

清拆及處理位於仁濟醫院的 醫療廢物焚化爐工程

工程項目簡介

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提交人：
香港醫院管理局



清拆及處理位於仁濟醫院的醫療廢物焚化爐工程

工 程 項 目 簡 介

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1. 基本資料

1.1 工程項目名稱

清拆及處理位於仁濟醫院的醫療廢物焚化爐（以下簡稱“工程項目”）

1.2 工程項目的目的及性質

醫院管理局正計劃為仁濟醫院（以下簡稱“醫院”）進行重建工作，以提升荃灣區的醫護設施質素及建立一個現代化的公立醫院。現有醫院的四座大樓將被拆卸而建立一所社區衛生健康中心，提供以社區為重點及以病人為本的服務。

仁濟醫院一期改建工程包括將現有醫院地下室焚化爐房拆卸改為聯繫未來社區衛生健康中心及停車場車道的通道。因此兩台位於醫院地下室焚化爐房的醫療廢物焚化爐必須清拆及移除。

兩根連接焚化爐的煙囪及相關組件會被分隔及密封（分隔點在地下室天花板），不會被移除。本工程項目簡介所涵蓋的拆卸工程只包括在焚化爐房內進行及焚化爐房外的一段水平煙道的拆卸工程。

1.3 工程項目倡議人名稱

醫院管理局

1.4 工程項目的地點及規模

仁濟醫院位於香港新界西部荃灣區的中心地區。

醫院由荃樂街、關門口街、仁濟街和荃灣街市街所圍繞。附錄甲展示了醫院的位置圖。

該醫院是由六座大樓(A、B、C、D、E、F)所組成。兩台將被拆除焚化爐設置在B座大樓地下室的焚化爐房內。兩台焚化爐被編為「一號焚化爐」及「二號焚化爐」。

焚化爐房面積約17平方平方米。每台焚化爐約高2.5米、闊1.5米及長3.5米，而每台焚化爐的燃燒室體積約2立方米。焚化爐使用天然氣作燃料而現場沒有儲油罐。每台焚化爐的煙氣由水平煙道經天花板伸延到焚化爐房外的垂直煙囪。一號及二號焚化爐的水平煙道伸延出爐房外的長度分別約7米及3米。

拆卸及移除工程包括焚化爐，相關的控制台及水平煙道部分。除燃燒室是內襯陶瓷耐火磚外，焚化爐和煙道的主要構造材料為鋼鐵。

兩根連接焚化爐的垂直煙囪會被分隔及密封（分隔點在地下室天花板水平煙道節），不會被移除。本工程項目簡介所涵蓋的拆卸工程只包括在醫院地下室的內部地區（在焚化爐房內，並伸延到焚化爐房外的一段水平煙道）。

兩台焚化爐於 1991 年投入服務而一號及二號爐分別於 2008 年及 2009 年 4 月停止運作。被焚化的醫療廢物廢棄物包括人體組織、器官、帶血的敷料和手術室產生的廢物。焚化爐運作期間每星期運作 5 日，每日運作約 6 小時。焚化爐運作期間的保養及營運分別由機電工程署及醫院工程人員負責，運作期間並沒有意外或事故記錄。

1.5 工程項目簡介涵蓋的指定工程項目

根據環境影響評估條例中附表2的第2部第3項，解除醫療廢料焚化爐的運作屬於一項指定工程項目。因此，有關方面在清拆及移除工程施工前必須獲得由環保署批准的環境許可証。

工程項目簡介涵蓋位於醫院地下焚化爐房內的兩台醫療廢物焚化爐及部分水平煙道。

1.6 聯絡人姓名及電話號碼

整個仁濟醫院重建工程項目均由盧緯綸建築有限公司所管理，而栢誠(PB)則被委任為環境顧問，其聯絡資料如下：

Miss Fleur Parkinson

褚偉基先生

栢誠(PB)

香港九龍灣宏遠街一號「一號九龍」七字樓

電話 (852) 2579 8899

傳真 (852) 2856 9902

2. 規劃大綱及計劃的執行

2.1 工程項目的執行

醫療廢物焚化爐的拆卸及處理工程將會由醫院管理局或其代表所委任的專門承建商執行。

將通知煤氣公司的技師中斷連接焚化爐的天然氣供應管道。

2.2 工程項目時間表

一號及二號焚化爐分別在2008年及2009年4月停止運作。

拆卸及處理工程預計在2010年5月1日進行及於2010年7月31日前完成。實際焚化爐及煙道的拆卸所需工程時間有機會不超過14天。拆卸及處理初步計劃列於表2.1。

表2.1：拆卸及處理焚化爐工程初步計劃

工序及簡述	所需時間
場地預備及搭建密封區	
預先消除工地污染	半天
建造密封區	二天
煙霧測試	半天
清拆工程	
醫療廢物焚化爐的清拆及除污	五天
廢物處置	獲得廢物處置許可證後的一天內

2.3 與整體工程要求的關連

清拆焚化爐將會與仁濟醫院一期重建工程有關的其他拆卸項目(拆卸C,D座大樓)同時進行。

3. 周圍環境的主要元素

3.1 可能受擬議工程影響的地方

按環境影響評估條例技術備忘錄，可能受擬議工程影響的地方包括住宅樓宇發展、臨時房屋區、教育機構、健康護理設施、公眾崇拜場所、耕種地區、水道、泳灘、集水區、地下水資源、海洋資源、對污染敏感的工業、對擴散污染吸納量有限的空氣域、有自然保育價值的地區、具有高度觀賞價值的地方及文化遺產地點。

位於項目工地(B座地下室焚化爐房) 250米範圍內的可能受擬議工程影響的地方包括：

- 仁濟醫院現有設施
- 位於醫院南方的荃灣天主教小學
- 住宅物業(豪輝花園及名逸居)及酒店，最近設在醫院約50米
- 位於醫院西北約50米的德華公園。

附錄甲提供可能受擬議工程影響的地方的平面圖。

3.2 周圍環境

按環境影響評估條例技術備忘錄對周圍環境的主要元素包括現有污染黑點、附近現有及／或停止了的工業操作、附近的幹道，及主要或次要幹路、附近進行的嘈吵商業、社區或康樂活動、飛機噪音、直升機噪音、鐵路噪音、現有或計劃的廢物處理、處置及棄置設施、有潛存危險的裝置、嘈吵或多塵埃露天貯存設施、現有及過去土地用途的工程項目。

以上的主要元素都被認為不適用於此工程項目。

4. 對環境可能造成的影響及環境保護措施

4.1 引言

工程項目的性質和規模被認為是小規模而工程範圍將僅限於醫院內部。因此，工程對環境可能造成的影響被認為是微乎其微。

表4.1列出了拆卸及處理焚化爐工程可能對環境造成的影響。

表4.1：可能對環境造成的影響

環境影響	可能發生影響（如沒有緩解措施）
氣體排放	X
塵埃	✓
氣味	X
操作時發出的噪音	X
晚間操作	X
引起的交通需求	X
污水、排放物或受污染的徑流	✓
產生廢物或副產品	✓
製造、貯存、使用、處理、運送或處置危險品、危害物料或廢物	✓
會造成污染或危險的意外風險	✓
處置損毀物料，包括潛存受污染的物料	✓
擾亂水流及底部沉積物	X
礙眼的可見物	X
生態影響	X

