嗰方面嘅，但係就如果我印象記得當時，就佢哋係用啲 mechanical jointing，其實係上「牙」嘅啫，咁就應該係喺保養嗰面有啲 feedback 返嚟，就話都有啲漏水嘅情況，嗰個主要係因為個 workmanship，即係做得唔好嘅啫。

而另外就 uPVC-lined GI pipe 基本上喺普通嘅五金舖係買唔到嘅，全部係大批咁樣訂番返嚟嘅，變咗我哋啲居民如果佢哋屋入面，佢需要譬如話裝修或者盛，有咩嘢改變嘅話，佢哋其實係會換咗銅喉嘅，因為佢都根本買唔到呢一類嘅咁嘅配件。

另外，我相信即係種種原因，亦都睇過，就係話喺呢個其實嘅譬如 private development 嚟講，亦都用咗好多銅喉嘅，所以當時就有個諗法就話不如我哋就做多一個 spec.，就係用銅喉嘅 spec.，但係就仍然即係交番畀 contractor，等佢哋去到揀，即係話落標嗰陣時佢哋可以係揀 uPVC-lined GI pipe，亦都可以揀銅喉，只需要佢哋落標嗰陣時寫清楚，咁就得嚟喇。寫番呢個 spec. 嘅任務就交咗畀我哋，我就參與其中，呢個就。

當然喺成個過程入面，我哋即係除咗自己要去搵資料之外，亦都係會諮詢業界嘅，啲 supplier、contractor 亦都會去即係攞經驗，因為好老實講，就係話喺我哋 Housing 嚟講，大量用銅喉係即係一個新嘅開始，呢個就。

喺個過程入面，當然即係譬如話我作為一個 specification drafter 嗰個角度去到睇，就係話我哋開始 draft 個 spec.，第一樣要做嘅，一定係先睇一睇有冇相關嘅法例、有啲咩嘢要求，咁就水務條例嗰啲我哋一定要睇，而或者我將佢 focus 番喺嗰個 brazing 同--應該話 solder 嗰方面，即係因為範圍太闊。

喺水務條例入面，即係所有 pipe 嘅 fittings 係要跟 BS 864

part 2 嘅，但係喺嗰個時間，即係我哋作為一個 drafter，一定會睇 BS 864 而家仲係咪有效呢咁樣樣，喺嗰個時間其實好明顯，就係已經所謂 obsolete 咗，而亦都係畀呢個 BS 1254-1 就取代咗嘅。但係我哋習慣上，如果有一個新嘅 standard 出咗，我哋一定會去仔細睇一睇嘅，個原因係因為如果你新嘅 standard 出咗嚟，係咪市場嗰啲產品係即時跟得上呢咁樣樣，咁變咗可能我哋寫個 spec. 嗰陣時要考慮呢啲 factor，可能譬如話有個 grace period，「而家可以用新 spec.，亦都可以用 -- 新 standard，亦都可以用舊 standard，去到幾時先轉。」呢個我哋要考慮嘅。

喺嗰個睇番個 standard 過程入面，就係關於 solder 呢個要求，其實係 BS 1254-1 入面，就只係喺佢 Table 6 入面就將啲不同嘅 requirement 列咗出嚟，但係喺嗰個 table 入面，基本上佢又有 leaded 嘅 solder，亦都有所謂 lead-free 嘅 solder 喺度嘅，咁就佢唯一就係喺佢嗰個 table 嘅 footnote 嗰度細細隻字咁樣寫咗，就係話如果 installation for water for human consumption，就唔可以用有 lead 嘅 solder 嘅。

基本上，我諗一般嘅認知都會知道就話其實鉛係對健康即係唔好嘅，而佢本身呢個即係表達嘅方法相對係有咁清晰嘅，我哋作為一個 drafter，其實係有責任要喺我哋自己嘅 spec. 入面即係將呢啲寫清楚佢。

如果睇番我哋即係嗰啲派嗰份，SUP 1 相關嘅 specification，係，就 SUP 1.M178.N，N 係代表新嘅 clause，就係 page 11 of 22。

黎先生：譬如 11 頁。

主席：第 11 頁嗰度？

答：係，係，11 頁嗰度。你會見到我哋嘅寫法就係“soldering alloys complying with BS EN 1254-1, Table 6, sections II and III.”，呢個正正就係頭先講嘅 Table 6，而 section II and III 就係無鉛或者 lead-free 嗰隻 solder 嚟嘅。

而喺第二段，我哋就話我哋係容許用一啲有 integral solder 嘅

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fitting，即係 fitting 入面有埋啲 solder 喺度嘅，就唔使外加嘅。咁就當然亦都要佢係 comply with 呢個 BS EN 1254-1 嘅。

其實喺 BS EN 1254 入面，關於呢啲 integral solder fittings，亦都有個 requirement 寫咗嘅，就唔可以用有鉛嘅 solder 嘅。因為呢個原因，其實我哋好自然就係話為咗清晰，即係避免有 specification user 真係唔小心搞錯嘅，我哋自由會加多一句，無論係外加嘅 solder 或者係啲個 integral solder，我哋都會提一提就係“use only lead-free category solder”，即係咁樣走出嚟嘅，基本上就。

其實我所知，唔係淨係我哋咁樣寫法嘅，就算其他政府部門，譬如好似建築署咁樣樣，...

主席：好似乜嘢話？

答：建築署。

黎先生：建築署。

答：佢哋嘅 specification 就算番去 1993 年啲個版本，當時仲係用緊 BS 864 嘅，佢哋都有寫係 lead-free 嘅 solder 嘅。

主席：19...

黎先生：93。

答：1993，sorry，1993，應該。

主席：1993 年，okay。

答：咁其實呢個係一般即係作為一個 specification drafter，係即係會常用，即係話如果睇到有啲咩唔清晰嘅，就係自己嘅

specification 上高寫得比較清楚啲咁解。

主席：得，明白。我想問一問嘅，就係其實你上高嗰個 176 點-- SUP 1.M176.N，其實你就係將你嗰呢一個 EN 1254-1 裏面見到嗰個你話嗰個 Table 6 嗰度所寫嘅兩樣嘢就拆開嚟特別寫落去嘅？

答：係，冇錯，冇錯。

主席：啱唔啱呀？

答：啱，啱，啱。

主席：你哋有 EN 1254-1，係咪呀？

好喇，我明白，換句話嚟講，當時時候你哋--我想問，你就當時就係一個 engineer，一個 building services engineer，你一定會將你所睇到嘅嘢話畀你嘅上司聽㗎喇，係咪呀？你嗰個 senior building services engineer，即係會一路上去㗎嘛，係咪呀？

答：會唔會特別為呢樣嘢而講呢？我估即係未必一定，因為始終我哋 draft 咗份 spec.，要經過一層一層咁樣去，去到 vetting 㗎嘛。

主席：咁上去，係，到最後佢一定係一--即係如果最後落咗落去你哋個 specifications 裏面嘅時候，咁唔會--即係我用常理去推嘅啫，上面一般係會知道咩嘢原因會擺咗落去個 specification 嗰度，唔會無端端㗎，會唔會呀？

答：如果譬如話睇到--即係覺得特別嘅，一定會問，呢個就，但係如果覺得亦都係一個正常做法嘅，我諗未必會問嘅。

黎先生：我想問問，吳生，你頭先你講你係有負責草擬呢一段嘅？

答：係。

黎先生：係你嘅建議㗎嘅，係咪呀？

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答：當時其實係成 team 人做嘅。

黎先生：成 team 人做。

答：係，我哋亦都有問番出面嘅即係業界嘅，你話係邊個嘅建議，我亦都真係唔記得，但係即係我用即係話所謂 specification drafter 嗰個角度去睇，其實我哋睇到份 BS --或者 BS EN 係咁樣樣，好自然係會咁樣做嘅。

黎先生：我又可唔可以問下，譬如嗰個你哋呢一個係嗰個 board DCMB 呢個會有冇 meeting minutes，每一次開會？

答：應該有嘅。

黎先生：即係會唔會可能睇番，我哋吵番嗰啲嘅會議紀錄嘅話，可唔可以睇得到當年討論呢一個項目嗰陣時個經過情況，可以睇唔睇到？

答：又未必，因為睇下係咪一啲特別嘅嘢有討論。

黎先生：因為我睇到而家 41 段，呢個 2002 年個版本嗰陣時寫得好清楚嘅，同埋呢個版本係跟住嗰啲版本，無論係 04 年、08 年、12 年都係差唔多一樣嘅，咁即係話實際上就係當年嗰個討論將佢擺落去呢一個 specification 嘅人士係好清晰知道係鉛係用--一定要用一啲無鉛嘅焊料係接駁嗰啲水喉嘅。

答：我諗一般人都會即係覺得係應該要用無鉛㗎嘞。

主席：咪住先，你嘅意思即係話當時其實建築署都有咁樣樣嘅同樣嘅 specification...

黎先生：屋宇署。

主席：屋宇署。

黎先生：屋宇...

答：建築署。

主席：建築署。

答：Architectural Services Department。

黎先生：Architectural Services。

主席：建築署，咁即係換句話嚟講，要用無鉛級數嘅 solder 就唔係一--
即係如果...

答：唔係新事物嚟。

主席：唔係新事物嚟嘅？

答：係，係。

主席：得，跟住下面嗰個-- D 嗰度就係話要用一啲 non-corrosive type
of flux，即係嗰啲咩嘢？松香糕呀？

答：係，係，係。

主席：呢個又係你哋自己--因為成個 B -- 1254-1，我睇過，都搵唔到
有講 flux 嘅，咁又係你哋...

答：唔一定係我哋自己，因為呢個--我哋其實除咗 study 呢啲 standard
之外，我哋亦都要睇番啲譬如話啲 material 嘅 catalogue，亦都
會參考一啲而家即係話向來有嘅一啲 handbooks 去到做嘅，而呢一
句話要係--即係話“recommended by the solder alloy
manufacturer.”呢類 flux，其實係我哋一啲 technical spec.
入面亦都好 common 嘅寫法嚟嘅，即係要由嗰個 manufacturer
recommend，因為當兩種 material 佢喺個安裝期間或者運作期間
會有一個我哋叫做 interaction，就好多時我哋係會要求就由呢個
manufacturer 去到 recommend 即係用另外嗰種 material 嘅。

我或者舉個例子，我哋譬如話喺--我哋喺電器嗰面嘅
specification，我哋穿線嗰啲燈喉係用膠燈喉嘅，啲膠燈喉嘅接
駁係用膠水，我哋嘅 spec. 同樣會寫就係話，因為膠水，可能唔同嘅
膠水瀉咗落去，其實佢同嗰隻物料會起--有機會起一個化學作用。咁
就我哋亦都有寫就係話呢啲 jointing material 要由嗰個燈喉嘅

manufacturer 去 recommend 嘅，而一般其實喺呢啲 material 嘅 catalogue，甚至 supplier 嘅 catalogue，都有機會係咁樣寫嘅。

我記得就如果講緊 Fry 嗰隻 99C，喺個 catalogue 入面亦都有提到嘅，佢哋係--個字眼未必係“recommend”，好似係“partner with”另外一隻 flux，係有咁嘅情況嘅，所以係相當普遍嘅。

或者我舉個比較一般人都會接觸到嘅例子，即係譬如講車，汽車嘅生產商通常就會 recommend 就係話「如果你換機油嗰陣時，你最好用番邊隻牌子、邊個型號嘅機油。」其實個原因就係佢哋喺嗰個設計嗰個 engine 口嗰陣時係 base on 某一隻機油嗰個特性去到設計，咁變咗你用番嗰隻機油，就可以得出番嗰個預期嗰個效果咁解。

主席：得，我哋都聽過啲證供嘅，就係話 1993 年嘅時候，美國嘅 EPA 就已經就出過一啲 circular 或者 notice，就係畀一般嘅美國--我諗係市民又好，佢業界又好，就話畀佢哋聽即係鉛喺水裏面超標就有兩大個原因嘅，即係對健康有影響，就第一，就係因為以前用嘅鉛嘅水喉，第二，就係因為一啲鉛嘅焊料，咁就會導致啲水裏面有鉛含量超標，就對身體有危害。咁請問你哋喺 2002 又好，即係你哋作為 building services engineer，喺 2002 年之前，其實你哋知唔知道呢一方面--有冇呢一方面嘅認知呢？

答：頭先 Chairman 你提到嗰個資料其實之前係冇接觸過嘅。

主席：即係 1993 年你哋就未聽過？

答：未，未聽過。

主席：2000 年我哋知道就係話呢個喺蘇格蘭就有一件事，就其實同我哋今次做呢個調查基本上就係如出一轍，咁嗰一件事又知唔知道呢？完全...

答：冇 idea。

主席：完全冇，唔知嘅？

答：係，係。

主席：得，唔緊要。我又想問一問你，因為你哋都睇過呢個 specifications，我想睇下你有冇呢一方面嘅認識，Table 6 嗰

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個表。

答：Table 6。

主席：我唔知喺邊度有搵到。

答：係咪 BS EN...

主席：BS 1254-1。

答：哦，我啱啱有一份喺度，我自己有一份喺度。

主席：你自己有？

答：係。

主席：其他啲律師，我唔知佢哋喺邊度搵到，總之佢哋...

何先生：C19.1。

主席：好。

何先生：10310。

主席：我有啲嘢想問嘅，就係你 A --根據你個 A 嗰度，就話 Table 6 sections II and III，我相信個意思即係話 sections II and III 嗰啲 solder 就可以用，係咪咁嘅意思呀？

答：係，冇錯。

主席：好喇，跟住第一--我想問一問，第一個上高嗰個寫住“Lead/tin 50/50 %”，即係 50 個 per cent lead 同埋 50 個 per cent tin，係咪呀？

答：係，應該係咁嘅意思嘅。

主席：有冇聽過一隻叫做英國 50 力扁錫焊條，同呢個有冇關嘅呢？

答：最近就聽過。

主席：同呢個 I 有冇關嘅呢？

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答：可能會有關係。

主席：可能會有關係？

答：但係唔知道，真係。

主席：唔知道，不過你都係即係...

答：估計嘅啫。

主席：即係你同我一樣都係估嘅啫？

答：係喇。

主席：得，咁唔好講喇，大家都估就唔好講。好喇，II 同埋 III 嗰度就係無鉛，係咪？

答：係，冇錯。

主席：我想問一問你，隔離嗰個 column，“Maximum temperature”係咩嘢意思呢？

答：應該就係話當嗰個用喺水管入面嗰個溫度即係去到幾多，即係可以去到幾多。

主席：唔明，係你講係水裏面嗰--水管裏面嗰啲水嘅溫度可以去到幾多吖？

答：應該就係話水可以係凍水，可以係熱水，而佢如果係熱水嘅，佢係會令到個銅喉都會熱咗㗎嘛。

主席：係。

答：咁應該係講緊銅喉去到達到嗰個溫度。

主席：哦，明白，銅喉達到嘅溫度，譬如我哋而家講緊 II、III，“Tin/silver 95/5%”，隔離第一個就係 30 度，咁又咩嘢意思？

答：30 度就話當喺 30 度嗰個溫度之下，佢本身不同嗰個喉 size，即係再隔離嗰幾個 column，不同喉嘅 size 佢可以頂到幾多壓力。

主席：哦，明白。

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答：所以你會見到越高溫，佢頂到嘅壓力就越低嘅。

主席：越高溫可以承受嘅壓力越低，係咩嘢原因呢？

答：因為你越接近佢嗰個熔點，即係嗰個焊錫嘅熔點，就會弱咗㗎喇嘛。

主席：係，明白。即係啲水管有機會爆開，係咪咁嘅意思呀？

答：係喇，冇錯。

主席：嗰個接焊位嗰度有機會...

答：係，冇錯。

主席：即係如果你嗰啲水係譬如--咁呢個 110 度唔係講水，係咪呀？

答：嗰個可能係講 steam，即係蒸氣嗰類㗎喇。

主席：Okay，即係如果 110 度，呢個唔係講緊嗰條銅喉嘅溫度嘅？

答：點樣講？如果唔係銅喉嘅溫度，或者個環境嘅溫度。

主席：或者水就唔會去到 110 度，係咪？

答：係，係。

主席：即係...

答：但係佢銅喉唔一定用啲水度㗎嘛，即係可以用好多嘅 application 嘅。

主席：即是呢個譬如上面嗰個用有鉛嗰個都可以去到 110 度嘅，冇問題嘅，即係佢個環境去到 110 度嘅時候，佢嗰條喉可以承受嘅壓力就變咗細咗好多咁嘅意思？

答：係，冇錯。

主席：得，唔該。

答：唔使。

主席：好喇，換句話嚟講，你嘅意思就係當年將--我想問一問，原本嗰個叫做 red lead，red lead 又係咩嘢意思呢？2000 年嘅時候。

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答：你係咪講緊 779 頁嗰個？

主席：係呀。

黎先生：2000 年嗰個。

主席：2000 年嗰個。

答：2000 年嗰個版本？

主席：係呀。

黎先生：779。

答：779。

主席：係喇。

答：呢一句，我睇落去，只係一句好 general 嘅講法嚟嘅，就只係話“Do not use jointing materials based on red lead”，而大嗰個 heading 就係“Jointing pipes and fittings”嘅，即係啱啱嗰一頁嗰個大 heading。

主席：係呀。

答：我估呢個係一個即係 general 嘅講法，咁 red lead，red lead 可能係一啲 lead oxide 嗰類嘢，我唔敢肯定。

主席：係，咁愛嚟做乜嘢嘅呢，嗰陣時？

答：如果呢度咁樣寫法，應該就係要嚟 joint 啲 pipe 嚟喇。

主席：係呀，但係我--佢又唔係 solder 嚟嘅，係咪？

答：應該唔係，但係如果我揭番後面嗰頁，佢特別有一段就係講 jointing

copper pipes 嘅，SUP 1.W380.3。

主席：380.3？

答：係喇，即係喺 780 嗰度，不過佢就有提到 material，淨係話 joint pipes 個 non-manipulated...

主席：有講嘅？

答：係喇，呢度都有提到。

主席：得。

黎先生：我睇落去，係 02 年係一個分水嶺嚟嘅，你 2000 年嗰陣時嗰個 specification，我係講緊係 red lead，而且冇講得咁清楚嘅，話唔准用係無鉛嘅焊料嘅，你 02 年嗰個 edition 就已經寫得好清晰，即係實際上我睇落去，喺 02 年，2002 年嗰陣時，嗰個 drafter 係草擬呢份 02 年文件嗰陣時係好清晰知道嗰個問題，係知道如果用銅--用去焊接啲銅喉嗰陣時，係要用啲無鉛嘅焊料，係非常之清晰嘅。

答：知嘅呢個，係喇。

黎先生：所以見到個 specification 係好清晰嘅。

答：因為係 standard，亦都寫得好...

黎先生：所以睇得到係 2002 年寫呢一個版本嘅人，即係你哋嗰啲 drafter 草擬嘅人係非常之精明，係知得到係如果用焊接銅喉嗰陣時，要係好清晰要係用無鉛嘅焊料先可以做，而你哋以後嘅版本亦都用番呢一個咁嘅樣嘅 version 嘅。

答：我只可以話喺 BS standard 入面或者 BS EN 入面亦都係咁樣寫㗎。

黎先生：係，係，佢寫嗰陣時亦都係睇得到唔係話一啲好直接嘅寫法，而喺嗰個 footnote 嗰度係睇到呢啲咁嘅文字，係將佢特登抽㗎出嚟，擺喺嗰個嘅 spec. 入面嘅。

答：最低限度，佢有兩箇地方都有提到嘅。

黎先生：咁我又想問，究竟係既然咁--即係咁精明寫得落去呢一個嘅

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specification 入面嗰陣時，喺同時間有冇諗埋關於點樣樣係促使
啲人係要係遵守，係 comply with 呢一個咁樣樣嘅 specification
嘅 requirement 呢？嗰陣時有冇咁嘅討論嘅呢？

答：如果我記得當時呢份 spec.，即係 2002 年嗰份 spec.，基本上係一
個 technical spec.嘅啫。

黎先生：咁你寫咗出嚟，你有冇諗埋點樣樣要 make sure 啲人係遵守嘅
呢？

答：應該當時有特別諗呢樣嘢。

黎先生：即係據你所知，就有，有討論過？

答：係，即係我自己嘅理解。

主席：你呢份嘢--呢份文件後面就 distribution 抄送去畀好多、好多
人，係咪呀？

答：係呀，係呀，係。

主席：因為我唔識你哋嗰啲 abbreviation 嘅，所以你可唔可以話畀我
聽下究竟抄送畀--似乎連...

黎先生：有啲 staff。

主席：係喇，乜嘢 staff 呢？

黎先生：Site staff 都有。

主席：係喇。因為你有好多 abbreviation，你可唔可以即係...

答：你需唔需要逐行我解釋下？

主席：係喇。

答：如果第一行“PD”，就係 project director，即係而家我哋嘅

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assistant director，就分開即係 East、West、Central 咁樣樣。第二行就“PM”，就係 project manager，就 1、2、3、4，呢個就係當時因為我哋有個所謂 project manager 嘅制度嘅，就主要係睇住啲 consultant 幫我哋做嘢嘅。跟住嗰個，你見嗰一行全部都係“CA”，就係 chief architect，不同嘅 chief architect。後面嗰個“D&S”就 design and standard。P...

主席：C --邊一度--哦，“CA”，design and standard?

答：係喇。

主席：即係嚴先生而家做嗰個位？

答：係喇，冇錯。咁“CAPS”，唔係好記得 exactly 呢啲，因為而家有呢個位置。

主席：唔緊要，你記得幾多就講幾多畀我哋聽。

答：跟住嗰行“CSE”，就 chief structural engineer，跟住就 chief building services engineer，跟住就 chief civil engineer，跟住就 chief geotechnical engineer，跟住就 chief quantity surveyor，“CS”應該係 central service，另外嗰個就係“CQS/P”，應該係 project 喇喇嗰個。跟住“FC/D&C”，FC 可能係 finance controller，呢個我唔敢肯定呢個。就“SM/PM”，SM 應該係 senior manager，但係 PM 係--我都唔敢肯定。

主席：得。

答：“BA to BD/D”，呢個我唔敢肯定。

主席：好呀。

答：跟住“CTO(BW)/HQ”就 chief technical officer。

主席：Chief 乜嘢話？

黎先生：Technical...

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C 答：Technical officer。

D 主席：Technical officer。

E 答：就 building works, stroke HQ 應該係 headquarters。跟住
F “CTO(BS)/C1”，嗰個就係 building services 嗰邊，chief
G technical officer 係睇 site 嗰個。就跟住“CTO(C)/Works
H 1”，Works，呢個可能係 structure 或者 civil 嗰面嘅 CTO 嚟嘅。
I 跟住係喇，有個“Works 2”。跟住“CTO(BW)/NA1”，BW 應該係
J building works，但係 NA1、2、3、4 嗰啲我唔肯定係啲咩嘢。跟
K 住“SM/TS2”，嗰個應該係-- TS 應該係 technical secretarial
L 嗰個意思嘅。

M 主席：唔該。

N 答：咁就再 CC 就“BD”，“BD/M” -- 呢個可能係 AD 以上嘅，可能譬如
O deputy director 嗰一類嘅。跟住就“AD/D”，D 就代表
P development 嗰度。“AD/ICU”就我哋所謂 Independent
Q Checking Unit 嘅 AD。“AD/Q”，我唔記得係邊個。“AD/M3”，M
R 應該係代表我哋 estate management 嗰面嘅，嘅 AD 嚟嘅。跟住
S “CM/M(SS1)”，CM/M 就係 chief manager，就 M 代表 management
T 嘅，咁 SS1 係應該--係一啲 central function 嘅，代表 support
U -- specialist support 嗰類，我估係，exactly 我唔係好記得。
V 咁就後面嗰個都係類似。

跟住“SA”就係 senior architect。就“SBSE”就 senior
building services engineer。“SQS”就 senior quantity
surveyor，就三個嗰度就。跟住“SHM”就 senior housing
manager。“D&V”應該係 development and vetting。“SMS/TD”，
exactly TD 代--“SMS”就 senior maintenance surveyor，
TD 我唔係好肯定 exactly 嗰個叫法，可能係 technical
development 嗰類。

R 主席：得。

S 答：跟住“SQS/CM1”就係喇，senior quantity surveyor。“CM”應
T 該係 consultant management。“SQS/C5”嗰個應該係睇住我哋
U internal 個 project。“SM/Audit”就 senior manager 就負責
V audit 嗰方面嘅。跟住“QS/ST”，QS 就係 quantity surveyor，
stroke ST 應該就 specification team。跟住“PTO(BS)/C1”
就 principal technical officer，BS 呢方面嘅，呢個係 indoor

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嘅 technical staff 嚟嘅。下低嗰個係啲 file name 嚟嘅，就係 BS 嘅 file，跟住嗰個就係 QS 嗰面嘅 file。應該係咁多。

主席：我想問一問，就係你哋 2002 年去寫呢一個 specification 嘅時候，就知道呢個鉛就有呢個--即係喺呢個 solder 嗰度就唔可以用，如果用嘅話，就係基本上就係可以話係一個 hazard 嚟喇，就係一個。

答：第一，犯例，係，係。

主席：有一個--係一個 hazard 嚟嘅。

答：係喇。

主席：好喇，你哋 identify 咗呢個 hazard，下一步就係應該做個 risk assessment，你 identify 咗啫，你個 risk 有幾高，有冇做過呢？

答：我印象中，應該冇特別去做。

主席：冇？

答：係。

主席：Okay。實際上，其實你同唔同意喺房署又--房署喇我哋講，其實無論係--即係我哋又係炒番啲舊嘢，無論係用啲乜嘢嘅金屬去做水喉，你哋都知道有機會有重金屬係會 leach 出嚟嘅？即係呢啲係 hazards 嚟嘅？

答：我諗我...

主席：多少就係另外一件事，即係呢個係一個 identifiable 嘅 hazards 嚟？

答：如果以我一個 engineer 或者讀 science 真一個--即係嚟到睇，我所知，就係話不同嘅 material，當佢同水 contact 嗰陣時，嗰個所謂 solubility，水溶性其實係不同材料會唔同嘅。

主席：不同嘅咩嘢話？

答：不同嘅物料會唔同嘅，有啲會多啲，有啲會少啲嘅，咁係咪話每一樣即係金屬嘅譬如喉，就一定要去驗水入面有冇呢啲嘢呢？其實我諗如果你問我，我第一步應該先去睇一睇究竟嗰個佢個 solubility 係點

樣樣。

主席：喺。

答：咁然後去亦都需...

主席：呢樣嘢就其實就係後面嚟嘅，你 identify 咗個 hazard，跟住你就去 assess 個 risk，如果個 risk 唔高嘅，咁你可以覺得唔需要做，係咪？

答：係。咁就即係變咗譬如話就算我哋唔係喺呢方面即係咁熟悉，其實可以去譬如請教下其他人，即係我哋會咁樣做。但係再喺另外一個角度睇，就係話譬如之前一路提住銅喉呢樣嘢，或者其他喉，不銹鋼喉，基本上其實尤其是銅喉，喺香港用咗好多，呢個亦都係水務署准許用嘅，而喺發生咗呢件事之後，其實水務署亦都出過另外一啲通函，就話要驗多四隻即係重金屬嘅，如果大家都知，全香港咁多用緊銅喉，但係再加呢四隻嘅重金屬都有銅呢樣嘢，我諗我哋會相信水務署係睇過呢方面嗰個 risk 係去到邊度，應該係個 risk 係好低嘅，如果唔係，我相信水務署一定會喺個通函度加埋嘅。

主席：佢哋做唔做就--當然我唔係話你唔可以 rely --唔可以倚賴佢哋，即係我而家調番轉，即係 test 下你哋啫，因為譬如好簡單，你知道有個 hazard 喺度，如果你話「啊，我哋自己獨立地都考慮過呢個 hazard，我哋認為係冇問題。」當然你獨立考慮嘅時候，你可以考慮埋人哋，譬如水務署所講一啲嘢，咁冇問題嘅，係咪？

答：唔。

主席：因為我哋自己一個人做唔到咁多嘢，不過正如你剛才譬如所講，譬如應該咁講，譬如你話水呢個每一種唔同嘅金屬喺呢個水裏面個 solubility 都唔同，水溶性都唔同，咁當然水溶性 depends on 好多唔同嘅 factors，係咪先？Depends on 佢個 pH，depends on 佢個溫度，如果嗰條係熱水喉嚟講，可能 dissolve 嘅 metals 就會多啲，係咪？

答：唔，唔。

主席：咁所以你又唔可以話「啊，呢條喉係用銅造嘅，咁我又一定係冇--一定就係唔會--冇太多餘--太多」--對唔住，「銅釋出嚟。」，因為有好多唔同嘅用處，可以係唔同嘅地方，你可以係可能係有熱水嘍嘛。

答：啱，啱。

主席：熱水可能會釋出多啲，你凍水嗰陣時候唔超標，可能熱水超標，我頭先見到你啟晴邨，其實我都想問，如果係一般嘅住戶就當然有問題，不過其中有一度好似有幼稚園嘅，細路仔可以承受銅或者承受鉛嘅能力比較低啲嘅，你哋--譬如你哋--即係我嘅意思就係你 identify 咗個 hazard，你可能一般嘅居民住宅，你可能話呢個 risk 係好細，所以我哋都唔在乎，但係如果譬如假設你個屋邨裏面又有幼稚園或者又有老人中心、老人院，即係有啲地方係畀老人住，諸如此類。即係我個意思即係話你 separately，即係每一個屋邨你有唔同，甚至你有唔同嘅 buildings，可能你都要獨立去考慮佢哋有嘅 risk 係唔同㗎。

答：同意，其實正正就係因為咁複雜，我諗我哋更加需要一啲專門嘅人去提出呢樣嘢。

主席：但是你知道水務署佢就得一個參數，全香港都係嗰個參數㗎嘛，佢唔理你㗎嘛，你明唔明？

答：明，明。

主席：咁你咪冇咗呢個--即係冇咗你自己特有嘅--譬如好簡單，你呢條--佢哋就一個參數就全香港，但是你譬如去到某--即係我想講嘅就係話可能你去到--譬如你起醫院同你起住宅嗰陣時，你考慮嘅嘢就會變咗唔同㗎囉，你對水嘅要求--當然你哋未必會起醫院，係咪？但係譬如你起一啲老人中心喺個邨裏面嘅，咁可能你要有獨立嘅唔同嘅--佢唔會話畀你聽--水務署唔會話畀你聽--即係如果佢話畀你聽就當然好，但係佢而家個情況就係佢唔會話畀你聽「我得一個數嘅啫。」可能到你設計你要起嘅樓宇嗰陣時，可能你都要考慮埋呢啲。

答：當然即係如果我哋嘅資源上高係可以做得到嘅，呢個一定係最好嘅，呢樣嘢就，但係如果--我又咁樣去睇，譬如房委會真係專登去請一班專家去到睇呢樣嘢，但係得到嘅結果，受惠嘅就只係房委會轄下嗰啲 project 嗰啲居民，但係如果譬如話喺全香港，譬如個--唔一定係水務署，有一個比較所謂中央嘅做法，去請專家去到睇，睇不同嘅即係範疇，佢得到出嚟嘅結果，全香港都可以受惠，咁變咗如果喺個資源嘅運用嗰方面，我就會覺得即係後者會好啲。

主席：Okay。我有嘢問，你哋有冇跟進嘅問題，因為...

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何先生：多謝主席。或者因為伍生頭先提過呢個建築署 1993 年嘅時候其實都已經係有講到呢個係唔可以用鉛嘅焊料呢個，我哋其實有一份 93 年建築署嗰個，或者我呈埋上--我哋已經準備咗一啲副本畀咁多個 parties。

主席：好呀。

何先生：我想睇下係咪就係伍先生所諗緊嘅嘢。

主席：好呀。或者我哋而家休息十分鐘先，佢要 make copies，好唔好呀？

何先生：好呀。

主席：十分鐘之後我哋再繼續。

下午 3 時 35 分聆訊押後

下午 3 時 48 分恢復聆訊
出席人士如前。

何先生：主席同埋委員，我剛剛頭先我哋準備咗嗰啲就係 1993 年呢個建築署所用嘅一個政府嘅 contract。

香港房屋委員會第四證人：伍達群（房屋署（啟晴邨和元州邨第二及四期總屋宇裝備工程師））宣誓繼續作供
何先生盤問

問：呢一份政府嘅 contract 就係你頭先講話--伍生，頭先你講話建築署都係有條例係--有嗰個條款係講明喺嗰個水喉嗰度嗰啲 jointing 同埋嗰個用料嗰度係用無鉛嘅？

答：係。

問：我想睇下係唔係就係嗰個 19.55 嗰條？

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答：冇錯，就係 19.55。

問：我哋見到呢一個就係建築署喺 1993 年佢哋嗰個 contract，佢呢度就係用--佢嗰個準則就係寫番係 BS 864 Part 2 Table 17。

答：係。

問：呢個我哋都睇過，嗰個都係講話無鉛嘅焊料嘅。

答：應該有一個 clause 係話 portable water 係要用無鉛嘅焊料。

問：係喇，咁我唔再即係請大家再睇個 BS 864 嗰個，我哋已經睇過好多次。我想知道呢個就係建築署 93 年，所以基本上如果係用嗰啲焊料，係話應該啲焊料無鉛，呢樣嘢就唔係一種新嘅嘢喇，係咪呢？

答：喺我哋起草嗰個 spec. 嗰陣時，基本上唔係新嘅。

問：唔係新嘅嘢喇？

答：係。

問：我想睇下點解我哋喺 2002 年嘅時候要做呢一個動作，要起草一個新嘅條款呢？係我理解就係因為當時--你頭先都有講，就係除咗我哋係話一向用開嗰個 uPVC-lined galvanised 嗰啲 steel pipe 之外，你就容許承建商係有個選擇，就可以使用呢個 copper...

答：係，冇錯。

問：...做--銅嚟做個喉嘅物料嘅？

答：唔。

問：咁所以係咁嘅情況底下，就有一個--需要畀一個新嘅 spec. 出去？

答：冇錯。

問：你亦都講到話當時做呢個新嘅 spec. 出去嘅時候，亦都有諮詢嘅，係咪呀？

答：係，冇錯。

問：係咪呀？

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答：係，係。

問：諮詢業界，係咪？

答：係，冇錯。

問：即係建築行業喇？

答：建築行業，係。

問：建築行業，即係...

答：Contractor、supplier。

問：咁有冇諮詢同水有關，水務署嗰啲呢？

答：因為銅喉喺香港已經好普遍，嗰個時間，我印象中，冇特別去諮詢佢
咗，但係因為我哋要寫嘅 spec.，因為人面嘅細節，我哋變咗就要即
係話 -- 尤其是個 supply 嗰方面，我哋要 make sure 嗰個
availability，所以同 supplier、contractor 覺得用呢類咁嘅
做法係咪即係對佢哋嚟講有啲咩影響，我哋係要去諮詢。

問：咁即係我知道你譬如話當時銅喉其實房委之前就唔用㗎？2002 年之
前。

答：可以咁講，即係喺食水嗰方面。

問：食水嗰方面？

答：係喇。

問：我係講食水嗰方面。

答：係喇。

問：對唔住，我問題應該準確啲。食水嗰方面，房委之前係唔用銅喉嘅？

答：係。

問：因為你講過係用嗰個 uPVC-lined 嘅 galvanised 嘅 steel pipe，
係咪呀？

答：係，冇錯，係。

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問：咁就所以以前，我哋睇番 2000 年房委用嗰個合約嗰啲條款，可唔可以打番開呢個 B2 文件夾第 766 頁嗰度？

答：係，得。

問：第 766 頁嗰處就你見到第 SUP 1.M130A.3 嗰度，就係講 portable water 嘅。

答：係，冇錯。

問：嗰陣時呢個因為係 2000 年當時都仲係用緊 uPVC-lined 嗰啲 galvanised pipe？

答：係，冇錯。

問：係咪呀？

答：係。

問：但係下面嘅，for cold water，我哋都見到“Pipes for cold water”都有一個係講係呢個“BS 864: Part 2, Table 6”，你見到嘛？

答：係。

問：呢個就 2000 年嘅時候咁做，你頭先就講話 2002 年嘅時候，因為容許用銅喉做食水喉嘅時候，所以就有一份需要去更新嘅文件？

答：係，冇錯。

問：我想你睇下呢份更新嘅文件，你底下其實有幾個 annexes 嘅。

答：係。

問：有幾個 annexes 嘅，我見到 Annex A，好似你個文件嘅第 6 版，你話 Annex A 或者叫做 annex 個-- Annex A 個頭嗰版，嗰個題目係--嗰個標題係“New/Revised Specification Clauses”，見到嘛？

答：係，見到。

問：即係 Annex A 裏面嗰啲就係一啲新嘅條款嚟喇？

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答：係，冇錯。

問：我哋睇到嘅 SUP 1.178 就係其中一個新嘅條款？

答：唔好意思，或者你講多次。

問：SUP 1.M178 嗰個就係其中一個嘅新嘅條款，當時？

答：係，冇錯。

問：係咪呀？

答：係。

問：係，唔該。我想知道就係其實銅喉喺 2002 年，我哋講番 2002 年呢段時間，銅喉就做食水喉就唔係房委第一個去做？

答：係。

問：即係其實喺其他嘅建築項目，唔係房委嘅 project，其他嘅建築項目都有用銅喉做食水項目？

答：係，有。

問：咁所以亦都係--譬如呢個 BS 864 也好或者係 1254 -- BS EN 1254 也好，當時講話呢啲焊料係唔應該有鉛呢一樣嘢，要 lead-free，亦都唔係即係新嘅嘢嚟？

答：一定唔係新嘅喇。

問：吓？

答：一定唔係新嘅。

問：唔係新嘅嘢嚟。我可唔可以咁睇呢，即係呢一份 2002 年呢一份文件唔係帶出一啲咩嘢新嘅問題出嚟？

答：係，可以咁樣講，唔係...

問：可以咁講，我嘅講法係正確嘅？

答：正確嘅。

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主席：唔係帶出一啲新嘅問題，因為佢哋嗰陣時都唔覺得有問題。

何先生：因為當時根本一路嚟係用--或者我再問呢個問題，我明白。

主席：因為你嗰個 EN 1254 係 1998 年已經出咗。

何先生：明白，係喇，正確，正確。

問：而喺當時你哋話都可以讓承建商有多一個選擇，除咗 uPVC-lined galvanised steel pipes，仲可以多一個選擇，用銅喉，你哋--我相信當時如果譬如喺行內，呢個建築界對於用銅喉有特別嘅 concern，你哋都未必會咁樣容許即係引入呢個銅喉做食水喉，係咪呀？

答：當然喇，即係如果我哋知道...

問：如果你知道當時係有個特別嘅 concern？

答：係喇。

問：但係當時你哋知唔知有冇話，用銅喉其實係有問題㗎嘞，呢樣嘢，2002 年嗰陣時？

答：唔知道。

問：唔知道？

答：係。

問：亦都唔係新事？

答：冇錯，係。

問：如果咁睇，即係純粹其實呢個就係你用咗呢一個機會將以前--譬如好似 BS 864 一個已經係被取替嘅一個 BS standard，我哋就 update 咗佢，做咗一個 BS 1254 嘅一個當時使用嘅 standard，係咪咁呀？

答：係，冇錯。

問：頭先你都講話除咗 BS 12 --即係嗰個--我哋睇番呢個 2002 年呢個文件 SUP 1.M178 嗰段，即係除咗你話「我哋而家係更新，將佢 update 做咗一個 BS 1254」--裏面比較仔細，寫 Table 6 sections II and III 咁樣，除咗呢個之外，你頭先所講就係話因為嗰個 Table 6 可能就咁睇，驚住人哋唔察覺，冇咁清楚，因為佢講話唔准用有含鉛嘅食水嘅 solder 裏面係嗰個註腳嗰度，咁所以你就專登將佢擠咗個 C 出嚟，係咪呀？

答：係。

問：就要講明係要用 lead-free...