主要對環境可能造成的影響為塵埃排放及廢物管理。這些主要影響以及污水排放和意外風險在本工程項目簡介第4.2節會有更詳細討論。

4.2 主要對環境可能造成的影響

4.2.1 殘餘爐灰

主要對環境可能造成的影響(塵埃排放及廢物管理)與殘留在焚化爐及灰收集器的殘餘爐灰有關。為確定相關風險，及提出相應的環境保護和緩解措施，對爐灰進行了取樣和分析。

在2009年五月對焚化爐房進行了初步觀察和在2009年六月一日作殘餘爐灰取樣和分析。按現場觀察，只有極少量，約0.5平方米的灰燼剩餘在焚化爐及灰收集器內。除此以外，焚化爐房內及地磚均沒有殘餘爐灰。因為醫院工作人員曾對焚化爐房內進行清潔。

為確定殘餘爐灰相關的資料，分別在焚化爐內及灰收集器內（在垂直煙囪底部）提取爐灰樣本作詳細分析。

4.2.1.1 爐灰採樣

爐灰採樣地點摘要列於表4.2。五個被提取的爐灰樣本取自焚化爐燃燒室內和垂直煙道底部的灰收集器內。一個樣本取自一號焚化爐燃燒室而兩個樣本取自二號焚化爐燃燒室。一號焚化爐並沒有足夠的剩餘爐灰作進一步採樣。每根垂直煙道底部的灰收集器各取一個剩餘爐灰樣本。

鑑於焚化爐和灰收集器的容量（每個焚化爐約2立方米）及總剩餘爐灰較少（約0.5立方米），所取的樣本數量被認為有足夠代表性。

表4.2：爐灰採樣地點

爐灰採樣號	位置
001	二號焚化爐燃燒室
002	二號焚化爐燃燒室（包括爐壁及爐天花板）
003	二號焚化爐灰收集器
004	一號焚化爐灰收集器
005	一號焚化爐燃燒室（包括爐壁及爐天花板）

4.2.1.2 採樣程序

爐灰的樣本送往由一所獲香港實驗室認可計劃（HOKLAS）認證的化驗所作詳細分析。

技術人員穿著合適的個人保護裝備，包括即棄的防護衣，內外腈類手套，膠靴，即棄式防塵口罩及安全帽。採取樣本利用潔淨的陶瓷匙收集在焚化爐燃燒室內的殘餘灰燼。這些殘餘灰燼被分別存放在潔淨的玻璃容器內並加以密封。每個採樣地點均採用了以上的採樣程序。取得的樣本連同玻璃容器均被存放在攝氏零至四度（但未結冰）的冷凍箱內，運送至化驗所以作分析。

請參閱附錄乙的採樣程序相片紀錄。

4.2.1.3 採樣分析

測試的方法、分析結果報告限值及評估準則與結果摘要於表4.3。完整的實驗室測試結果在附錄丙提供。

測試的結果（除二德英／呔喃）與適用的指引標準進行比較及評估。因殘餘爐灰由專門承建商處理，按環保署按風險而厘定的土地污染整治標準（RBRG）對測試結果進行比較而作出受污染的評估。

該實驗室對殘餘爐灰樣本分析的結果可歸納如下：

- 一號焚化爐殘餘爐灰的二噁英水平低於1 TEQ ；被認為是低污染。
- 一號及二號焚化爐灰收集器殘餘爐灰的二噁英分別為2.85和2.21 TEQ ；被認為是中度污染。
- 二號焚化爐殘餘爐灰的二噁英為141TEQ ；這被認為是嚴重污染。但殘餘爐灰的總量很低（約少於0.2立方米）。
- 發現樣本含重金屬（請參閱表4.3）。一號及二號焚化爐殘餘爐灰鉛含量為2.340及2.490毫克/千克，超出環保署RBRG標準的2.290毫克/千克。
- 殘餘爐灰符合多氯聯苯標準。
- 殘餘爐灰符合石油碳氫化標準。
- 殘餘爐灰符合多環芳香族碳氫化合物標準。

鑒於以上分析結果，該焚化爐，其煙道及其他附着物屬於受到污染。在清拆整個設施時須加倍小心，以確保可能受污染的灰燼得到妥善處理、運輸和棄置。

表4.3 : 化驗結果和分析

分析參數	化驗方法	報告下限值	評估準則	採樣結果					合乎準則
				001	002	003	004	005	
二噁英/呋喃									
二噁英/呋喃濃度 (pg I-TEQ/g)	美國環保局8290 或相等標準	-	5 ppb TEQ	0.363	0.158	2.85	2.21	141	否
多氯聯苯 (PCB)									
總多氯聯苯	美國環保局8270 或相等標準	0.1	7.48E-01	<0.1	<0.1	<0.1	<0.1	<0.1	是
石油碳氫化合物 (TPH)									
C6-C9	美國環保局 8015/8260或相 等標準	2	1.00E+04	<2	<2	<2	<2	<2	是
C10-C14		50		<50	<50	<50	<50	<50	是
C15-C28		100		<100	<100	<100	<100	<100	是
C25-C36		100		<100	<100	<100	<100	<100	是
多環芳香族碳氫化合物 (PAH) / 半揮發性有機化學品(SVOC)									
奈(Naphthalene)	美國環保局8270 或相等標準	0.5	4.53E+02	<0.5	<0.5	<0.5	<0.5	<0.5	是
菲(Phenanthrene)		0.5	1.00E+04	<0.5	<0.5	<0.5	<0.5	<0.5	是
蒽(Anthracene)		0.5	1.00E+04	<0.5	<0.5	<0.5	<0.5	<0.5	是
螢蒽(Fluoranthene)		0.5	1.00E+04	<0.5	<0.5	<0.5	<0.5	<0.5	是
芘(Pyrene)		0.5	1.00E+04	<0.5	<0.5	<0.5	<0.5	<0.5	是
苯並(a)芘 Benzo(a)pyrene		0.5	9.18E+00	<0.5	<0.5	<0.5	<0.5	<0.5	是
重金屬									
砷(Arsenic)	美國環保局6020或 相等標準	1	1.96E+02	6	6	141	71	8	是
鋇(Barium)		0.5	1.00E+04	1200	227	12	3.6	100	是
鎘(Cadmium)		0.2	6.53E+02	1.2	1.9	1.5	0.9	8.0	是
鉻(Chromium)		1	1.00E+04	1020	837	67	76	453	是
鈷(Cobalt)		0.5	1.00E+04	3.2	3.2	36.5	31.8	4.5	是
銅(Copper)		1	1.00E+04	59	70	268	213	80	是
鉛(Lead)		1	2.29E+03	1370	2340	384	184	2490	否
汞(Mercury)		0.05	3.84E+01	<0.05	<0.05	<0.05	0.05	<0.05	是
鉬(Molybdenum)		1	3.26E+03	10	9	8	6	11	是
鎳(Nickel)		1	1.00E+04	12	8	47	54	27	是
錫(Tin)		0.5	1.00E+04	75.3	51.7	78.6	45.3	94.8	是
鋅(Zinc)		1	1.00E+04	498	615	64	35	1240	是
所有數值都是毫克/千克(干機)(除二噁英/呋喃)；另有指明的除外。 評估標準是參照環保署基於對人類健康的風險整治目標 (RBRG) - (毫克/千克)。									