答：係，冇錯。

問：...嘅 category 嘅 solder？

答：係。

問：亦都唔係一個新嘢嚟，係咪呀？

答：唔係。

問：即係唔係一個新嘢嚟？

答：我可以話，就係話一個 specification drafter 好正常嘅一個做法嚟嘅。

問：頭先主席亦都問過你話呢個有冇專登去同你個上司去即係研究下點樣可以等即係其他嘢人都遵照呢一個咁樣嘅即係做法咁樣，你就話唔係一定會同即係上司去討論呢個，因為我見到其實呢一份 2002 年所涵蓋嘅嘢當然唔會淨係包括呢一個焊料含鉛一個咁細嘅項目嘅，係咪呀？

答：係，冇錯。

問：因為我睇呢一份文件佢所指嘅話有啲新嘅 provision，呢個 Annex A，即係所謂新嘅 specification clauses，其實都涵蓋面都幾多嘢嘅？

答：係，冇錯。

問：亦都可能係因為當時唔係--即係嗰個 solder 唔係一個--即係一樣

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-- solder 唔應該含鉛喺個食水喉嗰度唔係一個新嘅，亦都唔會專登去提出嚟討論呢個問題？

答：係。

問：對唔對？

主席：再講多次，乜嘢話？

何先生：吓？

主席：你再講多次。

何先生：即係因為嗰個食水喉嗰個 solder 個焊料唔係用一個--即係唔應該含鉛，呢個唔係一個新嘢嚟，唔係一個新嘅標準或者規範，所以亦都唔特別提出。

主席：一個新嘅標準或者規範，其實我而家有你呢份手頭嘅嘢，我就喺度睇番，我都係好粗略咁樣睇嘅啫，其實你成個 meeting 差不多都係講緊呢個銅喉嘅嘢，如果講 new 嘅嘢，全部都係講同銅喉有關嘅嘢，係咪呀？

答：係，冇錯。

主席：係呀，所以當時係有一個好大嘅討論，即係大嘅討論我嘅意思即係如果嗰日開會，基本上個目的就係講呢個銅喉，即係因為你哋新嘢吓嘛，因為你見到你裏面好多--我睇番你個啲 abbreviation，即係 X 就係話 delete，N 就係新嘅，你睇番個啲 N 個啲，N 個啲差唔多絕大部分都係講緊同銅喉有關嘅嘢。

答：係。

黎先生：我諗最容易幫我哋理解嘅，就係或者會唔會個部門嘗試搵番當年開會嗰啲嘅會議嘅紀錄或者嗰啲 papers，係關於討論呢一個問題，變咗係咪清晰一啲？

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何先生：我盡量。

黎先生：究竟邊個人去過開會、邊個人提出嚟同埋嗰個會議討論嗰陣時個焦點喺邊度，...

何先生：盡量。

黎先生：我諗會幫助我哋好多，我諗。

何先生：我盡量睇下我...

主席：係呀，盡量搵下喇。

何先生：...睇下房委仲有冇呢啲咁嘅紀錄。

主席：因為一定--我諗一定有--一定最主要嘅問題有個好處同埋個唔好處嘅。

何先生：如果房委仲有呢啲紀錄，會有相關嘅紀錄，我會呈畀委員會睇嘅。

主席：好呀，好呀。

黎先生：因為幫我哋好大作用，好大幫忙。

問：係，即係我而家只係從我所理解，睇到呢一份文件基本上係一個 updating 嘅 exercise，咁講正唔正確呢？

答：係，冇錯。

主席：Update 乜嘢呀？

何先生：Update 嗰個 BS --因為用咗銅喉，所以現時個銅喉嗰個我哋已經唔可以再用番以前 864 嗰個 BS，咁我哋所以...

主席：呢個我又唔...

何先生：所以就要用個新嘅 BS 嘅 1254。

主席：我又唔覺得係純粹係因為要 update 864 去 1254, for 呢一個 sake

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of amendment，其實係因為以前根本正如你嘅伍先生所講，因為以前即使有 864，但係我哋都從來冇用過 864 嘅，因為你哋以前唔用銅喉嚟嘛。

何先生：食水嗰個...

答：即係食水嗰個部分。

何先生：食水嗰個部分。

主席：係喇，係喇，食水嚟講，係咪？

何先生：係。

主席：呢一個其實係一個全新嘅...

何先生：如果--主席先生，我唔喺嗰個字眼上面斟酌，因為當時個實際情況又真係銅喉以前係冇得用嘅，喺食水嗰度，咁所以亦都係用嗰個銅喉同埋當時做呢一個 exercise，亦都係將嗰個 BS 嗰個標準要帶到去當時適用嘅 1254 嗰個標準。

主席：一來，係喇，一來係咁。

何先生：係，好呀，唔該。

問：就仲有幾個比較簡單嘅問題，我想即係其實基本上我係澄清--我相信你可能都已經講...

主席：對唔住，當時你嘅上司 senior building services engineer，甚至你個 chief building services engineer 退咗休未呀？

答：應該未。

主席：哦，應該未，哦，請問邊位呀？

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答：我唔係好記得我自己 02 年嗰陣時究竟係 engineer 定係 acting senior，咁就但係咁蹺，即係我直接嘅上司當時如果係我嘅 senior 嘅，就有位梁生，而後畀，梁生亦都升咗做 chief 嘅，而我就即係替咗嗰個 senior 個位咁樣。

黎先生：02 年嗰陣時係邊一個--邊位？

答：梁生，S C Leung。

黎先生：即係而家係做緊...

答：而家係 AD。

黎先生：AD 呀？

答：喺我哋 estate management 嗰面嘅 AD。

主席：Estate management 嗰邊嘅姓梁嗰位副署長？

答：係，係。

主席：唔該。

黎先生：助理署長。

主席：係。

何先生：或者我--對唔住，我都最後一個問題，喺頭先嗰個 subject 嗰度。

問：就係你話你哋--我就頭先用咗呢個字，就係 updating，唔緊要，我哋唔爭拗到底嗰個係做啲乜嘢，你就話 2000 年後來就有個大改，就去到 2004 年，2002 年呢個就唔算係一個大改，係咪呢？

答：2002 年主要係因為即係想將銅喉作為一個 alternative

material，就去到改動嘅。而去到 2004 個版本中間，係因為有其他嘅即係改變，就將所有呢啲加加埋埋，而變成 2004 年嗰個版本。

問：唔該晒。好，或者我問一個頭先其實代表有利嘅大律師都問過你，我淨係想同你真係--即係呢個係完全係澄清嘅啫，呢個唔係一個新嘅問題。我想睇番就係嗰個--我哋頭先講嘅就係呢啲叫做 approved samples，WWO46 號嗰個文件。我哋知道就係 WWO46 號 part I 嗰度就係有一啲物料，有二十五項就係會畀水務署去批准嘅，咁就有啲譬如好似焊料嗰啲就唔係喺嗰個 WWO46 嗰個 form 裏面？

答：唔需要擺落去，係。

問：亦都係同承建商嗰個合約裏面，我哋知道就係佢哋係要畀--如果係 PLU1 底下，佢哋係要畀一啲 documentary proof，documentary proof，文件上要證明係嗰啲物料係合乎我哋所定嗰個標準嘅？

答：冇錯，係。

問：但係就唔--如果喺講 contract 嘅層面底下，佢哋唔係是必要畀一個 sample 我哋，畀一個樣辦我哋嘅？

答：係。

問：我想睇番嘅，就係呢一個 solder 嗰個焊料，我睇到嘅就係喺 B15.1，B15.1，37811 頁。

答：37812，係，睇到。

問：即係嗰個焊料嘅物料就係要符合呢個 Fry 99C 無鉛嗰個 grade 嘅物料嚟嘅，睇唔睇到？37811 頁。

答：哦，係，1a 嗰度？

問：係。

答：係。

問：同埋下面嗰度有個“Fry' Powerflux”咁喇？

答：係，冇錯。

問：咁就呢個實際上就有畀個 sample，喺 2f 嗰度睇到係“Sample

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attached”。

答：係。

問：但係就呢個就唔係嗰個 contract 所需要，但係承建商一般都會咁樣做，你頭先講？

答：冇錯，係。

問：佢呈上嚟嗰個 sample 係符合你哋所要求嗰個無鉛 99C，Fry 99C grade 嘅焊料物料嘅？

答：基本上係根據佢呈上嚟嗰啲 test report 嗰啲嘢，係可以睇到係符合到個要求嘅。

問：唔該晒。另外就係我想再同你睇一睇另外就係嗰個 licensed plumber，我哋睇嘅就係水務署嗰個 2004 年嗰個通函，喺同一個文件夾 37804。

答：係，見到。

問：我哋曾經問過你關於呢一個 (g) 嗰段。

答：係。

問：就如果喺嗰個建築嘅過程裏面，如果係有一啲嗰個 licensed plumber 係用嘅物料係同佢原先畀出嚟嘅 WWO46 文件底下所列出嚟嘅物料係唔相同嘅時候，佢就要呈報畀水務署？

答：係。

問：同水務署呢一個咁樣嘅呈報嘅關係，呢個就唔經過你哋房委嘅，係咪呀？

答：係呀，冇經嘅。

問：係由嗰個 licensed plumber 就直接同水務署去知會佢哋，就話「我轉咗嗰隻物料。」咁樣？

答：係，冇錯。

問：即係水務署就可以批准或者唔批准咁樣，係咪呀？

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答：係，冇錯。

問：就唔經過你啦？

答：冇，冇經過。

問：但係你頭先又話--因為亦都畀你睇嗰個何標記嗰份口供㗎？

答：唔。

問：咁就何標記嗰度就係話如果我哋係做到工程嘅時候，如果有改動嗰啲物料係會同房委係聯絡嘅，...

答：唔，唔，我...

問：...你記唔記得何標記嗰份口供係咁講？

答：係，係，我記得，記得。

問：我想知道同水務署嘅嚟嚟-- sorry，交往，同水務署嘅 dealings 就係嗰個...

答：licensed...

問：...持牌水喉匠，就直接去同水務署...

答：冇錯。

問：...去呈佢哋嘅改動咁樣，係咪？

答：係，冇錯。

問：咁同你哋嗰個關係係乜嘢呢？

答：其實我哋主要就係話，如果佢之前係 submit 過一啲 material 畀我哋批咗，之後佢打算改變嘅，佢就需要再 submit 畀我哋去到審批。

問：我想你睇一睇呢個 B15.1 37846。

答：係，見到，係，見到。

問：我哋呢一個表，我哋知道就係事後再係--譬如好似第 1 項至到第 25 項就係比對番 WW046 個 part I 嗰個 annex，你有冇見過呢個表先？

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答：後期有見過嘅。

問：後期有見過嘅，係咪呀？

答：係，係，係。

問：因為呢個係已經係發生咗鉛水事件，然後就想睇番嗰個原本畀你哋個 WWO46 報出嚟嘅係乜嘢物料，實際上用咗嘅又係乜嘢物料咁樣嘅，嘅一個比較嚟嘅。

答：係，冇錯。

問：你見唔見到？

答：係。

問：當然佢就有第 1 項至到第 25 項嘅，就即係喺啟晴邨嗰個 WWO46 嘅第 I 部分個 annex 嗰二十五個 item 喇？

答：係，冇錯。

問：好呀，而家我就唔係講話嗰個 licensed plumber 同水務署佢有冇報嗰啲咁樣，如果係呢二十五個項目，如果佢譬如話要更換一個唔同嘅物料，假設我哋講第 1 項 copper pipe 咁，原本係要用 Crane，生產商係 Crane，如果轉做第二個生產商嘅咁，要唔要同你哋講嘅呢？

答：如果佢之前係 submit 咗 Crane 嘅，畀我哋批咗嘅，佢要轉另外嘅一隻嘅，佢一定要即係攞番我哋嗰個 approval。

問：就呢個會係經過總承建商同你哋聯絡，係咪呀？

答：係，冇錯，一定係經建商...

問：因為就係總承建商同你哋先有嗰個合約嘅關係，係咪？

答：係，冇錯，合約，係，係。

問：咁所以我哋要分開嚟睇，就係同你哋聯絡嘅就係如果佢要係更換一啲物料，佢就要攞番你哋嘅--即係喺個合約嘅框架底下，就要攞番你哋嘅同意嘅？

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答：係，冇錯。

問：但係佢實際上佢點樣去報畀水務署聽，呢個就嗰個...

答：佢哋自己去安排，licensed plumber。

問：...即係持牌水喉匠就要佢自己去負責？

答：冇錯，係，係。

何先生：唔該，主席。

主席：冇問題囉呵？

伍先生，暫時冇問題，你可以...

答：我仲有第二條邨。

黎先生：佢有第二條邨，佢有第二條邨。

主席：哦，仲有第二條邨，第二條邨，你要讀幾耐呀？

殷先生：我相信同琴日嗰個時間差唔多。

主席：不如你今晚返去睇下邊啲重複嘅，skip 咗佢，唔好讀喇，係咪？
我為你著想啫。

殷先生：應該冇，即係除--其實我唔知道其他嘅人有咩嘢問題，因為我見到有利嘅承建商之前都問咗問題。

主席：即係嗰啲單...

殷先生：關於--即係據我理解，啟晴邨就唔關有利事嘅。

主席：係呀，隨便你，你--唔係，即係減省時間，有一啲好--佢好 general
嗰啲 role 嗰啲就唔使，如果兩個都重複嗰啲。

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許偉強先生：我哋商量下。如果完全一樣啲，咁可以省卻咗嘅。

主席：係呀，如果完全一樣啲可以省卻咗。

許偉強先生：但係如果涉及到有第二條邨，咁咪可以讀番。

主席：係問去到 individual 邨啲就先至讀出嚟，唔使浪費時間。

我哋聽日再繼續，伍先生，聽朝早 10 點鐘，唔該晒。

答：好，唔該晒。

主席：而家可以離開，唔該。

你 Mr Ho 返去同我哋搵番，睇下有冇一啲咩嘢...

何先生：睇下有冇相關會議紀錄，2002 年附近。

主席：同埋嗰位副署長。

黎先生：助理署長 Mr Leung。

主席：助理署長。

何先生：助理署長。

主席：係呀。

黎先生：當年嘅 chief building services engineer。

主席：Building services engineer。

黎先生：而家做咗 assistant director, Mr Leung。

主席：如果你喜歡嘅，就你哋同佢落一份口供。

何先生：係主要我相信你個...

主席：就係圍繞頭...

何先生：...想睇就係嗰個改動嗰個。

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主席：係喇，係喇，係喇。

黎先生：當年佢嘅參與改動個陣時...

何先生：嗰個改動嗰個情況。

黎先生：...嗰個角色定乜嘢。

主席：係呀，個情況，冇錯。

黎先生：同埋嗰個情況，有咩嘢發生呢？

何先生：明白。

主席：如果佢有 minute，咪 attach 埋上嚟囉。

何先生：明白。

主席：好唔好呀？

何先生：好，我睇一睇。

主席：好，唔該晒。

何先生：唔該晒。

主席：我哋休庭。

2015年11月16日

下午4時18分聆訊押後

C Monday, 16 November 2015 C

(10.04 am)

D (Transcript of simultaneous interpretation D

E except where otherwise specified) E

F MR NG TAT KWAN (on former affirmation) F

(Evidence in relation to Kai Ching Estate)

G CHAIRMAN: (Chinese spoken). G

H Cross-examination by MR KHAW H

MR KHAW: Mr Ng, paragraph 2 of your statement, page 3764.

I Paragraph 2: in January 2013, you started to be I

J involved in the construction of Kai Ching Estate as J

K chief building services engineer/2. We understand that K

L with regard to Kai Ching Estate, it was completed in L

April 2014?

A. 2013.

M Q. Yes, 2013, April. So your involvement has been for M

N about three months? N

A. Yes.

O Q. In these three months, you were involved with the O

P plumbing work? P

A. Yes.

Q. My question for you is: when did you start becoming the Q

R CBSE? R

A. It was on 28 January 2013.

Q. What was the title before that?

A. For some time, I wasn't involved for about six months.

I was the senior building services engineer before that.

Q. As senior building services engineer, when was that?

A. It was in --

CHAIRMAN: I can't quite hear you. Can you speak up
a little bit?

A. It was in 2005, yes.

CHAIRMAN: Thank you.

MR KHAW: Let me clarify with you: as CBSE, what were your
duties? In your statement, you mentioned your duties --
let me clarify the duties with you.

CHAIRMAN: Please carry on.

MR KHAW: In your statement -- you were responsible for the
pump room and also some of the plumbing work. So with
regard to the plumbing work, it includes the pump room
and also the non-pump-room work. You were involved with
the design and also the specifications. You are
responsible for both?

A. Yes.

Q. So in terms of the checking of the materials, the
samples, we are not talking about the point when the
materials were delivered to the site, but before that
there were sample checks. According to your statement,
for the pump rooms, the materials for inside the pump
rooms, you were responsible for the sample checks

yourself?

A. I have to clarify that in relation to sample checks, under the specification there was no such thing. When the contractors provided the information, it was documentary information.

Q. I will take up with you the actual situation of sample checks, but let me put this to you. For the samples delivered to you, I'm talking about the materials for the pump room which you are responsible?

A. Yes, indeed.

Q. In relation to the pipes, the copper pipes, not materials for the pump room, your building services team was responsible for that also; yes?

A. Outside the pump room, it wasn't our duty. It was the construction team.

Q. Let's turn to paragraph 10, page 37650. Paragraph 10, if I may refer you to that. The project BSE is responsible for certain things. This project BSE is also one of your team; is that right?

A. Yes.

Q. Let's have a look at paragraph 10(d), page 37650, the top part there:

"(In English) The vetting and approval of plumbing materials installed outside water pump rooms submitted by the main contractor under the main contract at

construction stage."

So the plumbing materials installed outside the pump rooms, the vetting and approval of them was also the responsibility of the project BSE; is that right?

A. We are dealing with the documentary approval not so much approval of the samples.

Q. Right. We will go into detail about the samples. But I am talking about the sequence of work. When the main contractor delivers the materials -- let's not talk about the samples for the time being -- but for the materials, it may be in the form of documents, it may be some documentary proof, and your team, in relation to the plumbing materials installed outside the pump rooms, you also looked at that?

A. Yes.

Q. When it comes to the site supervision, the work would be more clearly defined. You have the pump rooms at different places. You have the booster pump. For these two pump rooms, it is your team that is responsible for the site supervision?

A. Yes.

Q. Can I say this: in relation to the plumbing work, the materials for the pump room, you regard them as part of the building services work?

A. Yes.

Q. For the pipework outside the pump room, it is regarded as the building services' building work?

A. Right.

Q. We took evidence from Mr Yim Yu Chau, the chief architect. He mentioned that in terms of building services, his understanding was in relation to the air-conditioning, the gas, the water and electricity.

A. Right.

Q. This is a general description in the trade. Now, let's take water, for instance, out of the lot. Water is in relation to the inside services. My question for you is this: in your sphere of work, why is it that there is such a narrowly defined sphere of work, whereby the pump room would be under the BS, whereas anything outside would come under the building work? Can you explain the difference between the two?

A. This distinction has been around for some time, and it makes sense, because outside the pump rooms, we are talking about the installation of pipes, and the technical expertise would be less. But inside the pump room, other than the pipework, we have to install the pumps, we have to connect the electricity to the pumps. We also have to control the alignment, and the area would be broader, and we do need to have more technical expertise and we need special technical people.

Q. Yes. The distinction ultimately is due to the technical details. So for the plumbing work, they have to do with the pumps and they have to do with the materials of the pump room.

Let's talk about the documents. You check on the documents for the materials for the pump room, and you mentioned that?

A. Yes, during vetting and approval, yes.

Q. Once you have vetted them and approved them, when it comes to the actual execution of the work, then anything outside the pump room would have nothing to do with you and your expertise doesn't apply there; is that right?

A. I think I have to make it very clear. With regard to the vetting and approval process, for plumbing materials outside the pump rooms, when the main contractor submits the information to us, they would submit them to the building works colleagues and they may have some recommendations, they may pass some comments, and then they would be passed on to the BS engineers for further scrutiny.