4.2.2 塵埃排放

4.2.2.1 引言

塵埃排放量的控制，可執行環境和人類健康的保護措施。

清拆焚化爐室應在完全密封的環境下進行，以避免在清拆焚化爐過程中泄漏受污染爐灰到周圍的環境。詳細辦法在以下章節討論。

4.2.2.1.1 場地預備及搭建密封區

1. 場地需要預先以高效能空氣粒子過濾（HEPA）吸塵機清除垃圾及碎屑。除焚化爐外，所有現有妨礙清拆的物件應於搭建密封區前盡可能移走。
2. 焚化爐房西南角的門廊(通往醫院焗爐房)，需利用三層防火的膠布密封。
3. 搭建一個臨時建築物覆蓋焚化爐房到房外的水平煙道，並搭建三間除污室用於出入工作範圍。該三間除污室應由骯髒室、淋浴室及清潔室所組成，每一間隔所佔的地面面積至少應為一米乘一米及圍上三層防火膠布，提供空間給工人於離開工作範圍前進行除污程序。
4. 在焚化爐房內應提供空氣轉換機作排氣之用。每個空氣轉換機應附設一個後備的空氣轉換機。工作範圍應保持充足的空氣流動，以為工作間提供每小時至少六次空氣轉換（ACH）及於整個清拆過程期間維持密封區內的負氣壓在15至4毫米之間的表水壓。在接近的位置應放置一部有列印功能並會發出聲音警報的壓力監測儀器，以證明負氣壓得以維持。空氣轉換機應使用新的前置過濾器，而高效能空氣粒子過濾器只可在工場內安裝。
5. 每部空氣轉換機的維修紀錄副本，應存放在工場內，以供查閱。被委派的承建商應驗查空氣轉換機的氣壓差額以確保其未被阻塞。如氣壓差額高於5 毫米表水壓，即代表過濾器需要更換。所有保留在密封區內的物件，應在清拆工程進行前鋪上兩層防火的膠布。
6. 在開始清拆工程前，應使用無毒煙霧測試，以確保密封區已經密封及無空氣洩漏，並應檢查密封區內是否有任何煙團靜止不動及不能被排出，即表示是否有靜止的空氣團在內。在證實密封區完整無缺漏之後，便可開動所有空氣轉換機，以達至每小時六次空氣轉換的流量，並將煙霧全抽出。同時，應以肉眼觀察斷定空氣轉換機是否能有效地過濾煙霧及氣壓器的讀數是否正常。要維持密封區內每小時六次的空氣轉換，負氣壓應保持在15 至4 毫米的表水壓。監測儀器應裝有聲音警報器，在氣壓差距不足的情況下，即在負氣壓少於15 毫米的表水壓時發出警報。

7. 在整個清拆過程中，應在焚化爐房外的當眼處張貼中英文警告告示。
8. 所有清拆工人必須穿上整套個人保護裝備，包括可棄掉和有保護性之全面覆蓋衣物（如Tyvek 產品系列），包括帽及鞋套，橡膠手套、橡膠靴或鞋套，和能保持氣壓於正壓且覆蓋全面的呼吸面罩；此外，這面罩需裝上可過濾空氣微粒及有揮發性氣體的過濾帶盒。

為在清拆及處置醫療廢物焚化爐工程中所建議採用的密封區設計平面圖在附錄甲提供。

4.2.2.1.2 除污，清拆及移除

1. 清除殘餘灰燼：

在焚化爐內和灰收集器內及在牆壁、地面和天花表面的殘餘灰燼，應利用刮除的方法清除。清除殘餘灰燼後的焚化爐內部，以及牆壁、地面和天花表面，應用高效能空氣粒子過濾吸塵機除污，並用濕布拭濕。

刮除出來的物料及在高效能空氣粒子過濾吸塵機內的過濾物應在工地上包裹妥當，並放在表面為聚乙烯之鋼筒內，隨後於化學廢物處理中心（CWTF）處置。

2. 焚化爐的移除：

水平煙道和焚化爐面板應自上而下在接口拆除螺栓或切除。所有在焚化爐內和灰收集器內的殘餘灰燼應刮除及用高效能空氣粒子過濾吸塵機吸去。

所有拆下的焚化爐組件應用兩層防火的膠布包起，然後再包上第三層，並用膠紙封好。最外層應在除污室內用濕布拭濕除污。

拆除後的焚化爐燃燒室(含內襯磚的)應用三層防火的膠布包起而第三層需用膠紙封好。最外層應在除污室內用濕布拭濕除污。

3. 清拆完畢後，所有焚化爐房表面均需要以濕布拭濕及以高效能空氣粒子過濾(HEPA)吸塵機除污。最內層的防火膠布需噴上聚醋酸乙烯酯(PVA)。乾後將之除去，使先前外露的表面密封在膠布內層，包裝妥善用膠紙封好。

在第二和第三層的膠布重複以上除污程序。

除污過程中產生的廢物及廢水在本工程項目簡介第3.3.3節及第3.3.4節中作分別討論。

4.2.2.2 摘要

清拆工程中將採用密封方法控制塵埃及灰燼的排放。因整個清拆及移除工程須在一個密封及帶有負壓的環境下進行，預計在清拆及移除焚化爐過程中無顯著塵埃排放。

工程項目倡議人將在專門承建商的合同條款規定上述環境保護措施的要求得到實施。

4.2.3 廢物管理

4.2.3.1 引言

本節列出了在清拆及移除焚化爐過程中有可能產生的廢物。

4.2.3.2 廢物來源

本工程項目所產生的廢物如下：

- 焚化爐和灰收集器的殘餘灰燼
- 焚化爐燃燒室內的陶瓷耐火磚
- 焚化爐及煙道拆除的廢金屬材料
- 除污及移除過程中產生的材料（過濾器 and 布）

4.2.3.3 廢物的種類和處理方法

化學廢物

根據1992年的廢物處置(化學廢物)(一般)規例，操作焚化爐所產生的殘餘灰燼有可能是污染廢物。該規例列明化學廢物是指列於該規例附表一中的任何物質(以任何狀態，數量和濃度)。

與這工程項目有關而列於附表一的物質包括：石棉，呋喃，二噁英，多氯聯苯和重金屬（砷，鋇，鎘，鉻，鈷，銅，鉛，汞，鎳，錫和鋅）。

根據環保署發布的“化學廢物產生者登記指引”，如果任何附表1的物質存在於焚燒廢物產生的灰燼，該灰燼應被列為化學廢物。

註冊石棉顧問在2009年6月1日對焚化爐，煙道和焚化爐房進行了石棉調查。

調查確定了沒有含石棉的材料（ACMs）。因此，這工程項目沒有產生含石棉的廢物。詳細石棉調查報告在附錄丁提供。

殘餘灰燼（估計剩餘不到1立方米）和整個清拆及移除過程中產生的廢物（膠布和過濾器）將被送往化學廢料處理中心（CWTC）棄置，搬運過程按運載紀錄系統作出監察。爲了謹慎原因，所有殘餘灰燼按化學廢料處理。持牌廢物收集者將收集及搬運化學廢物。

其他廢物

如經環保署核準，建議部份焚化爐及煙道可以再循環使用。但這些剩餘材料有可能附上化學廢物灰燼。因此，這些材料應用高效能空氣粒子(HEPA)過濾器除塵及擦拭，然後裹在膠布內和化學廢物分開。爲符合環保署減少垃圾的政策，第二處理方法是填埋。

4.2.3.4 摘要

廢物的產生不預期對環境造成不良影響。工程項目倡議人將在專門承建商的合同規定上述的環境保護措施得到實施。

4.2.4 廢水和排放

4.2.4.1 引言

產生的廢水僅限於抑制塵埃的用水。專門承建商會採取預防措施去減少廢水的產生。此外，用來擦拭的濕抹布將不會被重複使用。除污所產生的廢水將僅限於設備表面，預計廢水將蒸發而不會產生受污染的廢水。

焚化爐房的污水渠應在拆卸工程中臨時密封覆蓋。煙道的上方應在工程開始前24小時蓋上膠布。

4.2.4.2 摘要

預計此工程不會產生或排放廢水。

4.2.5 會造成污染或危險的意外風險

4.2.5.1 引言

正如任何項目，本工程項目的意外風險如處理不當可能會造成污染或危險。

4.2.5.2 控制措施

本工程項目的主要潛在危險及其控制措施如下。

表4.4：潛在的危險和控制措施

風險	控制措施
切斷天然氣供應引起的意外事故-對人體健康有潛在影響	煤氣公司技工將進行這項工作。這是煤氣公司的例行工序，而合資格技工可承擔是項工作。
在大氣中釋放塵埃(爐灰)-對人體健康有潛在影響	清拆和移除工作將在密封環境下及僱用專門承建商進行，並穿上個人防護裝備。
在運輸過程中釋放化學廢物-對人體健康/環境有潛在影響	化學廢料由持牌廢物收集者按運載紀錄系統收集、搬運及棄置

4.2.5.3 摘要

對減少造成污染或危險的意外風險的控制措施被認為是足夠的。

4.3 其他環境影響

其他不大可能在此工程項目發生的環境影響在本節詳細介紹。

4.3.1 含石棉物料

註冊石棉顧問在2009年6月1日對焚化爐、煙道和焚化爐房進行了石棉調查。調查確定工程範圍內沒有含石棉材料。石棉調查報告在附錄丁提供。

4.3.2 氣體排放

拆卸工程沒有產生氣體排放的工序。

4.3.3 氣味

拆卸工程中大多數廢料為固體殘留物，預計沒有任何氣味或異味產生。

4.3.4 噪音

拆卸工程將在室內環境進行及使用手工具和小型電動工具，預計不會對醫院地下室以外引起任何重大的噪音影響影響。

4.3.5 晚間操作

拆卸工程將在早上8時至晚上7時進行，將不會有夜間工作。

4.3.6 引起的交通需求

清拆焚化爐只會產生少量的清拆廢物，項目將不會有交通需求相關的環境影響。此外，車輛可經B座地下的通道直接從焚化爐房收集廢物。

4.3.7 擾亂水流及底部沉積物

工程項目沒有排放物到地表水、挖泥或填海工程，因此沒有擾亂水流及底部沉積物。

4.3.8 土地污染

容量只有2 立方米的焚化爐，是利用堅固的金屬造成，而燃燒室的內壁更使用耐熱物料所造。焚化爐是固定於混凝土厚板上的基座上，保存良好，故此焚化爐過去的運作對土地污染影響不大。

4.3.9 不雅的視覺外觀

因拆卸焚化爐工程將在現有的焚化爐房內進行，預計將不會對外觀造成不良影響。

4.3.10 生態影響

鄰近沒有生態環境或保護價值的地區。項目將不會有任何的生態影響。

5. 使用已批准的環境影響評估報告

本工程項目在清拆方法及焚化爐的大小與種類的性質上均與下列已批准的工程項目簡介類同：

- 清拆及處置位於明愛醫院懷愛樓的醫療廢物焚化爐（工程項目簡介編號：PP-312/2007，環保署長決定編號：DIR-149/2007和環境許可證編號：EP-278/2007）
- 清拆位於博愛醫院的醫療廢物焚化爐（工程項目簡介編號：PP-150/2001，環保署長決定編號：DIR-062/2001和環境許可證編號：EP-117/2002）
- 清拆及處理位於鄧肇堅醫院的醫療廢物焚化爐（工程項目簡介編號：PP-180/2002，環保署長決定編號：DIR-074/2002和環境許可證：EP-154/2003）

上述項目簡介將被視為本工程項目的參考藍本。參考以上簡介提議，以上各醫院的醫療廢物焚化爐清拆工程未有進行大型環境影響評估研究的必要。

6. 結論

對拆卸及處理醫療廢物焚化爐的潛在環境影響進行了討論及詳述適當的緩解措施。

從環境角度出發的重點在於防止殘餘爐灰洩漏到周圍環境、避免污染場地設施，以及採取其他標準環境控制措施來控制各項潛在的環境影響。鑒於焚化爐的體積小，本項廢物焚化爐的拆卸及處理預期不會對醫院鄰近地區造成嚴重的環境影響。