Q. You would look at them in detail?

A. Yes.

Q. So outside the pump rooms, you would also be aware of the materials that would be used? You would be aware of whether they are up to specifications?

A. Yes.

Q. But when it comes to the site supervision, you have the information in hand but you are not doing the site supervision; is that the case?

A. This is a division of work: inside the pump room we do the vetting and approval. Once vetting and approval have been done, the work would be handed over to the building services inspector to supervise the work. We are not resident on site as engineers. So anything outside the pump room, it would be handed back to the building works colleagues.

Q. You have the division of work on paper, but when it comes to the actual site supervision, when you turn up on the site, for supervision, you say in your statement that you are not always on the site, you would be there at different times of the projects, but when it comes to the supervision of the work, you are telling us that you are not merely looking at the pump room, and the building work team will also be responsible for the supervision together with your team work or is there a very clear division of work?

A. Well, manpower is very tight, so in terms of division of work, we would not really go and look at other spheres of work.

Q. When you turn up on the sites for supervision, you would

C apply this line of division of work? C

A. Right.

D Q. Paragraph 16 of your statement. Paragraphs 15 and 16. D

E Now, with these pump rooms there is an arrangement E
F whereby there is a nominated contractor. For other F
G areas, they have the domestic subcontractors. G

H When it comes to the actual operation, let's look at H
I your area of work, in relation to the pumps -- for these I
J two pump rooms, the licensed plumber or the LP would be J
K different from the LP for other parts of the area; is K
L that right? L

A. Yes.

K Q. Let's deal with the LP in your area. In the day-to-day K
L work, how do you co-ordinate your work? L

A. Well, it all depends on the licensed plumber's position. M

M There are some employers who are licensed plumbers. M

N Some are employees, licensed plumbers. So in the N
O day-to-day operation, we put together the design, we O
P have the drawings, and they also have the working P
Q drawings before work is undertaken. If there are any Q
R problems with the design, they would approach us R
S engineers for discussion. S

T But sometimes the problems may not be statutory T
U problems, and the LPs might approach us for some U
V discussion. So this is the actual situation. V

Q. But in the Housing Department, do you have any established guidelines whereby you work with the licensed plumber in a certain way, in a co-ordinated way, when are you supposed to discuss with the LP about the progress of work, do the work and so on; are there any guidelines in this regard that were in existence?

A. No.

Q. So it depends on each and every different project?

A. Yes, it depends on the situation.

Q. I will come back to the workers later, but now let me talk about the Waterworks Ordinance and Regulations. In paragraphs 20 and 21 of your statement, you say that the complete plumbing system -- you knew that you had to comply with the relevant laws, and as you said here, you mentioned the Waterworks Regulations. Am I right in saying this: if it is related to the construction works, and if there are requirements in the Waterworks Regulations that are related to building works, you know them; right?

A. Yes.

Q. Let us not talk about this in a vacuum. Let us look at the regulations and what they say, and then we can have a discussion.

A. Okay.

Q. About the regulations, let us look at C2, page 1160.

Let us look at Regulation 20. This talks about pipes or fittings, that they shall be of British Standard.

I don't think you are reading this for the first time; I am sure you have some knowledge of this. During the time of the Kai Ching project, you knew about these regulations?

A. Yes.

Q. As for the relevant British Standards, let us go to page 1156. We have looked at those. Let us just refresh your memory. Regulation 2: BS, British Standard, it means "the latest revised edition"; we should follow the latest edition of the BS. That is the addition of the specifications.

Let us go to the back. There is an appendix, on page 1172, that is schedule 2. Let us look at part 1. Mr Ng, please look at paragraph 17. This is on capillary fittings or compression fittings, that they shall comply with BS 864, and during the hearing we knew that 864 evolved into 1254.

During the Kai Ching project, you knew about these requirements; right?

A. Yes.

Q. Now let us take a look at the contract, the contract with the main contractor. B5.1, page 7849.

This is actually quite a thick book. We have taken

out some pages and photocopied them and put them in our file. This is a contract booklet on the Kai Ching project. Please go to page 7868. This is on the specification. Yes, number 1:

"(In English) The specification referred to in the articles of agreement ..."

Meaning there are some articles of agreement which will be included in the contract, and these include: (a), when the HA or the HD -- well, let me say Housing Authority, and the Housing Authority Specification Library 2008 edition, meaning you have to use this edition of the specification. And if we look at the 2008 specification, then we will know the requirements; is that right?

A. Yes.

Q. Now, if we look at the 2008 specification -- where can we find it? It is in B2, page 584. Let's take a look. PLU1. Later on, I will discuss with you the difference PLU1 and PLU2. Under PLU1: soldering alloys for copper and copper alloy capillary fittings. These have to do with soldering materials?

A. Yes, correct.

Q. Number 1 says:

"Comply with BS EN 1254 ..."

That's what you mentioned. Then number 3, it states

A	<i>Annex: Realtime English Transcription based on floor / Simultaneous Interpretation</i>	A
B	Commission of Inquiry into Excess Lead Found in Drinking Water	B
	Day 10	
C	categorically that it should be lead-free category solders. You know this very clearly; right?	C
D	A. Yes.	D
E	Q. You knew about these specifications?	E
	A. Yes.	
F	Q. Well, if you apply common sense, it's clear that	F
G	lead-free and 1254 and such specifications are there so	G
H	that we can comply with the statutory requirements?	H
	A. Yes.	
I	Q. If materials contain lead, you knew it was harmful to	I
J	health; you know about that?	J
	A. Well, I have general knowledge about that.	
K	Q. I am talking about common sense, really. I am not	K
L	saying this asking you in your capacity as BSE, but	L
M	common sense tells us that lead is toxic; you know that?	M
	A. Yes, yes, it would affect health.	
N	Q. Let us again talk about common sense. The specification	N
O	say you should use lead-free solder and you should	O
P	comply with British Standards. Well, the objective is	P
Q	to prevent leaded materials from being used for plumbing	Q
	works.	
	A. Yes.	
R	Q. Also, you don't want such materials to be used for	R
S	plumbing works, because you want to make sure that the	S
T	result, which is the water that we use, is safe; is that	T
U		U
V		V

correct? Do you agree?

A. Certainly.

Q. Okay. Now, let us look at the samples that we mentioned at the beginning and also the submission of information about the samples. From other witnesses, we have heard that the procedure for submission of samples is regulated by PLU1 and PLU2, but it is different. PLU2 says they have to be submitted, but this was not clear in PLU1.

A. Well, I should say this: PLU1 does not require the submission of samples for most kinds of materials, but you have to submit documental proof to show that they comply with the specifications.

Q. Okay. Let us take a look at the contract specifications first. Let us look at B2, page 607. PLU2, "Sanitary appliances". In PLU2, you can see, at number 1, PLU2.M010.5, "Samples":

"Comply with the requirements of PRE" -- meaning preliminaries; that is another set of specifications -- "B9.410 by submitting samples of the specified sanitary fittings for Approval", meaning a sample has to be submitted?

A. Yes.

Q. So PLU2 applies.

Let us look at PRE.B9.410 and see what it says.

B5.1, page 7903. Can you find page 7903?

A. Yes, I can.

Q. Under "Samples", we can see the PRE -- these are preliminaries of British Standards. Under "Samples", it says, "(In English) Samples of materials -- general requirements":

"(In English) Submit samples of materials as requested by the CM" -- that's the contract manager, and we know this is the chief architect -- "and do not confirm orders until approval has been obtained."

So you should not go and actually purchase the materials; approval has to be awaited first. Then:

"(In English) Keep Approved samples at the place agreed by the CM for comparison with materials used in the Works ..."

Meaning, after vetting the samples, they should be stored away properly, because when delivery is done at site, you have to take out the sample from the room, to check it against the delivered goods, so you can give the approval. This is what PLU2 requires you to do.

And PLU1, we took a look at it just now, under PLU1 we cannot see such requirements. In B2, page 581.

A. Sorry, which page?

Q. B2, page 581. We cannot see here what PLU requires with regard to samples?

C A. That's correct. C

D Q. I would like to ask you in more detail. Let me say D

E this. For the contract, with regard to samples and E

F sample information, PLU1 does not have requirements? F

G A. No, I should say only the majority. Let me give you G

H an example. Let's look at page 587, or 586. Let us H

I look at the heading first, that is "Pipe brackets and I

J sleeves", and it says they should be submitted for J

K approval prior to installation. K

L CHAIRMAN: Please wait. Page 586 or 587? L

M A. 587, near the top, subclause 6. M

N MR KHAW: Okay, thank you. N

O A. I will give you another example. Page 592. Under "Draw O

P off taps and stop valves", PLU1.M710.5, number 1, the P

Q last line: Q

R "(In English) Submit sample for approval prior to R

S installation". S

T So there are these examples. T

U Q. Okay. With regard to these two kinds of materials, U

V I can ask you some questions. These require the V

submission of samples. As far as you understand, with

regard to the submission of samples, do you mean the

sample itself or just sample materials like test reports

or other documents?

A. No, the sample, the physical object.

Let me get some more time in explaining. If we go to page 581, PLU1.M110.5, paragraph 5, it says:

"(In English) Be approved by the Office of the Water Authority for the intended application. Submit type test reports/certificates issued by laboratories that comply with PRE.B9.570 for verification of compliance with this Specification."

This is a general requirement. It actually means that under this specification, you need to submit some documents to prove that they comply with the specifications.

Q. Actually, I was coming to this. Is it that you would like to continue?

A. Well, yes. We were on samples. I was trying to explain the situation. Why is it that we usually do this, but for one or two particular objects we require the submission of physical objects? Because under PLU1, in this specification, there are British Standards or international standards that govern the requirements on materials, and if you ask for a sample -- well, you can't see with your naked eye whether it's in compliance. Say, for example, the chemical composition of the object and the stress it can take, say whether it will explode under certain pressure. If you look at the sample, it won't tell you this.

C So, when we draw up the specification, we have to
understand the objective of getting a physical sample.

D Let me talk about pipe and anchors. We did not have
E any design requirements in the specification. Now,
F of course, we would say how big the diameter of the pipe
G should be and the distance between brackets, yes. But
H then there is no specification on the design of the
I bracket itself. So, naturally, for every project, the
J contractor will have to submit a sample for us to look
K at, and it will be used for comparison. The same goes
L for draw-off taps. Actually, it is a tap for the
washing machine. And for such draw-off taps, the
M appearance and the finish differs from brand to brand.
N So that's why we are asking for samples to be submitted
O to the CM.

M Q. I understand. Yes. Let's now take a look at page 581,
N paragraph 5 of 110.5. That is, it says submit test
O report certificates issued by laboratories that comply
with the specification. Let's consider this point.

P We are talking about test reports and certificates,
Q and we are not talking about the actual objects. Test
reports and certificates only.

R Now, if you look at the materials specified in PLU1,
S the team has various methods. For the PLU1 materials,
T which have to come with samples and which have to come

C with only test reports, who makes that decision? C

D A. For this specification, this is a type of standard D
E specification, and at a central level, at a corporate E
F level, we have a team looking this, and we make this F
G decision in drafting the specification. G

H Q. Let's make the assumption -- now, we said here that test H
I reports, PLU1, as you said -- you quoted two examples -- I
J physical objects have to be presented to you. Now, in J
K the actual operation, for PLU1 materials, some of the K
L materials have to come with the samples and not just the L
M test reports; right? M

N Let me cite an example. For example, solder N
O materials. Earlier on, we looked at the Fry brand O
P material. Later on, I will take you through the P
Q relevant documents. To your knowledge, for this Q
R material in actual operation, are you looking at the R
S documents only or the documents together with the S
T samples? T

U A. According to the specification requirements, for U
V soldering materials, no sample is required, but very V
often the main contractor will make a decision on his
own as to whether to submit the samples for us to take
a look as well.

Q. Earlier on, the AP has said that PLU1 doesn't require
samples to be submitted, but then the practice is that

main contractors would submit such materials. I would like to know whether it is you who made the decision as to whether samples are to be submitted for certain materials and not for others. How do you make that decision?

A. As I said, we will look mainly at the appearance and the design of the material, and we would ask for samples, and for other materials where these are not the important factors, then only documents have to be submitted, as specified in the contract. The documents often carry photos, so we can actually understand the appearance of the materials.

When our colleagues vet the submissions of the documents and when they can't really understand about the materials from the photos, or if it's a brand-new material, then they would be asking additionally for samples to be submitted.

Q. It is difficult for you to make that kind of decision on site, saying that, "I can't just rely on test reports, I have to look at the samples". You can't make that kind of decision on site. You must have some criteria. There is a list or schedule of factors for your reference, so that staff members who actually do the vetting and approval will know exactly what to do, when to require for the physical objects and the samples

from the main contractor. Do you have that kind of criteria?

A. That has to do with contract administration. We are responsible for the works within the water pumps. Let me use the example of the water pumps to illustrate. We do have a list, but then the list is for reference only. The site staff will talk to the engineer and decide on which materials will have to come with samples, and at the outset that decision will be made, saying by which day the samples have to be submitted to us. Say if the material has to be submitted at an early stage, the sample has to be submitted early.

Q. Of course, the list would be subject to change, so who draws up the list?

A. We have a standard list.

Q. And who draws up the list?

A. The corporate team will do it, will draw up the list.

Q. You were talking about the chief architect. Does it fall under their portfolio?

A. If we are talking about pump rooms, I have two duties. I have to support the corporate team and I also have to look after the pump rooms.

Q. Let's just focus on the list. Let's not digress. To your understanding, which department was responsible for compiling the list, ie what materials have to come with

the samples?

A. There is a corporate team which is responsible, and the team is made up of representatives from different departments. For the BS part, for the water pump rooms, with regard to contract administration, there would be another chief building services engineer looking after this.

Q. Well, when we talk about the corporate level, it seems it's a very senior level. When you refer to corporate level, are you talking about another building services team which compiled this list? Is that what you meant?

A. Let me put it simpler. The list is used by different projects, so in terms of the use of resources, we can ask just one team to work on the list which can be used by various projects and that is good.

COMMISSIONER LAI: For the Kai Ching project, who compiled the list?

A. The Kai Ching project team drew up the list themselves.

MR KHAW: The question is who are these people on the team; which team is it?

A. With regard to pump rooms specifically, there is a master reference list which was being compiled. Then another CBSE, another colleague, who was looking after the compilation of the list.

Q. So he drew up the list?

A. Of course, he was assisted by somebody else. There is a whole team assisting him.

Now, on a project basis, we will look at the reference list and then decide specifically, for this project, whether everything in the list has to be complied with.

Q. Now we are talking about works within pump rooms, but what about the list for waterworks outside the pump rooms; who drew up that list?

A. For the list for waterworks outside the pump rooms, I was not involved so I was not clear about it.

Q. To your understanding, for materials to be used for waterworks outside the pump rooms, there should be a list; right? Do you know about that, Mr Ng?

A. Yes, I think there should be such a list.

Q. Good. I don't know whether this is true or not, as to whether materials should come with physical objects and samples and whether some materials should come with documents only would all depend on the need; right?

A. Yes, correct.

Q. For less important materials, for example bolts and nuts and so on, you don't have to have the samples for you to vet; right? These are small metal fittings or hardware. But for soldering materials, there is such a requirement; is that right?

A. Yes. In our submission, there is a vetting approval process for soldering materials.

Q. Mr Ng, in your witness statement, you said that with regard to water pump rooms, the samples required for which materials from the main contractor depends on the situation, and you said that for bulky objects the samples may not have to be required because there is no room for storing them on site, so for those materials, only documentary proof is required. But for some other materials which are not used extensively, then no sample is required.

A. That's right.

Q. Please wait for a while. Let's turn to B15.1, page 37811. This is on soldering materials. I know that you are responsible for pump rooms, but anyway I would like to ask you this question. This was the time when the Housing Department received the soldering materials from the main contractor who was vetting the materials. I would like to take you through the content of this form. Page 37811, you see that the dates are listed, and the contract title -- well, let's not dwell on those.

"General information", "Materials Description", Fry is the brand.

Let's turn to the next few pages. 37820, we can see

the catalogues related to the soldering materials. The information on the materials is shown here. Then we have the supplier's information. Page 37821, Prosperity Building Materials Co Ltd is the supplier.

Let's go back to the form. In the form, page 37811, it talks about Fry and the location. I suppose it's the locations where the material will be used. Then, towards the bottom, 2, it says the submitted sample is Fry. Which country manufactured it, it's Holland. Then in paragraph (f), "Appearance", "Sample attached", it is stated here.

This means that the sample was submitted. That's why you have put the words "Sample attached" here.

So I would like to learn about the procedure or the process. For example, for such materials, the main contractor will submit them to you and you will look at those, and then you check them against the documents, and then you approved them and then you filled out this form, showing your approval and verification.

Towards the top, "Details of submission" they needed -- it says "The enclosed sample and catalogue ..."; do you see that?

A. Yes.

Q. Well, that is above "(In English) General information", "The enclosed sample and catalogue/product certificate

... test report ... as described below" have been checked.

A. Yes.

Q. So the colleague in charge supposedly should put a tick against the information checked, sample? If there is a sample, put a tick against it. So after looking through this, can we make a comparison for materials coming without samples?

Okay, let's not deal with those without samples yet. Let's take a look at this form again. After the form has been completed, then the physical object, the samples as what Mr Yim, the CA, said, he said the sample would be stored in a locked-up store room, and in future, when the materials arrived and were delivered, before the site works, the materials would be delivered in large quantities of the site, the sample would be used for checking against the materials upon delivery. Then verification would be done on the materials arriving on the site; is that right?

A. Yes, correct.

Q. For materials used within the water pump rooms and also outside water pump rooms, the same approach applies; right?

A. I can't tell you the procedure for waterworks outside the water pump rooms, because I was not involved in

this. But for those within the water pump rooms, yes,
that's the process.

Q. Let's take a look at the very bottom part of the form.

Page 37813. Let's take a look at the bottom part, lower
part, paragraph 2:

"(In English) Track records in BMD for building
materials under C&M's surveillance is [checked]."

What does that sentence mean: "C&M's surveillance",
what is that?

A. There is another team within the Housing Department,
C&M. That is also a corporate level team which is
responsible for surveillance work. Actually, they will
go down to the works site to random check materials, to
ensure their compliance with the specifications.

Q. And it said that:

"The alerts issued and test failures recorded in the
Consolidated Laboratory Test Reports is ... not
attached."

In your witness statement -- the list here referred
to the material quality referred to in your witness
statement. Having seen the materials, the samples and
the documents, your colleagues would go back to the
record, wouldn't they, and see whether the materials
have ever got into trouble before, to put it crudely?
If they did get into trouble, then the material can be

picked up in the alert system. Let's say Fry, for instance, if they got into trouble before, then they would not give the approval; right?

Now, this alert system, how does it work? Is it the case that after every project, that you come up with a list of these dodgy products, that you detected problems on site and then you input these dodgy products into the alert system? How does it work, actually? Can you explain to us, please?

A. Well, the alert system derives the sources from many situations. In the process of installation, if there are problems, then the alert would be issued to all the colleagues. Even if it is not the Housing Department projects, if there are problems outside, after verification we would alert our colleagues as well.

Maintenance staff, during the usage period, if there are problems, then there would be alerts issued to our colleagues.

Q. I'd like to find out how this is done. If you find problems with certain materials in the project, is it the case that you find problems after testing, or is it the case that they are supposed to deliver grade A product but they ended up delivering grade B and it's not up to specification? How do you determine under what circumstances the materials would be going into the

alert system?

A. I must clarify this. With regard to BS, there may be other practices in other sections, but with regard to building services, if the project has approved material A and they ended up sending type B or whatever other products, then there will not be any alert issued. What happens that would trigger the alert is that there may be certain requirements in the specifications, but in the process of installation or in the process of usage, if a certain device would not be water-tight and there is water leakage, we would issue an alert and we would identify the causes of these leaks.

If there is leakage, the leakage can be caused by many factors. Maybe there are impurities in the water and that caused problems to the switch, or maybe there are problems with defects or maybe there were deterioration, or it could have been defects in the first place. So there were many considerations that we took into quantity.

Q. Is it the case that in the course of a project or after the project has been completed, you would normally compile a list of the dodgy materials and they will be put into the alert system?

A. Well, it's not the case that we do this after each project. We do have regular surveillance. For

different projects, we would random-check the materials.

As I said, the maintenance colleagues would also pick up

problems, if there are any, and notify us. It is not

the case that we would do this after each project.

Q. We try to improve the system. We want to make the system better and discard the undesirable aspects from the system. Let's say there are ten things in the system that have got into trouble, they fall short of the specifications. You want the project staff for the next project to understand it, and if you picked up all these problems with the materials in this project, you would like the staff of the next project to be made aware of them; so you do have the information, don't you?

A. Yes, we do have the mechanism, we do have the information.

Q. Let me put this to you: we looked at situations where samples were submitted, and there may be situations where samples were not submitted -- let me put this to you. B5.6, page 10961. Again, this is the same housing estate. In the vetting and approval process, you did look at the materials. We are dealing with a cast iron gate valve. Let's have a look at the table of submitted samples. (f), "Appearance": "See attached sample photo". Under these circumstances, does it mean they

merely showed you the photo, without the physical object?

A. Yes.

Q. However, in filling out the form, whether physical objects were submitted, it would say that they have submitted samples? Because here it says, "Submitted Samples". It doesn't say "sample" or "sample information".

A. Well, this is a standard form.

Q. So if it says "photo", it means there are no physical objects submitted?

A. Right.

Q. Let's have a look at the soldering materials. We looked at the vetting and approval. Samples were submitted for approval; you put the materials in the room. As we said a moment ago, when the materials are delivered on site, they will be checked against the stored materials.

Now, these samples are put inside a room. In the course of the project, if there is no need for further checking and verification, then the materials would just be left there. So, on the site, when the materials are delivered and you have to check against the samples, there is a form, 6210. Let me show you this form, 6210. That's in B1, page 240.

You have seen this before, Mr Ng, haven't you,

62010? You are aware of that?

A. I saw that recently.

Q. During the Kai Ching Estate was built, were you aware of this form? You were not?

A. I wasn't involved with this area of administration.

Q. All right. Let me take you through this. Form 6210 is basically about the consignment of materials arriving on the site; not the samples, but large consignments of the materials delivered on site. You have to do the checking and verification, and so on.

Now, with regard to the water pump room materials, they fall within the site supervision of your site; right? So you should be aware of form 6210, otherwise how would your team be aware of that?

A. We do have a system.

Q. So you don't follow this, do you?

A. No.

Q. Let's just have a look at this nonetheless. When we look at 240, we must look at 239 as well. 239 is very clear: "On Site Delivery Verification". So when materials are delivered on site, there is a verification process.

6210, page 240 refers to the materials that have to be verified. I have counted them: I think there are 32 items that are subject to verification.

A	<i>Annex: Realtime English Transcription based on floor / Simultaneous Interpretation</i>	A
B	Commission of Inquiry into Excess Lead Found in Drinking Water	B
	Day 10	
C	Let's deal with the plumbing work and not so much	C
D	the pump room for the time being. The plumbing work,	D
E	there are 32 items, according to this form, that have to	E
F	be verified upon delivery on the site.	F
G	A. Yes, according to this form.	G
H	Q. We understand that for vetting and approval of the	H
I	samples, there must be more than 32 items. Let's say	I
J	double the number; let's say you have to check 60 items.	J
K	Do you know exactly how many items that have to be	K
L	checked, that is the plumbing materials that have to be	L
M	subject to vetting and approval?	M
N	A. I don't have any idea.	N
O	Q. But presumably it must be more than 32?	O
P	A. Are you talking about the vetting conducted by ourselves	P
Q	or what?	Q
R	Q. Your team has to do the vetting and approval --	R
S	regarding the teams outside the pump rooms, the number	S
T	must be more than these 32.	T
U	A. Not necessarily. I don't think there are 32; I don't	U
V	think there are as many as 32. For the areas outside	V
	the pump rooms, regarding the piping work, no more than	
	32; less than 32.	
	Q. We are talking about the things outside the piping work.	
	Now let's deal with the piping work outside the pump	
	rooms. You vet and approve them, the samples have been	

approved and stored in the room. A lot of them are not in use for checking; right?

A. That I'm not sure.

Q. Let's have a look at site inspection and the process. I know that you are responsible mainly for the pump room. I would like to take up with you regarding the site inspection.

We heard from some other witnesses that they do have the manuals, the BS EN manuals. B1, page 34. B1, page 78. You are aware of this manual, are you?

A. Yes, the building services manual I'm aware of. We are not responsible for the contract administration, so we don't really look at this.

Q. But for the site inspection guide, in the pump room, you have to follow certain guidelines, which are different from this; is that right? Or are they similar things?

A. I didn't read this beforehand so I cannot pass any comment.

Q. Let's have a look at DASM-202, page 78, "Inspection Procedures", category A, 100 per cent, category B, 10 per cent, category C, random, and:

"(at least 3 times per block or 3 times per item or trade for external works)".

Do you have any knowledge of this, these categories of inspection?

A. It seems that the practice is not the same as the BS practice.

Q. What is your practice, in the BS side?

A. Basically, we have the inspection undertaken for different stages of work. When materials are delivered to the site, the contractor has to put together the inventory, delivery inventory record, and submit it to us. Once this has been submitted to our colleagues on site, our colleagues would get hold of these records, together with the record approved by the building services engineers, and check the materials. Now, after the sample checks, the record would be put into the site record book, regarding the brands, and so on. This is only sample checks, not 100 per cent. But in the delivery order, there is mention of the quantity. We would record the quantities. Now, these would have to do with the progress of work. If we run short of materials, we would chase them up.

Q. If you are not aware of this, please let me know.

Page 80, there are some examples cited for which 100 per cent check would be undertaken, 10 per cent or random checks, and so on. So you are not responsible for that?

A. No.

Q. You didn't see this before, did you?

C A. No. C

D Q. All right. Now let's have a look at the water D

E certification. As to certification, did you apply with E

F the Water Supplies Department form 46? I know that you F

G are responsible for the water pump room application. G

H There may be some difference, with regard to the pump H

I room, versus the fresh water supply system. I would I

J like to take this matter up with you regarding the J

K procedures. K

L First, B5.5, page 10597. L

M A. Yes. M

N Q. Can you see it? This is form 46, WWO46. This is for N

O application to the WSD for construction. We are talking O

P about fire services; right? You can take a look. P

Q "Downstream/FH", this is about fire services Q

R installations. R

S A. Yes. S

T Q. You can see the signature of the licensed plumber. T

U These are the works done by a subcontractor, and then U

V the AP signs it. This is within your area of work, V

right, the fire services and the pumps?

A. Yes.

Q. If we talk about fresh water supply, let us look at

10617.

A. Yes, I can see it.

Q. This is also a form, this is also form 46. In the middle, a little to the top, we can see "Plumbing covered by this form ... please specify", and you can see: "Fresh water supply, flush water supply". This is something outside the pump room and this is an application to do installations outside the pump room. The licensed plumber is Mr Lam Tak Sum, which is a different licensed plumber.

Here, I would like to ask you this question.

Usually, as you know, let us talk about your area of work, water pumps and fire services. Is it that when you submit the form, you have to submit an appendix?

A. Yes.

Q. And in that appendix, there is a list of the materials you are going to use?

Let us take a look. Page 10589. This is also about fire services water supply. This is also your area of work?

A. Yes.

Q. The licensed plumber is Mr Lam Tak Sum.

A. This may be talking about from the site boundary to the pump room, the section of the piping there, because if it is within the pump room, it would be signed by the licensed plumber of the subcontractor.

Q. Well, okay. Never mind. Usually, with these

applications, there is an appendix citing the materials used. During the process of construction, if there is variation of the materials in the appendix, who will submit updated information to the WSD?

A. I don't know whether I remember this correctly. In 2004 there was a circular letter from the WSD and any variation should be reported by the licensed plumber. Now, of course, they are talking about minor variations, and these would have to be updated by the licensed plumber.

Q. What you mean is, it would be for the licensed plumber to update information with the WSD?

A. That's correct.

Q. There are two documents that I would like to look at with you. You may not have direct knowledge of those, but I would like you to take a look because it has to do with your team.

First, the witness statement of licensed plumber Mr Lam Tak Sum, and I would like to show you a paragraph. It is Q1, page 17. Paragraph 4. This is about the interview between Lam Tak Sum and someone about lead content in water. I will read out paragraph 4.

Mr Lam said that with regard to Kai Ching Estate and Kwai Luen Estate and the variation of plumbing

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components used, as the licensed plumber of those projects, he actually said to the project resident building services engineer that this should be reported to the WSD, but the project building services engineer said that there was no need to submit again the revised WWO46 part I and part II. It would be enough just for communication to be made between the Housing Department and the WSD. That is why Mr Lam did not submit any waterworks form with regard to the variation of piping components.

Did you know about this?

A. I don't think this is possible, because basically we do not have any resident BSE on site.

Q. Okay. Apart from this, how is the co-ordination done? After form WWO46 has been submitted, during the entire process of construction, there may be some variation of materials, and you would expect the licensed plumber to report updated information to the WSD; is that right?

A. Yes.

Q. Now, would your department have done something like this before? And that is, okay, the LP, "You don't have to do it, you just have to tell us." Would that have happened, according to your understanding?

A. No, never.

CHAIRMAN: It says here there is a resident building

services engineer. You say, according to your knowledge, there is not such an engineer. But what about the main contractor or subcontractors? Do they have resident BSEs on site?

A. The main contractor should have one on site.

MR KHAW: Let us now look at another document, the witness statement of Ho Biu Kee: K1, page 42. This is the boss of Ho Biu Kee, Mr Ho Man Biu; that is his statement for this Inquiry. He asked questions put to him by the Commission.

On page 42, "Answer" -- let us go down a little, go down the page, starting from:

"(In English) The LP was also responsible for ..."

Can you see it?

A. Yes.

Q. "(In English) The LP was also responsible for complying with the statutory requirements imposed by the WSD. This included submission of revised WWO46 for the alternative materials."

Meaning if some materials have been changed, say another brand, he would have to submit the revised form. This is what is said here.

It continues:

"(In English) Thus the LP would co-ordinate with the HD on the submission of revised WWO46."

Meaning he will co-ordinate with you; when revisions are made, he would co-ordinate with you first. This would usually be done by the LP checking with the HD whether resubmission of the form is needed. This seems to be in line with what Lam Tak Sum said, meaning he would not do it himself but he would co-ordinate with you and then he would think about whether it is necessary to submit a revised form.

What is your comment on this?

A. From what I understand, the submission of forms like WWO46 is like this. The contractor would engage the licensed plumber, who will complete the forms, and then the forms will be sent to our staff. If our staff think the forms are okay, they will sign on it, and then we will send the forms back for submission.

If, in the early stage, materials have been submitted to the WSD and afterwards there was any change, and according to the 2004 circular letter, since our staff needed not sign on forms again, they can directly go to the WSD to do the revision.

Q. Sorry, let me clarify a point with you. You just said if the LP knows that in the process of construction there are changes, say for example there were five materials, but then he used different brands for three of those, and therefore they are different from the

specifications, but then these materials are used, in fact, for the project. So what you mean is, before he submits the revised form, he would actually talk to you?

A. Well, I should say, if there is any change, approval from us is required, certainly he will submit whatever change there is for our approval, and after the approval, according to that circular letter, we would expect them to complete the procedure and that is to go to WSD to revise the form.

Q. What you mean is, after making the changes, he will talk to you first and he will have to get your permission before he can submit the forms to the WSD again?

A. I should put it this way. We would have to approve the use of the new material. We absolutely would not say that we would not allow them to go to the WSD to change the forms.

Q. Sorry, I don't get it. Let me clarify. You say, okay, there are changes that are done during the process of construction. What you mean is if three out of the five declared materials have to be changed, then they have to tell you first?

A. Yes.

Q. You would have to give approval before they can use those three materials? They can't just go for the three materials which are different without your approval?

A. Okay.

Q. And then the materials might have been used for installation and then they would have to submit a revised form to the WSD. But before the submission of the form, do they have to check with you again that, "Look, I have three new materials and then I am going to submit the form"?

A. No, not necessarily then. Actually, I asked my colleagues about this. My colleagues gave me an example, and that is inside the pump room, actually materials were different and the licensed plumber did go to the WSD to revise the form, and signatures were put down to say which materials were changed.

MR KHAW: I may go to another topic.

CHAIRMAN: Let us now take a break for 20 minutes.

(11.36 am)

(A short adjournment)

(11.59 am)

MR KHAW: Mr Ng, I want to clarify something with you. In your witness statement, paragraph 42, page 37658 -- yes -- you said that during the works execution stage, what would happen.

Let's look at paragraph 41 first:

"(In English) In respect of solder this was used primarily for joints between copper pipework and its

fittings ..."

You said that normally copper pipeworks would be installed and solder would be used to connect them.

"(In English) ... but it did not apply tot water pumps and associated pipework installation inside water pump rooms ..."

That is to say the solder materials would not be used for pipework installation inside pump rooms, because inside these rooms, ductile iron pipes would be used and they don't need soldering materials.

And in paragraph 42 you said:

"(In English) Notwithstanding the above, short lengths of copper pipe and fittings were installed by the FSWP nominated subcontractor inside the fresh water up-feed pump rooms of blocks 1, 2 and 3."

You mentioned particularly about short length of copper pipe and fittings. To my understanding, such short lengths of copper pipes were connected to the water pumps. They were connected to the pumps?

A. No, that's not the case.

Q. Can you explain, Mr Ng, please?

A. When the water supply enters the pump room, the water would go into the sump tank for storage, and then we have a pump which pumps the water to the rooftop tank, and gravity will bring the water down thereafter. If

A	<i>Annex: Realtime English Transcription based on floor / Simultaneous Interpretation</i>	A
B	Commission of Inquiry into Excess Lead Found in Drinking Water	B
	Day 10	
C	the pressure is not enough, we need a booster to increase the pressure.	C
D	On the ground, there are facilities that may not	D
E	need any water pump. What we need is to make connection	E
F	with the mains. The copper pipes that we are talking	F
G	about here are the connections that are referred to from the water tank.	G
H	Q. "(In English) These short lengths of copper pipe ...	H
I	served to connect the plumbing installation stored by	I
J	the main contractor outside the water pump rooms of these domestic blocks."	J
K	So these short lengths of copper pipes are outside	K
L	the pumping rooms.	L
M	"(In English) The inspection of these short lengths of copper pipe and fittings was conducted by the building services team."	M
N	So this section, we may be talking about the water	N
O	pipes outside the pump room, they are still under your supervision?	O
P	A. Not outside the pump room but the section inside the pump room.	P
Q	Q. Yes, the section inside the pump room, the short section	Q
R	there.	R
S	A. Yes.	S
T	Q. "(In English) Due to the limited extent of works	T
U		U
V		V

A *Annex: Realtime English Transcription based on floor / Simultaneous Interpretation* A

B Commission of Inquiry into Excess Lead Found in Drinking Water Day 10 B

C involved, inspection of copper pipe joints and C

D soldering/brazing materials was not included in the D

E plan." E

F So this is not the key point, because the soldering F

G materials were not inspected in any case. So it doesn't G

H make any difference. H

I A. I did ask my colleagues. They did check the pipes and I

J they measured up to the specifications. J

K Q. Let me turn now to the licensed plumber, and also the K

L co-ordination of work. I did put a question to you L

M before. I would like to go into detail now. For the M

N pump room work, there is a need of a licensed plumber N

O who maintains communication with your team? O

P A. Where necessary, yes. P

Q Q. For the three months at Kai Ching Estate, from January Q

R to April 2013, for these three months, how many times R

S have you met the licensed plumber for the pump room? S

T A. I never met him. T

U Q. No, not in the three months? Did you communicate with U

V him by phone or whatever? V

A. No. Q

Q. So it is your team who would contact the plumber? R

A. Yes. R

Q. The licensed plumber would turn up at the site and he S

would communicate with your staff about the operation of T

U

V

the pump room, the progress of work, and it is your team that would communicate with the LP?

A. Yes.

Q. Do you have any record like, on the site, when communications take place between the licensed plumber and your team -- do you have any record of that?

A. No, we don't have any particular record, because in the course of installation, the nominated subcontractor has his own engineer and supervisor. So the role of the licensed plumber is what is required by the law.

Q. I am talking about the statutory requirements. I think you are talking about the Waterworks Ordinance. Under the Waterworks Ordinance, for these plumbing works, we need to have the supervision of a licensed plumber; you agree?

A. Yes.

Q. So the supervision of the licensed plumber -- let's not talk about the subcontractors and their supervision -- let us deal with the supervision by the licensed plumber, which is very important; would you agree that this is very important?

A. Yes, this is under the law.

Q. Other than the law, during the project, the LP is responsible for monitoring and supervising the workers to make sure that the work is done well?

A. Yes.

Q. As Housing Department, how do you ascertain whether an LP has turned up on the site or whether he just signed on the dotted line and disappeared, or is it the case that he would turn up once every week and communicate with the staff about any problems? What is your practice in this regard? How can you guarantee and make sure that the licensed plumber would, under the law, supervise the work?

A. In terms of work supervision, the CIC has a registration system for the workers. Under the contract, we also require that for work like this, there is a certain percentage required for licensed or registered workers. We are all aware that there is a limited number of licensed plumbers.

Q. The number, yes.

A. With so many projects in Hong Kong, should the licensed plumber be looking at everything, but as a minimum requirement we do have a requirement regarding skilled and semi-skilled workers; we do monitor the situation.

Q. That much I know. We did see some forms before about the number of fully qualified workers and the number of skilled and semi-skilled workers. We did cover the forms before then, what I understand. So, for different stages of work, you do have a record of the number of

workers.

But what I want to find out is -- let's brush aside the workers for the time being. Let's deal with the licensed plumber. He turns up -- let's zero in on the pump room. What requirements are there for the licensed plumber on the site?

A. None.

Q. So, to your understanding, is it the case that the licensed plumber doesn't always turn up on the site?

A. Yes.

Q. You can put it this way: because there are other projects as well, on average, for a particular project, you don't often see the licensed plumber?

A. Yes.

Q. In some cases, when you are the chief building services engineer or previously senior building services engineer, during the course of a project, did you have a situation where you never saw the licensed plumber?

A. Yes.

Q. Often?

A. I don't think you can say often, but it would be likely for it to happen. The licensed plumber would be there when water test takes place.

Q. We understand that under the law the licensed plumber has to supervise the work, but as far as the department

is concerned, did you think about a situation where the licensed plumber wasn't there and you might need to have a word with the licensed plumber, to make sure that work could be supervised properly?

A. No, we didn't think about it.

Q. Let me put this to you. For the workers, they come in and work. Now, there are subcontractors involved. When it comes to the plumbing work, normally these workers, were they brought in by the licensed plumber or were they workers brought in by the subcontractors? Do you have any knowledge of that? Or do they have their own teams?

A. I think there are different practices. For Kai Ching Estate, for instance, as far as I know, this nominated subcontractor has its own team of workers. They have their own labour. For the electrical work, they subcontract the work.

CHAIRMAN: What did you say?

A. Electrical work, yes, they were subcontracting further. That happened to Kai Ching Estate. For other projects, I think different situations may arise.

MR KHAW: Let's deal with the Kai Ching Estate. The plumbing workers -- you had more workers when you had to get on with the work quickly, but as far as you know, were the workers workers from the subcontractors or were

they workers from the team of the licensed plumber?

A. I don't know about this.

Q. What about other projects, other than Kai Ching Estate?

As far as you understand, would there be a situation where the licensed plumber would bring their own team of workers and the subcontractors would have their own team of workers?

A. If the licensed plumber is an employer himself, I am sure he would have his team of workers, but if the licensed plumber is an employee, then it may not be the case.

Q. So you have seen a situation where the licensed plumber as an employer would bring in the workers himself?

A. Yes.

Q. Let's not talk about where the workers come from or who brought them in. You do have a regular group of workers, do you?