參考其他同類已批准之工程項目簡介，都有提及各醫院的醫療廢物焚化爐清拆工程未有進行大型環境影響評估研究的必要。

附錄甲

圖片

附錄乙

相片紀錄

附錄丙

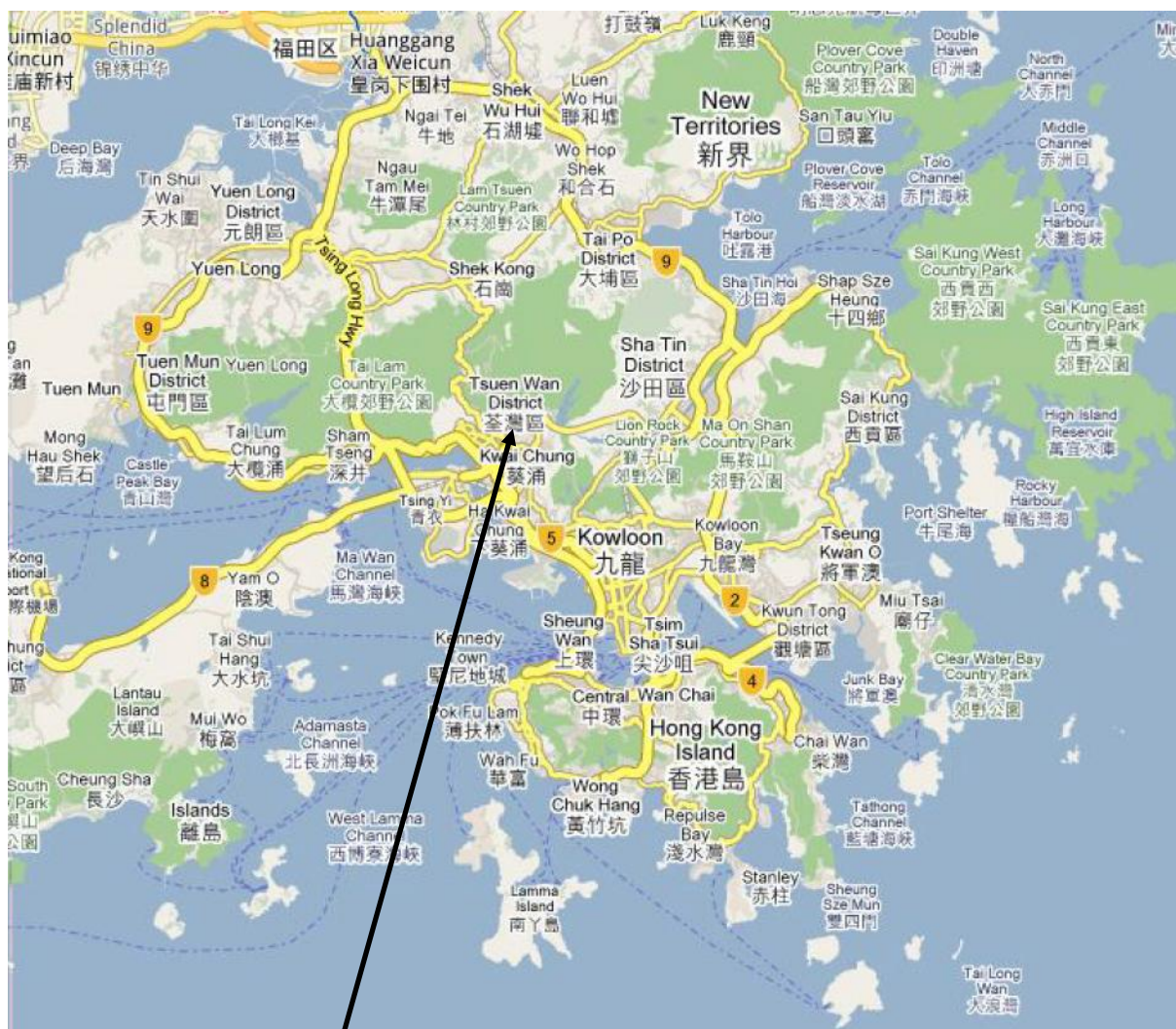
爐灰化驗結果（只提供英文版本）

附錄丁

石棉調查報告（只提供英文版本）

附錄甲

圖片



Source: Google Maps

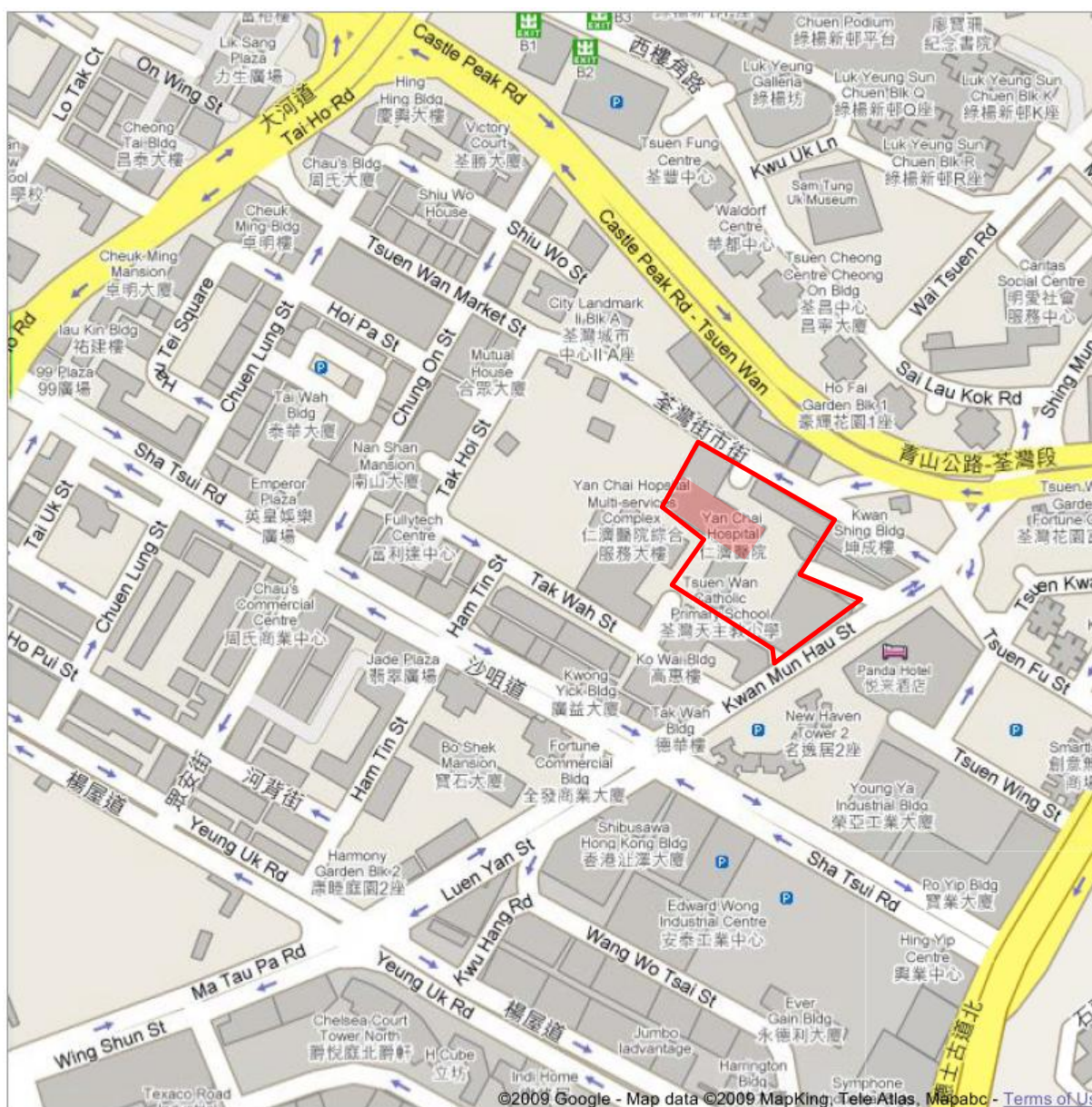
Project Location
工程項目地點

Title: Figure 1: Site location in Hong Kong
標題: 圖一：工程項目在香港的地點

Project: Decommissioning and Disposal of Incinerators at Yan Chai Hospital
工程項目: 清拆及處理位於仁濟醫院的醫療廢物焚化爐工程

July 2009

2009年七月



Source: Google Maps



Yan Chai Hospital Site Boundary 仁濟醫院的範圍



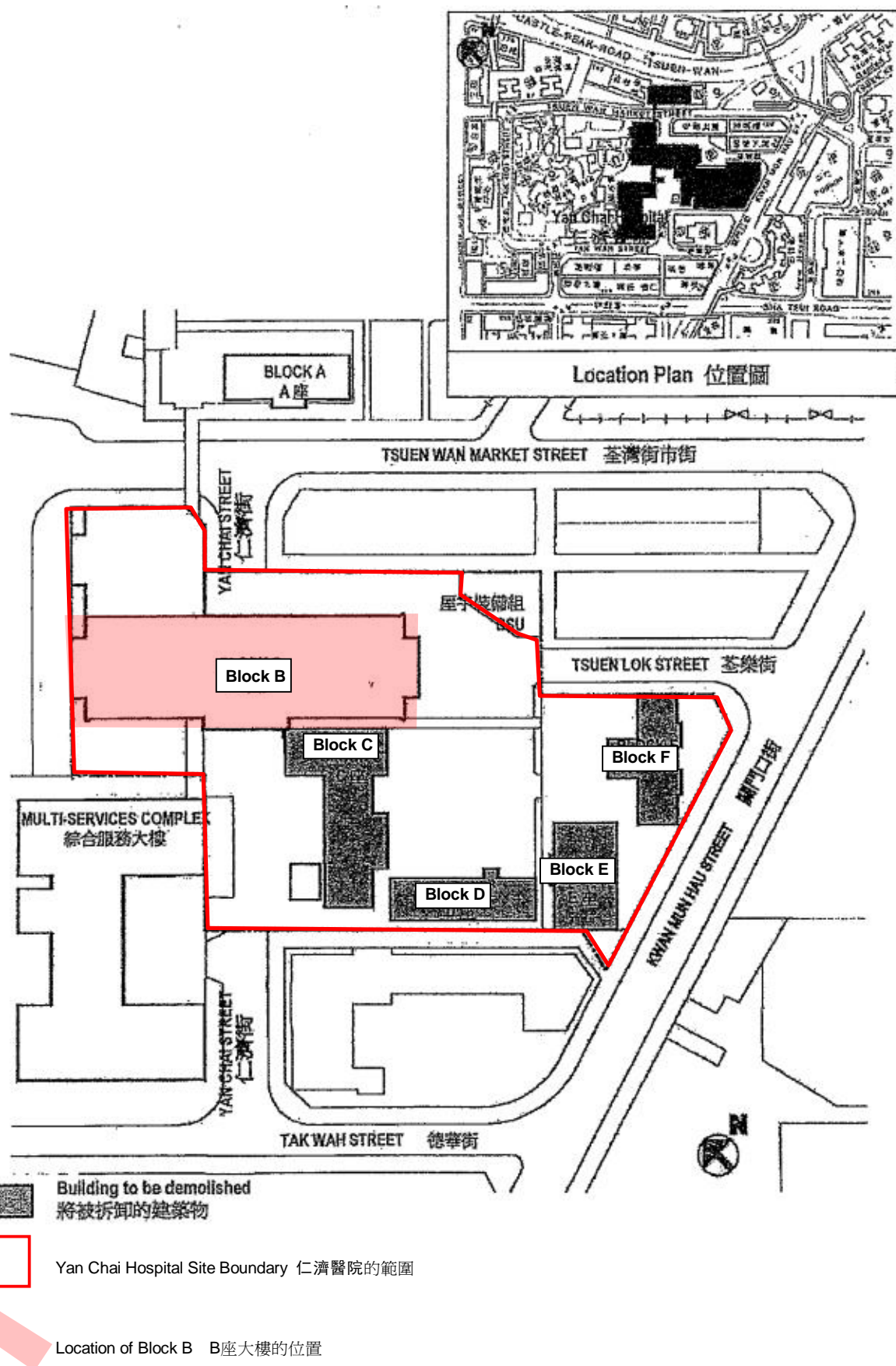
Location of Block B B座大樓的位置

Title: Figure 2: Site location in Tsuen Wan
標題: 圖二：工程項目在荃灣的地點

Project: Decommissioning and Disposal of Incinerators at Yan Chai Hospital
工程項目: 清拆及處理位於仁濟醫院的醫療廢物焚化爐工程

July 2009

2009年七月

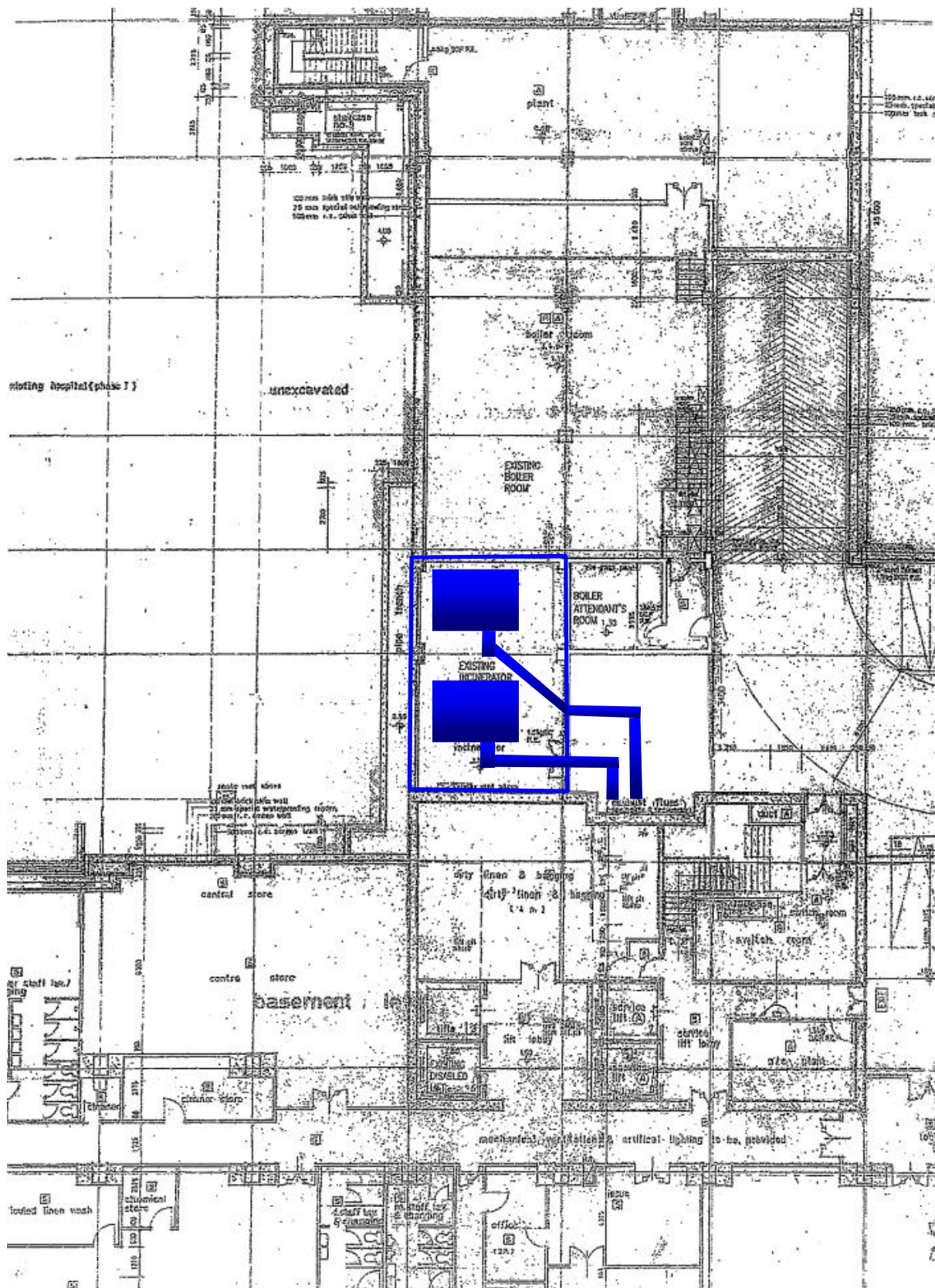


Title: Figure 3: Detailed Site location in Tsuen Wan
標題: 圖三：工程項目在荃灣的詳細地點

Project: Decommissioning and Disposal of Incinerators at Yan Chai Hospital
工程項目: 清拆及處理位於仁濟醫院的醫療廢物焚化爐工程

July 2009

2009年七月



Incinerator Room Boundary in the Basement of Block B 在B座大樓地下室的焚化爐房邊界



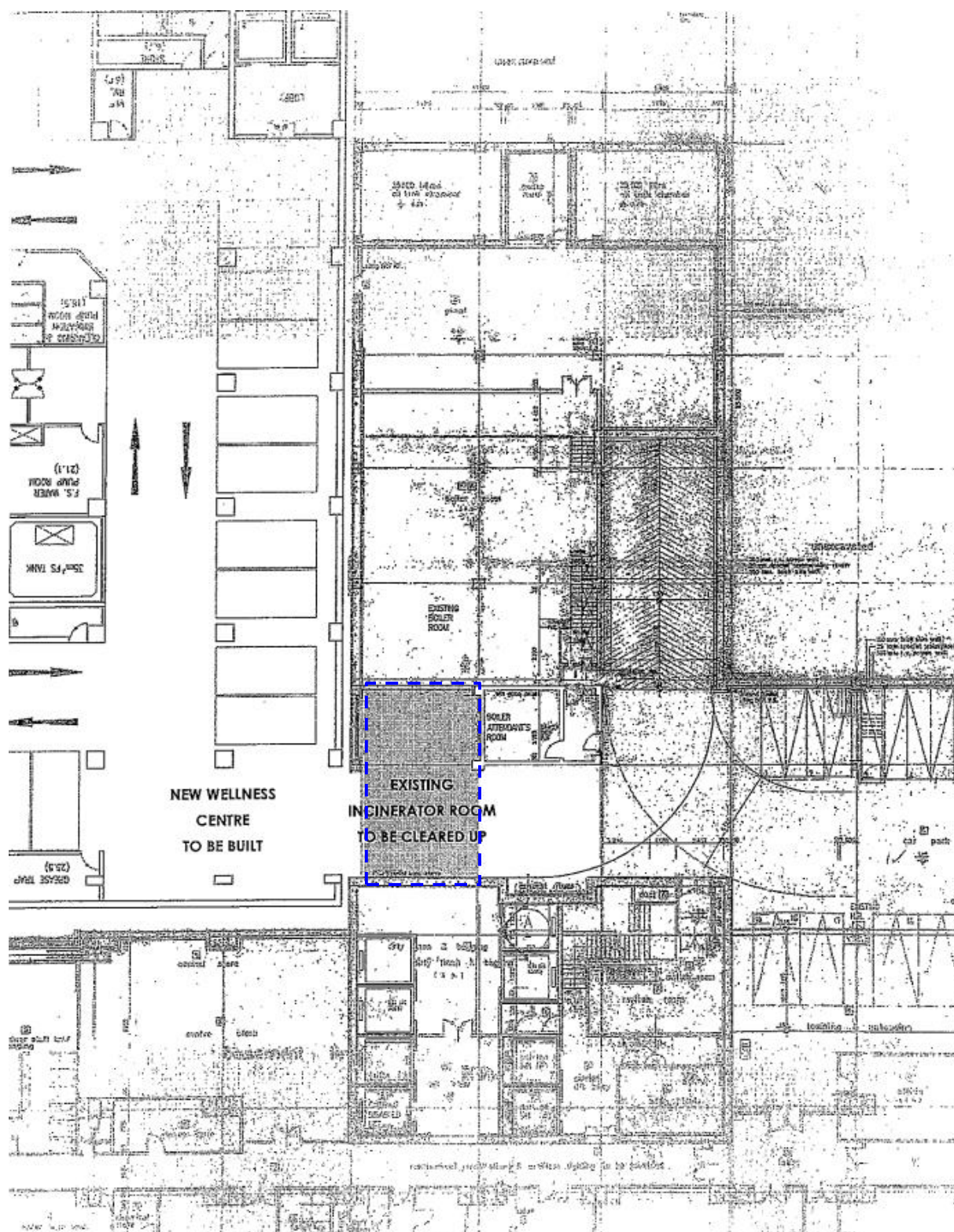
Approximate Location of Incinerators and Flue 焚化爐及煙道的位置