A. Yes, we do.

Q. Finally, I would like to put this to you. For Kai Ching Estate, we heard from other witnesses that prefabricated units were used for the toilets and the kitchens, so the units would be precast elsewhere for installation on site.

For the precast units, is it part of the BS's sphere of work?

A. Not for the plumbing services. We do have the ducts for the lighting. That's our area.

Q. For these precast units, do you know where they came from?

A. Yes, we do.

Q. For Kai Ching Estate, do you know where they were manufactured? In mainland China?

A. Yes.

Q. You said, when they undertook the precast units, were the workers skilled workers and semi-skilled workers? You didn't know about that, did you?

A. No.

Let's deal with the BS. We do need the ducts for the lighting fittings, under the law. Before work is complete, the REW, registered electrical workers, will have to check and sign on the paper, and they did do that.

Q. The one who signed on the form, was he part of your team?

A. He was from the main contractor.

Q. Now, from the Housing Department's point of view, these precast units for water and lighting, they didn't have to inform you of the kind of workers that they hired for the work?

A. No, they didn't.

C Q. Before the break this morning, I put a question to you C
D about form 46. The licensed plumber, does he have to D
E fill out the form or what -- I put a question to you E
F this morning. Ms Cheng has reminded me that there is F
G a circular letter from the Water Supplies Department. G

F That is C3, page 2305. This is a circular letter F
G from the WSD in 2004. It's about WWO46 submission G
H practice. H

H I talked about the process of submission. I would H
I like you to have a look at (g): I

J "(In English) Whenever there is any minor alteration J
K initiated by the LP, LP can mail or fax a copy of K
L previous WWO46 with his/her signature and date on each L
M entry of such alteration(s). This needs to be done M
N before staff of the Water Authority conducts N
O inspection." O

N So this is the circular referred to. If there are N
O any alterations, then he has to make this submission. O

O But before the break this morning, you told us that O
P when it comes to alteration, they would talk to you P
Q about this and they did need to make the submission. Q

Q I have no further questions. Q

R CHAIRMAN: Right. Other counsel? Mr Pennicott. R

S Cross-examination by MR PENNICOTT S

T (All questions from Mr Pennicott were in English) T

MR PENNICOTT: Good morning. So there's no misunderstanding on your part, I represent China State, who were the main contractors for the Kai Ching Estate.

A. I beg your pardon. I was just picking up the headphones. Can you repeat, please?

Q. I apologise. Just so there's no misunderstanding on your part, I represent China State, the main contractors for Kai Ching. You understand?

A. Yes, I do.

Q. I have just a few questions for you. I won't be very long. First of all, could I clarify with you your involvement on Kai Ching? I would like to do that, please, by reference to page 37729 of bundle B15.1.

Mr Ng, this is a helpful schedule attached to Mr Yim's witness statement, which sets out the project team information of the Housing Authority for the Kai Ching project.

If you look under the heading "Group" and you travel down the page, you will see a subheading, "Chief building services engineer"; do you see that?

A. Yes, I do.

Q. And to the right of that we see highlighted in green, "CBSE/2 (acting)", I assume that stands for, and then do we see your name?

A. Yes, I do.

Q. So is it correct that from January 2013 to August 2013, you were the acting CBSE/2 for Kai Ching?

A. Correct.

Q. Then underneath that you will see "CBSE/2", then your name again, and from August 2013 to the present you have been and still are the CBSE/2 for Kai Ching?

A. Correct.

Q. So does this follow, Mr Ng: that you have been involved as the CBSE/2 throughout the maintenance period, that's the two-year maintenance period, on the Kai Ching project?

A. Correct.

Q. If you look up the same page that we are looking at, to the project architect, you will see highlighted in brown the second entry, "A/23, Elaine Wong"; do you see that?

A. Yes, I can see that.

Q. Can you confirm that Ms Wong is and has been the project architect for Kai Ching and still is the project architect?

A. I can confirm that.

Q. Could I then, lastly on this page, for the purposes of the question coming in a moment, ask you to look right at the foot of this page. You will see the entry under "Project building services engineer", highlighted in brown, "BS E/C2, HM Yeung"; do you see that?

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A. HM Yeung, yes, the last entry, yes.

Q. Does Mr Yeung report to you, Mr Ng?

A. Yes, he does. He reports to me.

Q. We see, as you have seen, that your name is highlighted in green when you were the acting CBSE/2, and if you look at the legend at the bottom of the page, Mr Yim has told us that means "Officers who signed the completion certificate of domestic blocks"; do you see that?

A. This is to sign the completion certificate of domestic blocks in terms of building services.

Q. Yes, and is it correct that you signed that form or that certificate?

A. That is an internal memo, that with regard to building services installations of domestic blocks, these have been completed.

Q. Did you sign the certificate or the internal memo that gave rise to the certificate?

A. I don't really get the question.

CHAIRMAN: You yourself, did you sign those?

A. Yes, I did.

MR PENNICOTT: And prior to signing, what steps did you take to ensure that the building services works had indeed been completed to your satisfaction?

A. Basically, before signing that memo, our colleagues would submit inspection records, including final

inspection records. These would be put on file, and they would inform me that they had already done all the records that were required and they had done all the tests necessary. Also, in terms of building services, we had to get different government departments to do inspection. Say, for example, lifts and escalators, we needed to go to the EMSD; and then fire services, we had to approach the Fire Services Department to do the inspection; water pumping, the WSD. We needed to get the confirmation from these departments they had done the inspection and the results were satisfactory before we would sign the completion memo.

Q. So does it come to this, Mr Ng: as far as you are concerned, you had in front of you a body of documents gathered from various sources upon which you relied to then sign the certificate?

A. You can put it that way.

Q. Mr Ng, could I then take you to a slightly different topic. Could I ask you please to be given file B5.1, and could you go, please, in that file to page 7871.

A. Yes.

Q. That should be the front sheet to the PRE preliminaries forming part of the specification to the contract.

A. Yes, I can see that.

Q. I see everybody's screens are blank. Oh, we are okay.

If you go over the page to page 7872, Mr Ng, you will see a table of contents for the PRE preliminaries; do you see that?

A. Yes, I can see that.

Q. If you would go, please, to page 7874, there is an item towards the top of the page -- it's the fourth entry down I just want to look at with you briefly. It's "PRE.B7.150.P, Environmental consultant"; do you see that?

A. Yes, I can see that.

Q. I apologise, I am afraid these documents are all in different files, but if you can go, please, to file F1, because I think it's the only place that this appears. If you go, please, in that file to page 120.

A. Yes.

Q. Mr Ng, for your benefit and for the benefit of the Commissioners, if I can just make the point that this is an attachment to one of the witness statements served on behalf of China State, but as far as I am aware it's the only place that this sheet appears anywhere else in the bundles. I may be wrong about that.

You will see the last entry on page 120, Mr Ng, "PRE.B7.150.P" that we were just seeing in the index:

"The environmental consultant is Messrs Scott Wilson Ltd", and their address is given.

Were you aware that an environmental consultant had been appointed by the Housing Authority in relation to Kai Ching?

A. If you are talking about a particular consultant, I might not know it at that time, but in general I know that because we had to do the BEAM assessment, the Housing Department did engage a consultant to do it.

Q. Yes. The Kai Ching contract, Mr Ng, was awarded to China State in June 2010, and the formal contract was entered into in May 2011. Do you know whether it was common practice for the Housing Authority to appoint an environmental consultant, or was this a bit of a one-off, because of either the BEAM requirements or because of the special challenges of the Kai Ching project?

A. Generally speaking, our department would commission consultants for this kind of work.

Q. So far as I'm aware, Mr Ng, and I will be corrected by others if I am wrong, the Kai Ching contract is the only contract of the 11 affected estates with which we are concerned that has the HK-BEAM requirements in it. Are you aware that an environmental consultant has been appointed on any other of the 11 affected estates?

A. I am not sure, but if you were talking about an earlier stage, then probably we didn't do it, because HK-BEAM

was not common yet. But I'm not sure, I cannot say, for the estates completed at a later stage.

Q. Yes. I've only had an opportunity to look at, so far, the Wing Cheong contract, which is, if I can put it shortly, a Paul Y affected estate. There is no provision in that contract for an environmental consultant, and that contract was entered into after the Kai Ching contract. So that's why I am asking the question as to whether or not it was standard practice. But I think your answer is you are not sure, you don't know?

A. That's true. I am not sure.

Q. In your answer to one of my questions a little earlier, you connected, if I can put it that way, the appointment of the environmental consultant to the HK-BEAM requirements. Is this right, that your understanding is that the environmental consultant was engaged because of the HK-BEAM requirements, or that was one reason for their appointment? Is that right?

A. That is my understanding, correct.

Q. We heard some evidence last week that the Housing Authority made an application for HK-BEAM accreditation, that is platinum accreditation. Were you aware of that application?

A. I knew it.

Q. Were you involved in that application in any way?

A. Yes, because in the BEAM assessment, some of the items had to do with building services.

Q. What was your involvement in the application, Mr Ng?

A. Primarily, my colleagues helped to do this. We had a consultant, we had to submit information to the consultant to do the relevant assessment and some applications. So my colleagues supplied information on building services to the consultant.

Q. My understanding is that Mr HM Yeung, the gentleman that I mentioned earlier who we saw on the sheet, was primarily involved in the application so far as building services is concerned. Is that correct?

A. He took part, but I actually had two BSEs on this project. When the other colleague was also involved, I dare not say for the moment. Maybe to some extent.

Q. My understanding is this, Mr Ng, and please confirm or otherwise, if you know this to be correct: that the environmental consultant was the person or company that determined the nature of the tests that would be done; is that right?

A. From what I understand, they would advise us what tests should be done, but how did they base their advice, I believe they would consult the BEAM Society, to get advice, say, for example, if the requirements were not

A	<i>Annex: Realtime English Transcription based on floor / Simultaneous Interpretation</i>	A
B	Commission of Inquiry into Excess Lead Found in Drinking Water	B
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C	exactly clear.	C
D	Q. So it's your understanding that there would have been discussion between the consultants and the HK-BEAM Society, to come up with the test or criteria that should be tested?	D
E	A. I believed that to be the case, and that is what we hoped to do as well.	E
F	Q. And so far as the locations of where the tests were done, again was that a matter for the consultant or for the Housing Authority or for somebody else?	F
G	A. Sorry, can you please repeat the question?	G
H	Q. Yes. Obviously, certain tests had to be done.	H
I	A. (In English) Mm-hmm.	I
J	Q. Therefore, locations had to be decided upon as to where they could be done.	J
K	A. (In English) Mm-hmm.	K
L	Q. Was that a matter for the consultant or the Housing Authority or somebody else?	L
M	A. I think we would have consulted the consultant, definitely. But as to the process of decision-making, we might have been involved.	M
N	Q. Did you see, Mr Ng, the results of the various tests that were carried out which led to the accreditation being successful?	N
O	A. Recently, yes, but I didn't do it before.	O
P		P
Q		Q
R		R
S		S
T		T
U		U
V		V

Q. If we still have in front of us -- perhaps we've gone somewhere else -- file F1 again, page 158. You should have there a letter of 17 June 2014 from China State to chief architect/2 but sent for the attention of Mr HM Yeung, BSE/C2; do you see that?

A. Yes, I can see that.

Q. We also see, at the foot of the page, that the letter was copied to A/23, Ms Elaine Wong, the project architect that we identified earlier?

A. Yes.

Q. Then, just by way of example, if we look at page 159, we see a test report, and it appears that the tests have been carried out by ETS-Testconsult Ltd; do you see that?

A. Yes, I can see that.

Q. And we can see various information given, and then in particular we see the result, and then under the heading "Customer sample ID", we see the location of where the sample was taken; do you see that?

A. Yes, I can see that.

Q. Then without going into any detail -- and no further questions for you -- we see the type of tests that were carried out, the method that was used, and the results; do you see that?

A. Yes, I can see that.

C Q. We have a series of pages, we don't need to look at
D them, that follow this, which record the results of the
E tests carried out by ETS-Testconsult Ltd.

E And Mr Ng, can you confirm that it was on the basis
F of those documents that the Housing Authority applied
G for and successfully obtained the platinum accreditation
H from HK-BEAM Society?

H A. This should be just one of the requirements of HK-BEAM,
I and other areas of documents would have been submitted
J in order to get the accreditation.

J Q. I understand that so far as water quality are concerned,
K these are the documents that were relied upon by the
L Housing Authority?

L A. Should be.

M MR PENNICOTT: Thank you very much. I have no further
N questions.

N CHAIRMAN: (In English) Thank you.

O Mr Wong?

P Cross-examination by DR WONG

P DR WONG: Mr Ng, I am from the Water Supplies Department.

Q I have several questions for you.

R You are responsible for the water pump rooms. For
S plumbing works outside the water pump rooms, you are not
T responsible for that; right?

T A. We are responsible for the design and the specification.

Q. I would like to ask you -- paragraph 13 of your witness statement, page 37651. We know that for plumbing works inside the water pump rooms, they were being worked on by the FSWP nominated subcontractor; is that right, Mr Ng?

A. Yes, correct.

Q. So that's different from the plumbing works outside the pump rooms? Those were undertaken by the domestic subcontractor engaged by the main contractor; right?

A. Yes.

Q. It says:

"(In English) The FSWP nominated subcontractor was selected and nominated by the HA and overseen by the CBSE."

The CBSE is yourself; right, Mr Ng?

A. Yes.

Q. I would like to ask you, generally speaking, on what criteria would you be selecting this nominated subcontractor?

A. With regard to FSWP nominated subcontractor, at the HD we have a contractors list. If a company wishes to be included in the subcontractors list, they should meet with certain requirements in terms of the manpower set-up and financial situation. There are certain requirements on those aspects.

C Every time we tender for the FSWP nominated C
D subcontract, we will look at this list and then we will D
E select certain subcontractors, for them to submit the E
F tenders. Every six months, first of all, we would look F
G at what contracts will be upcoming in six months, and G
H then the procurement department, colleagues in the HD, H
I will ask the contractors on the list whether they are I
J interested, and if they show interest in submitting J
K tenders then they would also indicate their preference. K
L For example, for A project, this is their preference; B L
M project, this is their first preference; and then they M
N would show all these indications. N

K Then after that is done, our colleagues will then K
L decide that for every project, a certain number of L
M subcontractors will be asked to submit tenders, and when M
N the right time comes they would get the invitation. N

N Q. Now, after they have submitted the tenders and bids, N
O what is the selection process like? For the FSWP O
P nominated subcontractors, what criteria or standards P
Q would you adopt in selecting them for working on the Q
R pump rooms? R

CHAIRMAN: Why do we need that piece of information?

R I would like to know. I don't need that piece of R
S information. S

DR WONG: All right. Then let me change to another subject. T

Mr Ng, do you know why there is a difference in the procedures for the plumbing works outside and within the water pump rooms?

CHAIRMAN: He has already answered that question, because within the pump rooms there are other installations like electrical installations and so on.

DR WONG: Now can I refer you to paragraph 41.

Paragraph 41, please. You said:

"(In English) In respect of solder this was used primarily for joints between copper pipework and its fittings but it did not apply to the water pumps and associated pipework installation inside water pump rooms where ductile iron pipes and stainless steel pipes were used and hence there was no risk of having leaded soldering joints."

I would like to confirm with you, for materials used inside the pump room, you were using iron pipes and stainless steel pipes. Is it because of what the chairman said, the installations inside the pump rooms were different and hence there is this difference in the use of materials?

A. Why we were using ductile iron pipes and stainless steel pipes within the water pump rooms -- there are mainly two reasons. Within the water pump room environment, when workers do repair work there, they would have to

climb up and down. The water pump room is not spacious. There is no wide corridor for them to get in and out of the pump room. So they might have to step on the water pumps themselves. So if we use copper pipework, they are vulnerable to damage by people stepping on it. So the iron pipes and steel pipes are better in that regard.

Also, these iron pipes and steel pipes use mechanical joints. For ductile iron pipes, they use mechanical joints, with screws and joints, and for stainless steel pipes we use screws and bolt and we don't need soldering joints. So that means, when we do repair work, we have to dismantle the pipeworks and that makes the dismantling work easier and we can put them back on more easily. Hence the design.

Q. So for all the plumbing works outside the pump rooms there are no such considerations; is that right?

A. Yes, because for outside works there is no repair work.

Q. Now, I would like to ask the price differences; are they cheaper than the copper pipes?

A. No, that's not the case. In the world market, copper prices fluctuate. These are futures commodities.

Sometimes, they may be more costly than stainless steel pipes and sometimes they may be cheaper.

Q. The last sentence here is because ductile iron pipes and

A	<i>Annex: Realtime English Transcription based on floor / Simultaneous Interpretation</i>	A
B	Commission of Inquiry into Excess Lead Found in Drinking Water	B
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C	stainless steel pipes were used, there was no risk of	C
D	having leaded soldering joints. If soldering materials	D
E	were not used inside the water pump rooms, the risk of	E
F	having such leaded soldering joints is zero; right?	F
G	A. Correct.	G
H	Q. There is no risk so there is no test; right?	H
I	A. Yes, correct. Let me add, there might be pipeworks, so	I
J	fittings which may be composed of lead, but then that	J
K	meets with the requirements of the WSD.	K
L	Q. Thank you very much.	L
M	I would like to ask another question, in relation to	M
N	paragraph 43. The last sentence you put there is:	N
O	"(In English) However, a dedicated building services	O
P	team was resident on site for its duration."	P
Q	Can you see that?	Q
R	A. Yes, correct.	R
S	Q. I would like to ask, what do you mean by "resident"?	S
T	Can you explain? How long was he resident there? What	T
U	was he doing there?	U
V	A. The building services team, we're talking about the	V
	inspector, they were full-time at the site.	
	Q. What do you mean by full-time, Mr Ng?	
	A. 9 to 5.	
	Q. What do they do normally at the site with regard to	
	inspections?	

C A. They have a diversified work portfolio. With regard to
D inspections, those would include, say, when the
E materials arrived at the site, they have to do sample
F checks, and during the installation works -- well, if
G there was in-process inspection as well, this is
H something they would do.

I After the installation, we would also do final
J inspection and witness tests, and after all these were
K done they had to report back to the engineer and to
L myself, to see whether I could certify the completion of
M the works.

N DR WONG: Chairman, I don't have any further questions.

O CHAIRMAN: Perhaps Mr Lam will go this time, or maybe you
P should use Mr Lam's place now.

Q Cross-examination by MR TAM

R MR TAM: I speak on behalf of the three residents of
S Kai Ching Estate and Kwai Luen Estate. I have a couple
T of questions only.

U Mr Ng, in relation to paragraph 20 of your witness
V statement, it says: the complete plumbing system was
designed in accordance with some in-house guidelines.

Can I also refer you to paragraph 28.

You said: insofar as the building services engineer
in relation to the project concerned, it would conduct
tests on the materials. How do you do the checking and

how do you do the testing?

A. In our specifications, it sets out clearly that the contractor, when they submit this information, they should include relevant test reports and certificates. Say, for example, the supplier might provide them with tests from certain laboratories, the results of such tests, and for some other materials the WSD would do the vetting. So the relevant information would be submitted to us.

Q. Well, in simple terms, you are referring to reports and documents, certain forms, certain reports, and then you would check whether these reports' descriptions meet with the British Standards; is that correct?

A. Yes.

Q. I would also like to ask you what types of measures have you put in place to ensure that they are meeting with the most updated British Standards?

A. Yes, we do regular reviews on our present specifications, on the British Standards and international standards, whether they are really updated.

Q. Would you be updating your internal guidelines then?

A. Yes, we will do that. Of course, it may not be done at the same time or in sync with the updated standards. We might do one thing after another.