Title: Figure 4: Existing Basement Layout in Block B
標題: 圖四：現有B座大樓地下室的平面圖

Project: Decommissioning and Disposal of Incinerators at Yan Chai Hospital
工程項目: 清拆及處理位於仁濟醫院的醫療廢物焚化爐工程

July 2009

2009年七月



Title: 標題:	Figure 5: Proposed Basement Layout in Block B 圖五：建議中B座大樓地下室平面圖	July 2009 2009年七月
Project: 工程項目:	Decommissioning and Disposal of Incinerators at Yan Chai Hospital 清拆及處理位於仁濟醫院的醫療廢物焚化爐工程	

附錄乙
相片紀錄



一號焚化爐



二號焚化爐



一號焚化爐



二號焚化爐



焚化爐房內的水平煙道



在醫院地下一層的焚化爐房外的水平煙道



水平煙道與垂直煙道的連接點 (焚化爐的兩根煙道在右方；鍋爐的兩根煙道在左方)



在煙道底部的灰收集器



焚化爐的控制台及電源已被關閉



焚化爐外圍沒有可見的爐灰



焚化爐地板沒有可見的爐灰



灰收集器(在煙囪底部)的殘餘爐灰



一號焚化爐的殘餘爐灰



二號焚化爐的殘餘爐灰



爐灰採樣



爐灰採樣

附錄丙

爐灰化驗結果（只提供英文版本）



CERTIFICATE OF ANALYSIS

Client	: PARSONS BRINCKERHOFF	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 6
Contact	: MR FLEUR PARKINSON	Contact	: Wong Wai Man, Alice	Work Order	: HK0910725
Address	: 7/F, ONE KOWLOON, 1 WANG YUEN STREET, KOWLOON BAY, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Parkinsonf@PBWorld.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: +852 2963 7640	Telephone	: +852 2610 1044		
Facsimile	: +852 2856 9902	Facsimile	: +852 2610 2021		
Project	: 2525007A ENVIRONMENTAL SERVICES FOR YAN CHAI HOSPITAL INCINERATOR	Quote number	: ----	Date Samples Received	: 01-JUN-2009
Order number	: ----			Issue Date	: 16-JUN-2009
C-O-C number	: ----			No. of samples received	: 5
Site	: ----			No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client. The completion date of analysis is: 11-JUN-2009

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific comments for Work Order: **HK0910725**

Sample(s) were received in a chilled condition.

Sample(s) analysed and reported on an as received basis.

Sample(s) as received, digested by In-house method E-ASTM D3974-81 based on ASTM D3974-81, prior to the determination of metals.

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This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the Electronic Transactions Ordinance of Hong Kong, Chapter 553, Section 6.

Signatories

Anh Ngoc Huynh
Fung Lim Chee, Richard

Position

Senior Chemist
General Manager

Authorised results for

Organics
Inorganics



Analytical Results

Sub-Matrix: ASH

Client sample ID

Client sampling date / time

				001	002	003	004	005
				[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]
Compound	CAS Number	LOR	Unit	HK0910725-001	HK0910725-002	HK0910725-003	HK0910725-004	HK0910725-005
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	6	6	141	71	8
EG020: Barium	7440-39-3	0.5	mg/kg	1200	227	12.0	3.6	100
EG020: Cadmium	7440-43-9	0.2	mg/kg	1.2	1.9	1.5	0.9	8.0
EG020: Chromium	7440-47-3	1	mg/kg	1020	837	67	76	453
EG020: Cobalt	7440-48-4	0.5	mg/kg	3.2	3.2	36.5	31.8	4.5
EG020: Copper	7440-50-8	1	mg/kg	59	70	268	213	80
EG020: Lead	7439-92-1	1	mg/kg	1370	2340	384	184	2490
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	0.05	<0.05
EG020: Molybdenum	7439-98-7	1	mg/kg	10	9	8	6	11
EG020: Nickel	7440-02-0	1	mg/kg	12	8	47	54	27
EG020: Tin	7440-31-5	0.5	mg/kg	75.3	51.7	78.6	45.3	94.8
EG020: Zinc	7440-66-6	1	mg/kg	498	615	64	35	1240
EP-071: Total Petroleum Hydrocarbons (TPH)								
C6 - C9 Fraction	----	2	mg/kg	<2	<2	<2	<2	<2
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
EP-075B: Polyaromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP-066: Polychlorinated Biphenyls								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP-080S: TPH(Volatile)/BTEX Surrogate Surrogate control limits listed at end of this report.								
Dibromofluoromethane	1868-53-7	0.1	%	88.7	82.5	84.4	86.7	94.6
Toluene-D8	2037-26-5	0.1	%	96.9	96.9	94.8	95.6	97.3
4-Bromofluorobenzene	460-00-4	0.1	%	94.4	90.9	90.2	90.0	94.8
EP-075S: Acid Extractable Surrogates Surrogate control limits listed at end of this report.								
2-Fluorophenol	367-12-4	0.1	%	62.5	83.5	112	99.7	95.7
Phenol-d6	13127-88-3	0.1	%	102	93.2	110	94.9	108
2,4,6-Tribromophenol	118-79-6	0.1	%	47.6	47.3	77.0	75.0	57.4
EP-075T: Base/Neutral Extractable Surrogates Surrogate control limits listed at end of this report.								
Nitrobenzene -d5	4165-60-0	0.1	%	73.3	65.7	78.6	67.5	72.9
2-Fluorobiphenyl	321-60-8	0.1	%	72.7	66.6	80.0	68.0	76.9