C MR TAM: Thank you. C

D Cross-examination by MR CHUNG D

E MR CHUNG: I have a couple of questions, very short
F questions. I represent Yau Lee. E

G Earlier on, COI's counsel asked you certain
H questions in relation to the soldering materials, and he
I asked about whether the soldering materials should be
J submitted to the HA for vetting, and you said that in
K the contract there was no such requirement. It is just
L that the main contractor would take the initiative to
M submit the materials. M

N A. Let me put it this way. The contract said that the
O relevant documents have to be submitted but not the
P samples. P

Q Q. All right. Then I would like to follow up. You are
R talking about the hardware, the samples of the hardware.
S You said that those don't have to be submitted to the
T HA? T

U A. Yes, for screws and bolts and nuts, no. U

V Q. Then the next question is, for the soldering materials,
the samples, do they have to be submitted? At that
time, you said that yes, the soldering materials had to
be submitted. Can you explain? V

A. I said that in the contract, we said that only documents
had to be submitted, but not necessarily the samples.

Q. I just would like to clarify with you, because you were asking about -- the questions were about the samples of the soldering materials. Your answer now is that samples of soldering don't have to be submitted; right?

A. Yes, in our contract, samples were not required, but as a matter of practice, these samples are usually provided.

CHAIRMAN: All right. Is there any cross-examination here?

MR HO: Several short questions from myself.

Questioning by THE COMMISSIONERS

CHAIRMAN: For myself, I will have a go first, and if needed, perhaps you can follow up with cross-examination in the afternoon.

This is an old question, I would say. I would now like to refer you to B2, page 779. Let's go further down the page. You can see -- further, further down -- SUP 1.W320.3. That was the 2000 version of the specifications, in your Specification Library. It sets out here "Lead based materials" and there are a number of references and then it says:

"Do not use jointing materials based on red lead."

This is the year 2000 edition of the specifications.

Now let's look at the next edition, which is the 2004 edition. Again, it's B2. Page 646.

Further down the page, please. All right. M150.4.

C Then further down, M160.4, these two sections, please. C

D That has to do with the BS 1254 and has to do with the D
E solder used in capillary joints, and so on. So you can E
F see that comparing the 2004 editions, there is a major F
G difference here? G

F A. Yes. F

G CHAIRMAN: I would like to know, on the part of the HA, for G
H this Specification Library, for the compilation and the H
I amendment at the HD, rather, is it the responsibility of I
J the chief building services engineer? J

J A. For the 2000 edition, no, that was not the case. J

K CHAIRMAN: Yes. Hold on. For that edition, who was K
L responsible? K

L A. I am not very sure. It may be the architect's team. L

M CHAIRMAN: What about the 2004 edition? Who was responsible M
N for compiling the specifications? It should be the N
O building services engineer? O

O A. Yes. O

P CHAIRMAN: Was it the chief building services engineer? P

Q Maybe he didn't do it personally but somebody beneath Q
R him might assist him, and then these people will tell R
S the chief engineer and put it in there. And then for S
T the chief building services engineer, did he have to T
U tell the chief architect that the updated version, would U
V be included? V

C A. Well, I was involved in this as well. C

CHAIRMAN: Well, then let's listen to how you were involved.

D It's after 1 pm, and we will continue at 2.30 pm. Thank D
E you. E

(1.00 pm)

F (The luncheon adjournment) F

G (2.31 pm) G

H CHAIRMAN: This morning, Mr Ng, you said you had H

I involvement. Now let us hear from you why there was I
this change.

J A. Can I please be shown the relevant papers? J

CHAIRMAN: You would like to look at the one in 2000?

K A. I would like to look at both the one in 2000 and also K
L the one in 2004. L

M CHAIRMAN: The one that was issued in 2000, that's in B2, M
N page 779, and the one that was issued in 2004 is in B2, N
page 646.

O Let us look at page 646 first. This is the O
P specifications of 2004. I believe they should be the P
same for 2008 and 2012.

Q A. As I said before, I was involved in the drafting of Q
R these specifications. At that time, I was not involved R
in the 2004 version, but the 2002 version.

S CHAIRMAN: Ah, so there was another version in 2002? S

T A. Yes, it was called SUP 1. T
U
V

CHAIRMAN: So it was the version in 2000 but it was improved upon?

A. That is correct. There was improvement.

CHAIRMAN: Let us look at the version for 2000, and that is B2, page 779. In 2002, there was a version -- how is it different from the version we are seeing, which is the 2000 version?

A. Well, there are major differences. Actually, that version would be more similar to the version of 2004.

CHAIRMAN: Okay. Do you have a copy of the 2002 version?

A. I should have brought it with me. Please give me a moment.

CHAIRMAN: Okay.

It's not in our bundle; is that right?

COMMISSIONER LAI: Yes, it is in our bundle.

CHAIRMAN: Where is it? I am talking about the 2002 version.

COMMISSIONER LAI: Ah, the 2002 version, then we don't have it.

CHAIRMAN: If we have it here, we can photocopy it. If he can find it, we can photocopy it.

A. I have found it.

CHAIRMAN: Please give a copy.

Okay, apart from the versions in 2000, 2002 and 2004, in those four years, are there other versions?

C A. I cannot be sure, because I was only involved in the
drafting of the 2002 version. C

D Can I be shown a photocopy? D

E CHAIRMAN: Oh, you have taken it for photocopying. E

F Can I ask you this: the versions I have at hand are
at four-year intervals: 2000, 2004, 2008 and 2012. F

G Actually, you issue one every year years, or is it that
you would issue one whenever necessary? G

H A. In principle, we issue one every half-year and we can
I revise it every half-year. I

J CHAIRMAN: So there are two every year? J

K A. That is correct. May I please supplement? K

L CHAIRMAN: Yes, please do. L

M A. In terms of versions, if there are major revisions, then
we will have one for 2000 and another one for 2004. The
entire document will be reissued. But if the changes
N are minor, then we will inform other colleagues through
other channels. N

O CHAIRMAN: You inform colleagues through other channels --
P what do you mean? P

Q A. We have DCMBI, Development and Construction Management
Board Instructions. The one that I have just given for
R photocopying also includes such one DCMBI. R

S COMMISSIONER LAI: Can you let us know the composition of
this board? S

T

T

U

U

V

V

C A. The board is mainly made up of people in the development
and construction management or division. C

D CHAIRMAN: So there are chief architects, chief building
services engineer -- D

E A. Chief structural engineer and the chief professionals. E

F CHAIRMAN: -- and also chief quantity surveyors, also chief
geologists. F

G A. Geotechnical. G

H CHAIRMAN: Does the board hold meetings every half-year? H

I A. No, once a month. I

J CHAIRMAN: What about at that time? J

K A. I cannot remember. K

L CHAIRMAN: In the year 2000, what rank were you? L

M A. Engineer. M

N CHAIRMAN: Just engineer? What about 2002? N

O A. I might have been acting in a senior post. O

P CHAIRMAN: Okay. P

(A two-minute pause)

O I'll ask questions when copies are distributed to
P everyone. P

(A five-minute pause)

Q (Handed). Let's have two copies for each row and
R ask them to share, please. Two copies for each row of
S people. S

T Please distribute them first to those at the back, T

T

U

V

T

U

V

C and then starting from there, distribute them to the
D front people. Those at the back, please, distribute
E copies to them. (Handed).

F All right, we can start now. So please explain to
G us, Mr Ng.

H A. You want me to explain this document or you want me to
I explain the parts related to brazing or what?

J CHAIRMAN: If you know the history of the changes, please
K give us all the details.

L COMMISSIONER LAI: If you can let us know the differences in
M the version of 2000 and 2002, then that would be best.

N A. I will try my best. For the version in the year 2000,
O this morning I was asked who was responsible looking
P after that. I checked again. It should be the
Q architectural team's colleagues, and before 2002 it was
R said that the building services colleagues would be
S there to provide support. Previously, we used
T uPVC-lined GI pipes for drinking water system. If
U I remember correctly, at that time, they were using
V mechanical jointing, and the feedback from the
maintenance staff was that there was water leaking, and
that had to do with the workmanship which was not really
satisfactory, and uPVC-lined GI pipes cannot be
purchased in hardware shops; they have to be purchased
in bulk. So residents, if they need to do interior

fitting to their own flat, they would replace these pipes with copper pipes because they couldn't get these uPVC-lined GI pipes in the market.

And for various reasons -- and also we have looked at what's happening in the private development projects, a lot of copper pipes were being used.

So at that time we thought: let's come up with another specification which allows the use of copper pipes, and then we will leave it up to the contractors to make the decision. In other words, when they submit the tender, they can choose uPVC-lined GI pipes or copper pipes. As long as they make it clear in the tender, then that's good enough.

So the drawing of the specification, the work of doing that was entrusted to us, and I participated in the process. So, in the whole process, apart from trying to obtain certain information ourselves, we also consulted the industry, the suppliers and the contractors, how their experience went with such types of pipes.

For Housing Department, well, we have never used copper pipes in large quantities. This was a new beginning for us. I was one of the specification drafters, and from my perspective the first thing that we had to do, when we drafted the specifications, we had

to look at the relevant regulations and laws, whether there are requirements relating to it. So we looked at the Waterworks Ordinance and we also looked specifically at the brazing and the solder, because the area covered was really vast, and we had to abide by BS 864, part 2. As the drafter, we would look at whether the BS 864-2 was still valid. At that time, it was obvious they had become obsolete and they had been replaced by BS 1254-1.

Now, as a practice, whenever there are new standards coming up, we will look at them in detail, the reason being that with the new standards coming into effect, are there any products which are available in the market which match with those standards? So we would look into that, maybe there should be a grace period where new standards and old standards could be used at the same time. This is something that we had to consider.

In looking at the standards at that time, with regard to the requirement of solder, in BS 1254-1, that was only set out in table 6, and the various requirements were set out. But for that table there was also leaded solder and also lead-free solder listed there. And at the footnote of the table, there was this small print saying that installation of water for human consumption, no leaded solder should be used. So that was really common sense. Lead is hazardous to health.

The way it was presented, it was not very clear as a footnote. So, as a drafter, we had the responsibility to make that clear in our own specifications.

So, looking at the document just distributed, SUP 1, related specifications, SUP 1.5.M178 -- rather, can I refer you to page 11. You can see that soldering alloys comply with BS EN 1254-1, table 6, sections II and III. So that's table 6. And sections II and III are about lead-free solders.

And in the second paragraph we said that the use of integral solder fittings is permitted, ie fittings coming with solder, coming in with solder is permitted, but of course they have to comply with BS EN 1254-1 as well. And for BS EN 1254 about integral solder fittings, there is a requirement set out and lead solder should not be used; that's what it says.

So for this reason and for the purpose of clarity, we want to avoid the situation where solder users might mistake the text. So additional solders or integral solders, only lead-free soldering materials should be used.

To my understanding, it is not only us who was drafting this. Other government departments, including the Architectural Services Department, their specification, when we talk about the 1993 edition, at

that time we were still using the BS 864 standards.

They were also talking about lead-free solder.

Okay, 1993. As a specification drafter, this is what we usually do. In other words, if we see anything that is unclear, we would clarify it in our own specification.

CHAIRMAN: Okay, we understand. Now I'd like to ask you this question. Look at the one above, SUP 1.M176.N.

In EN 1254-1, you saw table 6. Those two things were separated and put in here; is that right?

A. Correct.

CHAIRMAN: You have EN 1254-1; right? Okay. I understand.

In other words -- sorry, let me ask you this. At that time, you were a building services engineer. You would certainly report to your senior officer what you saw, right, the senior building services engineer, and the reports would be submitted up the ranks; is that right?

A. Well, if anything would be said particularly about this, I am not sure, because we would be drafting the specifications and they would be vetted up the ranks.

CHAIRMAN: And in the end, if something goes into your specifications, by common sense I would think that your senior officers would know why something was put into the specifications; is that right?

A. Well, if there is anything that appears to be particular

or peculiar, it would be asked.

COMMISSIONER LAI: Mr Ng, just now you said that you were responsible for drafting this paragraph. So was this your proposal?

A. Well, at that time we had a team together, and we also asked the industry. Now, whose proposal it was, I can't remember, but from the perspective of a specification drafter, we saw the BS or BS EN, and it would be natural for us to do something like this.

COMMISSIONER LAI: The board that you talked about, the DCMB, do they have meeting minutes?

A. They should have.

COMMISSIONER LAI: Could we go back to those minutes and be able to see the process of discussion about this item?

A. Well, I don't know, because it depends whether it was actually discussed.

COMMISSIONER LAI: Because if I look at this version of 2002, everything is set out clearly, and if we look at the versions for 2004, 2008, 2012, they are more or less the same. In other words, there was some discussion before this was put into the specifications, and at that time it was clear that lead-free solder should be used to join the pipes.

A. Well, I think an average person would also think we should use lead-free solder.

CHAIRMAN: Well, wait. What you mean is at that time the Architectural Services Department also had similar specifications?

A. Yes, the Architectural Services Department.

CHAIRMAN: In other words, lead-free category solders should be used?

A. It is not something new.

CHAIRMAN: Okay, so it's not something new. And what about (d):

"Use only a non-corrosive type of flux ..."

So this is a kind of colophony soldering paste. In 1254-1, I could not see any mention of flux.

A. Well, it might not be ourselves, because apart from studying the standards, we also had to look at materials catalogues, and we would also take reference from handbooks.

Here, it says, "Use only a non-corrosive type of flux that is recommended by the solder alloy manufacturer."

Actually, this is a very common type of writing, in our technical specifications, that it should be recommended by the solder alloy manufacturer, because when two materials interact during the stages of installation or operation, very often we would ask the manufacturer to recommend which material to use.

Let me give you an example. In terms of electrical appliances, the ducts that are used to carry wires for the lamps are plastic and we would use glue to join them. This is because different kinds of glue may have chemical reactions with the materials they join together. Therefore, we would say that the jointing material should be recommended by the lamp wire duct manufacturer. Usually, in the material or supplier's catalogues, such construction is quite common. For Fry 99C, in that catalogue, this is also mentioned. Well, the wording may not be "recommended", but they would say to partner with another kind of flux. So this is very common.

Maybe I can give you another example that the average person may come into contact with. Talk about car manufacturers. Usually, they would recommend that if you change the engine oil, they should go for a particular brand, a particular type. This is because, in designing the engine, they may do so based on the special characteristics of a particular engine oil, so you should use that kind of engine oil in order to achieve the desired effect.

CHAIRMAN: Okay. We have heard some evidence saying that in 1993 the US EPA already issued circulars or notices to the average member of the American public or to the

industry, telling them that there are two main reasons for having excess lead in water and that may have an impact on health. The first one is that copper or leaded taps were used. Number two, leaded solder. So there was impact on health because there was excess lead in water.

Now, I would ask you this -- whether it be in 2002, since you are building services engineers, let's say 2002 -- well, before that, were you aware of this?

A. Chairman, you mentioned the information. Well, that I was not in contact with.

CHAIRMAN: So you have not heard about that, that was in 1993?

A. No, I haven't heard about that.

CHAIRMAN: And then in 2002 there was this incident in Scotland. That was in the year 2000. That incident was quite identical to the present Inquiry. Were you aware of that?

A. I have no idea.

CHAIRMAN: Okay. So you have no idea? That's all right.

Let me ask you this question. You have looked at these specifications. I would like to know whether you have this knowledge. The table 6. I don't know where I can find it.

A. BS 1254-1. I happen to have a copy with me.

A *Annex: Realtime English Transcription based on floor / Simultaneous Interpretation* A

B Commission of Inquiry into Excess Lead Found in Drinking Water Day 10 B

C CHAIRMAN: I don't know about the counsel. I don't know C
where they can find it.

D MR HO: (Chinese spoken). D

E CHAIRMAN: Okay, I have a question for you. According to E
(a), you talk about table 6, sections II and III.

F I think what you mean is that we can use solders in F
sections II and III?

G A. Yes, correct. G

H CHAIRMAN: Now my question for you is you have "Lead/tin H
I 50/50 per cent". This is the table. Does it mean I
J 50 per cent lead and 50 per cent tin? J
A. Yes.

K CHAIRMAN: Have you heard about the typewritten "50 lik" K
L flat lead sticks; is that related to that? Have you L
heard about it?

M A. Well, I heard about it recently. M

N CHAIRMAN: Would it be related to this type here? N
A. Maybe. I don't know.

O CHAIRMAN: So like me you are just speculating? If that's O
P the case, then let us not talk about it. P
Okay, sections II and III, these are lead-free
Q categories?

R A. Correct. R

S CHAIRMAN: I'd like to ask you about the column next to S
T this, "Maximum temperature"; what does it mean? T
U
V

A *Annex: Realtime English Transcription based on floor / Simultaneous Interpretation* A

B Commission of Inquiry into Excess Lead Found in Drinking Water Day 10 B

C A. It means if this is used for pipes, this is the C
temperature within the pipe that will be permissible.

D CHAIRMAN: I don't understand. You talk about the water D
temperature within the pipe?

E A. Well, it should be for the water to be cold or hot. If E
F it is hot water, it will also heat up the copper pipe. F
G So this should be about the temperature of the copper G
H pipe. H
I CHAIRMAN: Okay. I understand. The temperature that the I
J copper pipe will reach -- let us look at "Tin/silver J
K 95/5 per cent", and the maximum temperature is 30. What K
L does it mean? L
M A. 30 degrees means, if it is under 30 degrees Celsius -- M
N now, if you look at the other columns on the right, N
O these are the sizes of copper pipes, and that is the O
P pressure that can be withstood by the pipe, in that P
Q temperature. Q
R So you can see, if the temperature goes up, the R
S pressure that can be withstood will go down. S
P CHAIRMAN: Okay. What does it mean? Why? P
Q A. It is because you get near to the melting point for Q
R welding. R
S CHAIRMAN: Okay. I understand. So the pipes and the joints S
T there could break? T
U A. That's correct. U
V

C CHAIRMAN: Then 110 degrees -- is this about the water
temperature?

C

D A. Well, I think it is talking about steam here. D

E CHAIRMAN: Okay. So 110 degrees, this is not the
temperature of the pipe?

E

F A. How should I put it? Let us say it is the temperature
in that environment. F

F

G CHAIRMAN: Water cannot go to 110 degrees. G

H A. But copper pipes can be used for other purposes. H

H

I CHAIRMAN: The leaded pipes can reach 110 degrees. The
environment can be as high in temperature as
J 110 degrees, it's just that the pressure that can be
K withstood would be much less?

I

J

K

L A. That is correct. L

L

M CHAIRMAN: Okay. In other words, what you mean is, at that
time -- ah, I meant to ask you this question first.
N What about red lead; what does it mean, in the year
O 2000?

M

N

O

P A. Are you talking about page 779?

Q CHAIRMAN: Yes, the year 2000 version. P

P

R A. I think this is a very general statement. It says, "Do
S not use jointing materials based on red lead", and the
T heading is "Jointing pipes and fittings". This is the
U heading for this page. I guess it's a general way of
V saying this. Red lead may refer to some lead oxides.

Q

R

S

T

U

V

C I'm not sure. C

CHAIRMAN: What was it used for?

D A. Judging from the way it was written, it was used to D
E joint the pipes. E

CHAIRMAN: But they were not solders?

F A. No, they were not solders. F

G Let's turn to the next page, there was a jointing G
H pipes, SUP 1.W380.3 on page 780. It didn't mention H
I material, joint pipes with non-manipulated compression I
fittings.

J COMMISSIONER LAI: All right. To me, year 2002 was J
K a watershed year. 2000 was red lead and the terms were K
L not very clear, and it was not very clear that lead-free L
M soldering materials should be used. But then in the M
N 2002 version, it spelt that out clearly. The drafters, N
O when they were drafting the 2002 document, knew exactly O
P what the problem was, and if lead was used -- it was P
Q very clear that lead-free soldering materials should be Q
R used. So, when the drafters drafted the 2002 edition, R
versions were developed.

S A. I can only say that in BS EN standards, the same was set S
T out. T

C COMMISSIONER LAI: Well, at that time, that was only
D included in the footnote, but then the drafters spotted
E that and then extracted that and put it into the
F specifications.

A. At least two places mentioned about this lead-free
F requirement.

G COMMISSIONER LAI: So I would like to ask, since the
H drafters were so smart to include that in the
I specifications, at the same time did they think about
J how people should be encouraged or asked or required to
K comply with such specifications? Were there such
L discussions at that time?

A. For the 2002 specifications, it was very much
L a technical specification.

M COMMISSIONER LAI: So have you ever thought about how to
N make people comply?

A. I don't think we have thought about that.

O COMMISSIONER LAI: To your understanding, there was no such
P discussion?

A. Yes, that's my understanding.

Q CHAIRMAN: For this document, in the distribution list,
R a number of parties were included. I am not familiar
S with the acronyms or abbreviations. Could you tell me
T who are these people in the distribution list? There
U are so many abbreviations here.

A. Yes. Let me take you through line by line. "PD",
project director, and that is the assistant director.

Now, East, West and Central. The second line, "PM",
project manager, 1, 2, 3, 4. At that time, we did have
a project manager's regime to actually oversee the
consultant's work for us.

Then the next line is "CA", chief architect, various
chief architects. "D&S", design and standard; "CA/D&S".
CHAIRMAN: That's the position of Mr Yim; right?

A. Yes, correct. I can't remember exactly.

CHAIRMAN: Just tell us what you remember.

A. "CSE" is chief structural engineer; chief building
services engineer; chief civil engineer, chief
geotechnical engineer, followed by chief quantity
surveyor; "CS" should stand for central service.
"CQS/P": "P" stands for project. "FC/D&C": could be
finance controller -- well, this I'm not sure. "SM/PM":
"SM" stands for senior manager; "PM", I'm not sure about
that one. "BA to BD/D": I'm not sure about that one
either. "CTO(BW)/HQ": chief technical officer (building
works)/headquarters. Then "CTO(BS)/C1": building
services, chief technical officer on site. Then
"CTO(C)/Works 1": it can be structure or civil side CTO.
Then there is "Works 2", and then "CTO(BW)/NA1": "BW"
should stand for building works. "NA1", "2", "3" and

"4": I'm not sure what they stand for. Then "SM/TS2":
that should be -- "TS" should stand for technical
secretariat.

Then cc to "BD/D": could be positions above AD,
deputy directors, maybe. Then "AD/D": "D" stands for
development. "AD/ICU": Independent Checking Unit,
assistant director. "AD/Q": I can't remember that one.
"AD/M3": "M" should stand for estate management, the AD
for estate management.

"CM/M(SS1)": "CM/M", chief manager; "M" stands for
management. "SS1" stands for some central functions,
specialist support or the like; I can't remember
exactly. Then the one following is similar. Then "SA"
is senior architect. "SBSE" is senior building services
engineer. "SQS" is senior quantity surveyor, three of
them here. "SHM" is senior housing manager. "D&V"
stands for development and vetting. "SMS/TD": "SMS"
should stand for senior maintenance surveyor. "TD", I'm
not sure about that -- maybe technical development.
"SQS/CM1": senior quantity surveyor; "CM", consultant
management. "SQS/C5": he should be looking at internal
projects. "SM/Audit": senior manager responsible for
audit function.

Then "QS/ST": "QS" stands for quantity surveyor;
"ST" is specification team. Then "PTO(BS)/C1":

principal technical officer, BS side, and that's the indoor technical staff.

The next two lines are the file names, BS files and also QS files.

That's about it.

CHAIRMAN: I would like to ask, in 2002 you compiled the specifications, and you knew that soldering materials should not contain lead, and if lead was used then there would be a hazard?

A. Yes.

CHAIRMAN: Then you identified this hazard. The next step for you to take would be to do a risk assessment. How high was the risk? Have you done that kind of assessment?

A. Well, if I remember correctly, no, not done.

CHAIRMAN: So in actual fact, do you agree that HD, whether they were updating old materials or what materials they used in manufacturing the pipes, you know that there might be the existence or presence of heavy metals? This is an identifiable hazard; do you agree?

A. As an engineer and as someone who studied science, what I know is that when different materials come into contact with water, the solubility differs from material to material. Some are more soluble, others not. Say for every kind of metal pipeworks, we should test for

metals in water. If you ask me, I would say the first step to take would be to look at the solubility of the metal.

CHAIRMAN: Well, yes, that would follow. You identify the hazard and then you assess the risk, and if you find that the risk is not high, then you would say that no test is required?

A. Even if we are not very familiar with this kind of knowledge, then we can consult others. This is what we will do. And also, from another perspective, I've been saying all along about -- mentioning something about copper pipes and stainless steel pipes. Now, especially for copper pipes, in Hong Kong they are being extensively used. These are also permitted for use by the WSD.

Now, after this incident unfolded, the WSD has issued another circular, asking for four heavy metals to be tested. So many projects are using copper pipes now, and even if we include the four types of heavy metals, copper is not included, so the WSD would likely be of the opinion that the risk is very low.

CHAIRMAN: I am not saying that you can't rely on the WSD, but I would like to ask you this question. Now, if you know that there is this hazard, and you have really independently thought about this hazard and you think

that it's no problem, then that's all right. When you think about whether there is a hazard, you can also consider comments from the WSD, because you can't do everything on your own. That I understand.

But as what you said -- well, let me put it this way. The solubility of different metals in water is different, and the solubility depends on a number of factors: its pH value, the temperature -- if it is a hot water pipe, then there would be many more metals which would be dissolved.

So I can't say this is a copper pipe, so there will not be release of copper, because copper pipes can be used for different purposes and they can carry hot water. The standards will not be exceeded when it carries cold water, but they may be exceeded when hot water is carried.

And about Kai Ching Estate, I would like to ask this question. It may be okay for the average household, but I think there is a kindergarten somewhere. Young children should not be exposed to as much lead or copper as adults. So my question is: you have identified the hazard, and in the domestic blocks you may say the risk is low, so you won't do it again. But supposing, in the estate, there is a kindergarten or a home for the elderly or elderly centre, and so on and so forth. What

I mean is, in every estate, you have different facilities and buildings, and perhaps you would have to give independent consideration of the risk people are exposed to.

A. I agree. Exactly because of the complexity, we need professionals to watch over it.

CHAIRMAN: But you know in the WSD it applies the same parameter for the entire territory? It makes no distinction. You understand?

So you cannot apply your own consideration.

Supposing they only have one parameter for the entire territory. What I want to say is, supposing you build a hospital, and if you build domestic blocks I am sure you would have different considerations. Of course, you may not be really building a hospital, but if you build a centre for the elderly within the estate, then perhaps you might need independent, different assessments. The WSD will not tell you this -- it would be good if they did, but the situation is they won't tell you this; they will just apply the same parameter. Perhaps when you design the blocks to be built, you should also be aware of this.

A. Well, certainly, resources-wise, if we can do it, that will be the best scenario. But I look at it this way. Supposing the Housing Authority engages a team of

C experts to look at this, but only the projects under the C
HA will benefit, including the residents. But
D supposing -- I am not really talking about the WSD -- D
E but if there is a central kind of arrangement to engage E
F experts to look at different areas, the results will F
G benefit everybody in Hong Kong. So in terms of the use G
of resources, I would say the latter will be better.

H CHAIRMAN: Okay. I have no other questions. Would any one H
of you like to ask follow-up questions?

I Re-examination by MR HO I

J MR HO: Thank you, Chairman. J

K Mr Ng mentioned the ASD; in 1993, it was mentioned K
whether leaded solder could be used.

L Actually, we have it; let us submit it. I would L
like to see whether this is the document mentioned by
M Mr Ng. M

N CHAIRMAN: Let us take a break for ten minutes because N
copies will have to be made. We will resume after ten
O minutes. O

P (3.35 pm) P

Q (A short adjournment) Q

R (3.48 pm) R

S MR HO: Chairman and members, I just distributed a General S
Specification document or a contract used by the
T government in 1993 by the Architectural Services T
U
V

Department.

Mr Ng, you said just now that the Architectural Services Department did have clauses specifying the use of materials in jointings and pipeworks and lead-free materials should be used. So are you referring to 19.55 here?

A. Yes, correct.

Q. That was a contract drawn up by the Architectural Services Department in 1993, and it quoted the standards: BS 864, part 2, table 17. We mentioned that before. That set out lead-free soldering materials.

A. That should be a clause saying that potable water pipes should only be built by lead-free soldering materials.

Q. Okay. I will not refer to BS 864 again. This was drawn up by the Architectural Services Department in 1993. So lead-free soldering materials should not be a new thing?

A. Yes. When we drafted the specification, this was not something new.

Q. So I would like to understand why, in 2002, we had to draft the new specifications. To my understanding and as what you said, at that time, apart from the new uPVC-lined GI pipes, also you would be allowing the contractors to opt for copper pipes. Copper was allowed. So, under that circumstance, there was a need to distribute new specifications; is that right?

A. Correct.

Q. You also said that when you did the new specifications,
you did some consultation?

A. Yes, right.

Q. You consulted the industry, the construction industry?

A. Contractors and suppliers as well.

Q. And have you consulted the bodies, parties related to
water supply, say the WSD?

A. Copper pipes were widespread at that time, so we didn't
particularly consult them. But then we had to draft the
specifications and there were details in there. So, in
respect of the supply, we made sure that the relevant
pipes were available. So we consulted the contractors
to see whether there was any impact on them by the
latest move.

Q. Now, to my understanding, you did not use copper pipes
before 2002, the HA did not use it?

A. Yes, well, in respect of water supply systems, drinking
water supply systems, the HA didn't use copper pipes.

Q. You said you used uPVC-lined galvanised steel pipes.

So in 2000, when we looked at the clauses of
contract used by the HA, can we refer to the B2 folder,
page 766.

A. Yes.

Q. On page 766, SUP 1.M130A.3. That has to do with potable

water. At that time, in 2000, you were still using
uPVC-lined galvanised iron pipes; is that right?

A. Yes, correct.

Q. And pipes for cold water, lower down the page, it also
talked about BS 864, part 2; can you see that, Mr Ng?

A. Yes, I see that.

Q. That was the approach adopted in 2000. Then you said,
in 2002, you were starting to allow copper pipes to be
used, so there was a need to have an updated document.

I would like you to take a look at this updated
document. There were several annexes to this document.

A. Yes.

Q. There were a few annexes. Annex A, on page 6 of your
document, on the first page of annex A, the heading was
"New/Revised Specification Clauses". Can you see that,
Mr Ng?

A. Yes.

Q. So annex A contains new specification clauses; right?

A. Yes, correct.

Q. Then we see SUP 1.M178 is one of the new clauses; is
that right?

A. Excuse me, can you repeat?

Q. SUP 1.M178. That is one of the new conditions; is that
right?

A. Yes, that's correct.

Q. Thank you, Mr Ng. I would like to know, for copper pipes -- let's go back to the period of 2002. The HA was not the first party to use copper pipes for plumbing works; correct?

A. Yes.

Q. They were being used in other construction projects; right?

A. Yes.

Q. And for BS 864 or 1254, BS EN 1254, at that time the soldering materials should be lead-free, it was set then; it was not something new?

A. Yes, that's not new.

Q. So can I say this: for this 2002 document, the document was not bringing up any new issues; right?

A. Yes, correct.

CHAIRMAN: They do know that there was a problem, so they were not bringing up new issues.

MR HO: Can I repeat my question?

CHAIRMAN: The BS 1254 was issued in 1998?

MR HO: Correct.

At that time, you said that you would provide an additional choice for the contractors: apart from uPVC-lined galvanised steel pipes, they could choose to use copper pipes. I believe that at that time, say in the industry, in the construction industry, if the

industry had certain concerns about copper pipes, you would not have allowed for copper pipes to be introduced; right?

A. Yes, yes.

Q. Did you know that there might be problems in using copper pipes, back in 2002?

A. No, we didn't know.

Q. And this was not something new either?

A. Yes, correct.

Q. You took this opportunity, say, in relation to BS 864, which had been replaced and became obsolete, and now you were applying BS 1254, the prevailing standard at that time; is that correct?

A. Correct.

Q. You said just now, apart from this 2002 document, SUP 1.M178 -- now, we are updating that to incorporate the standards of BS 1254-1, table 6, sections II and III. Apart from that, you said that if you just look at table 6, people would not be able to discern the crux of the matter, because if the lead-free category solder was only included in the footnote, so that's why you included that requirement in clause (c), saying that only lead-free solder should be used. This was not something new; right?

A. As a specification drafter, that was just something

normal to do.

Q. Chairman also just asked you whether you had discussed with your superior so that other people would be complying with the same approach or standard. You said there might not be a need for you to discuss with your superior. Now, for the 2002 document, I am sure that it would not just include this item on lead-free solder; it contained other items as well. There were new provisions in the annex. The annex A was titled "New/Revised Specification Clauses", and the scope covered was rather wide.

Perhaps at that time lead-free solder to be used for drinking water pipes was not something new, so you did not raise it for discussion?

A. That's correct.

Q. The fact that lead-free solder should be used for drinking water pipes, that is not something new.

It is not a new provision or specification. That is why it was not raised in particular.

CHAIRMAN: I have this document that you gave us. I am just leafing through it. Actually, in the whole meeting, you talked about copper pipes. Everything that was discussed had to do with copper pipes; is that correct?

A. Yes.

CHAIRMAN: So there was this major discussion. What I mean

is the basic objective of that meeting was to discuss copper pipes, because it was new. I could look at your abbreviations. "X" is to delete and "N" is new, and you can see most of the parts denoted by "N" have to do with copper pipes.

COMMISSIONER LAI: I think to facilitate our understanding, the department should try to dig up meeting minutes or papers of that year, so it would help to clarify the issue: who went to the meeting, who made the recommendation and what was the focus of the discussion at the meetings. I think that would be a great help.

MR HO: I will try to see whether the HA still has it.

CHAIRMAN: Well, I think you must have discussed the advantages and disadvantages of using copper pipes.

COMMISSIONER LAI: I hope you would submit the relevant records to the Commission, because it will be a great help.

MR HO: From my understanding of reading this paper, basically it's an updating exercise.

CHAIRMAN: What are we updating?

MR HO: Well, because we could not use BS 864 anymore.

Well, that is why we need to apply BS EN 1254.

CHAIRMAN: Well, I don't think this was purely for updating BS 864 to BS 1254. As Mr Ng said, even if we had 864, we never applied it, because you did not use copper

pipes.

MR HO: Not for potable water.

CHAIRMAN: Correct. So this is an entirely new exercise.

MR HO: Chairman, I won't argue about the wording, but the situation then was really that they did not use copper pipes to carry drinking water before. So the exercise then was to update the BS standard that was applicable.

CHAIRMAN: Well, that was one of the reasons.

MR HO: There are a few more simple questions I would like to ask you, basically, for the sake of clarification.

CHAIRMAN: Sorry, your senior building services engineer, that is your supervisor at that time and even the CBSE, have they retired?

A. No, they should not have retired.

CHAIRMAN: Who are they?

A. I don't really remember whether in 2002 -- actually, I was an engineer and I was acting in a senior position. But coincidentally, my direct supervisor, he was a Mr Leung, and later Mr Leung was promoted to the chief rank, and I took over the senior position.

COMMISSIONER LAI: That was in 2002, was it?

A. C Leung, Mr C Leung. He is now an AD, in estate management.

CHAIRMAN: Okay. The assistant director, Mr Leung, for estate management.

MR HO: Sorry, my last question on the same subject. You said -- well, I used the word "updating" just now.

Never mind. Let us not argue about the wording. You said, if there was a major revision, the 2000 version would be updated to the 2004 version, this one, for 2002, this does not represent major change; is that right?

A. Well, in 2002, it is mainly because copper pipes would be allowed to be used as an alternative choice. But then in 2004, there were other changes as well, so everything was put together into the 2004 version.

Q. Okay. Thank you.

Let me ask a question that was also asked by counsel for Yau Lee. This is really for clarification. It is not a new question. I would like to refer to -- just now, we were talking about approved samples, and we mentioned the document WWO46. We know that in part I of that document, there was a list of 25 materials that would have to be approved by the WSD. Solder was not included in the WWO46 form. And in the contract with contractors, we know that under PLU1, they would have to supply documentary proof.

A. Correct.

Q. They have to give such proof to show that the materials comply with the specifications. But, on the level of

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C contracts, they do not necessarily have to submit C
a sample.

D A. Correct. D

E Q. I would like to refer to solder. I am talking about E
B15.1, page 37811.

F A. Yes, I can see it. F

G Q. The solder material should comply with Fry 99C lead-free G
solder category. Can you see that on page 37811?

H A. Okay, under 1(a). All right. H

I Q. And also Fry Powerflux, and actually samples have been I
submitted, as you can see under 2(f), it says "Sample
J attached". This is not required by the contract but
K this is something contractors usually do? K

L A. That's correct. L

M Q. The sample that was submitted complied with the M
specification Fry 99C; right?

N A. Well, basically, we would look at the test reports to N
see whether they comply with specifications.

O Q. Thank you. O

P I would like to ask you to look at the WSD 2004 P
Q circular, relating to licensed plumber. The same Q
folder, page 37804.

R A. Yes, I can see it. R

S Q. We asked you something about (g): during the process of S
T construction, if the licensed plumber uses any material T
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that is different from those listed in WWO46, he will
have to report to the WSD?

A. Correct.

Q. This reporting relationship with the WSD, it doesn't go
through the HA?

A. No, it doesn't go through us.

Q. It is up to the LP to notify the WSD that a different
material has been used?

A. Correct.

Q. Then the WSD can either approve it or not approve it?

A. Correct.

Q. So it doesn't go through you?

A. No, it doesn't go through us.

Q. You were also shown Ho Biu Kee's statement. Ho Biu Kee
said, if materials were changed, they would liaise with
the HA. You remember the statement of Ho Biu Kee?

I would like to know, exchanges with or dealings
with the WSD are undertaken by the licensed plumber;
there is a direct notification to the WSD for the
changes?

A. Correct.

Q. What is then the relationship with you?

A. For us, if they have submitted materials for our
approval and then later on they intend to change the
materials, they would have to resubmit them to us for

approval.

Q. Okay. I would like you to refer to B15.1, page 37846.

A. Yes, I can see it.

Q. We know that this table lists items 1 to 25. This can be compared to annex in part I of WWO46. Have you seen this table?

A. I saw it at a late stage.

Q. Okay. So you saw it at a late stage. The lead in water incident happened, and then we wanted to see what materials were reported in WWO46 and what materials were actually used. This serves as a comparison table. There were items 1 to 25, and for Kai Ching, WWO46, this is also the case in the annex of that form.

A. Okay.

Q. I am not talking about whether the licensed plumber reported to the WSD. If variation has to be made to these items, let us say number 1, "Copper pipe", originally it should be for the manufacturer to be Crane, but if they buy from another manufacturer, do they have to tell you?

A. No. If the Crane was approved and they wanted to change it, they must get our approval first.

Q. That was via the main contractor; right?

A. Yes.

Q. Yes, because it's the main contractor who has the

contractual relationship with you; right?

A. Yes, if they want to change the materials.

Q. Now, under the framework of the contract, they must get your approval, but as to how they would report the changes to the WSD, then it will be the duty of the licensed plumber; correct?

A. Yes.

CHAIRMAN: You don't have any further questions?

Mr Ng, we don't have any further questions now.

What about the other estate? How long will it take for you to read out the witness statement?

MR YIN: The same as yesterday's.

CHAIRMAN: Perhaps you can go back tonight and then skip the parts which are repetitive, because it's all for your own sake.

MR YIN: I don't know what questions others have. I see that Yau Lee Construction has asked questions. To my understanding, Kai Ching has nothing to do with Yau Lee.

CHAIRMAN: Well, to save time, the general role of Mr Ng should be skipped, and also parts which are similar to the earlier witness statements can also be skipped, and paragraphs which are just special or unique to that other estate should be read out.

MR KHAW: (Chinese spoken).

CHAIRMAN: So we will continue tomorrow. We will meet again

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C at 10.00 tomorrow. You may now leave. C

D Mr Ho, please try to see if you can retrieve any D

E minutes of meeting and also the assistant director and E

F the chief building services engineer at that time, he is F

G now the assistant director, maybe if you like you can G

H compile a witness statement from him. H

I MR HO: It has to do with the changes; right? I

J COMMISSIONER LAI: And how he was involved in drafting the J

K changes. K

L CHAIRMAN: If there are any minutes of meeting, please L

M attach them too. Meeting adjourned. M

N (4.19 pm) N

O (The hearing adjourned until 10.00 am the following day) O

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