Sub-Matrix: ASH				Client sample ID	001	002	003	004	005
Client sampling date / time					[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]	[01-JUN-2009]
Compound	CAS Number	LOR	Unit		HK0910725-001	HK0910725-002	HK0910725-003	HK0910725-004	HK0910725-005
EP-075T: Base/Neutral Extractable Surrogates - Continued					Surrogate control limits listed at end of this report.				
4-Terphenyl-d14	1718-51-0	0.1	%		87.2	84.6	104	89.0	88.3
EP-066S: PCB Surrogate					Surrogate control limits listed at end of this report.				
Tetrachlorometaxylene	877-09-8	0.1	%		67.3	49.7	58.6	54.6	72.5
Dibutylchloredate	1770-80-5	0.1	%		60.2	72.1	77.2	80.3	62.6



Laboratory Duplicate (DUP) Report

Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations (QC Lot: 1001902)								
HK0910725-002	002	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	1.9	1.7	10.3
		EG020: Barium	7440-39-3	0.5	mg/kg	227	199	13.4
		EG020: Cobalt	7440-48-4	0.5	mg/kg	3.2	3.6	12.5
		EG020: Tin	7440-31-5	0.5	mg/kg	51.7	54.8	5.8
		EG020: Arsenic	7440-38-2	1	mg/kg	6	6	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	837	890	6.2
		EG020: Copper	7440-50-8	1	mg/kg	70	77	10.2
		EG020: Lead	7439-92-1	1	mg/kg	2340	2320	0.9
		EG020: Molybdenum	7439-98-7	1	mg/kg	9	9	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	8	7	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	615	663	7.4
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1000853)								
HK0910725-001	001	C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0
		C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0
		C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 998406)								
HK0910675-006	Anonymous	C6 - C9 Fraction	----	2	mg/kg	<2	<2	0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 998336)								
HK0910753-044	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0
		Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0
		Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0
		Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0
EP-066: Polychlorinated Biphenyls (QC Lot: 1000854)								
HK0910725-001	001	Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: SOIL		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentratio	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 1001902)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	104	----	85	115	----	----
EG020: Barium	7440-39-3	1	mg/kg	<0.5	5 mg/kg	93.2	----	85	115	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	91.6	----	85	115	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	97.1	----	85	115	----	----
EG020: Cobalt	7440-48-4	1	mg/kg	<0.5	5 mg/kg	85.7	----	85	115	----	----



Matrix: SOIL		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
		Method: Compound	CAS Number	LOR		Unit	Result	LCS	DCS	Low	High
EG: Metals and Major Cations (QC Lot: 1001902) - Continued											
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	88.6	----	85	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	86.0	----	85	115	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	85.6	----	85	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	90.2	----	85	115	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.1	----	85	115	----	----
EG020: Tin	7440-31-5	1	mg/kg	<0.5	5 mg/kg	88.3	----	85	115	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	86.0	----	85	115	----	----
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1000853)											
C10 - C14 Fraction	----	50	mg/kg	<50	16 mg/kg	84.8	----	58	138	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	53 mg/kg	82.3	----	62	116	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	45 mg/kg	54.6	----	40	122	----	----
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 998406)											
C6 - C9 Fraction	----	2	mg/kg	<2	4 mg/kg	104	----	70	123	----	----
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 998336)											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	92.0	----	61	104	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	101	----	72	108	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	93.4	----	65	110	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	99.5	----	65	108	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	100	----	66	109	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.6	----	58	115	----	----
EP-066: Polychlorinated Biphenyls (QC Lot: 1000854)											
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	0.5 mg/kg	104	----	71	135	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 1001902)										
HK0910725-001	001	EG020: Arsenic	7440-38-2	5 mg/kg	82.9	----	75	125	----	----
		EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	82.4	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Cobalt	7440-48-4	5 mg/kg	83.2	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75	125	----	----



Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 1001902) - Continued										
HK0910725-001	001	EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	86.6	----	75	125	----	----
		EG020: Molybdenum	7439-98-7	5 mg/kg	80.5	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	80.8	----	75	125	----	----
		EG020: Tin	7440-31-5	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1000853)										
HK0910725-002	002	C10 - C14 Fraction	----	16 mg/kg	78.9	----	50	130	----	----
		C15 - C28 Fraction	----	53 mg/kg	76.8	----	50	130	----	----
		C29 - C36 Fraction	----	45 mg/kg	53.1	----	50	130	----	----
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 998406)										
HK0910675-007	Anonymous	C6 - C9 Fraction	----	4 mg/kg	103	----	50	130	----	----

Surrogate Control Limits

Sub-Matrix: ASH		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	25	121
Phenol-d6	13127-88-3	24	113
2,4,6-Tribromophenol	118-79-6	20	122
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	23	120
2-Fluorobiphenyl	321-60-8	30	115
4-Terphenyl-d14	1718-51-0	20	137
EP-066S: PCB Surrogate			
Tetrachlorometaxylene	877-09-8	50	130
Dibutylchlorendate	1770-80-5	50	130

TEST REPORT

1. NAME AND ADDRESS OF CLIENT

Ms Fleur Parkinson
Parsons Brinckerhoff
7/F One Kowloon
1 Wang Yuen Street
Kowloon Bay
Hong Kong

2. SAMPLE TYPE

Ash

3. NUMBER OF SAMPLE

5

4. SAMPLE RECEIPT DATE

2-Jun-09

6. ANALYTICAL METHOD

In-house method TM-01a

5. TEST PERIOD

Commencement Date: 8-Jun-09

Completion Date: 20-Jun-09

7. APPROVED SIGNATORY

Prof. Zongwei CAI
Director, Dioxin Analysis Laboratory

ANY INFORMATION BELOW THIS LINE IS INVALID

Customer's Sample ID: 001
Laboratory ID: 0906001

<u>Analyte</u>	<u>Analyte Concentration</u> (pg/g)	<u>I-TEF</u>	<u>TEQ</u> (pg I-TEQ/g)
2,3,7,8-TeCDF	(0.198)	0.1	(0.0198)
1,2,3,7,8-PeCDF	(0.0900)	0.05	(0.00450)
2,3,4,7,8-PeCDF	(0.456)	0.5	(0.228)
1,2,3,4,7,8-HxCDF	(0.0655)	0.1	(0.00655)
1,2,3,6,7,8-HxCDF	(0.0469)	0.1	(0.00469)
2,3,4,6,7,8-HxCDF	(0.0442)	0.1	(0.00442)
1,2,3,7,8,9-HxCDF	(0.0238)	0.1	(0.00238)
1,2,3,4,6,7,8,-HpCDF	(0.304)	0.01	(0.00304)
1,2,3,4,7,8,9-HpCDF	(0.0680)	0.01	(0.000680)
OCDF	(0.0805)	0.001	(0.0000805)
2,3,7,8-TeCDD	(0.0280)	1	(0.0280)
1,2,3,7,8-PeCDD	(0.0725)	0.5	(0.0362)
1,2,3,4,7,8-HxCDD	(0.0925)	0.1	(0.00925)
1,2,3,6,7,8-HxCDD	(0.0600)	0.1	(0.00600)
1,2,3,7,8,9-HxCDD	(0.0595)	0.1	(0.00595)
1,2,3,4,6,7,8-HpCDD	(0.250)	0.01	(0.00250)
OCDD	(0.730)	0.001	(0.000730)
Total TEQ			0.363

<u>Labelled Compound</u>	<u>Recovery (%)</u>	<u>Control Limit (%)</u>
IS 13C12-2,3,7,8-TeCDF	34	24 ~ 169
IS 13C12-1,2,3,7,8-PeCDF	62	24 ~ 185
IS 13C12-2,3,4,7,8-PeCDF	70	21 ~ 178
IS 13C12-1,2,3,4,7,8-HxCDF	73	26 ~ 152
IS 13C12-1,2,3,6,7,8-HxCDF	84	26 ~ 123
IS 13C12-2,3,4,6,7,8-HxCDF	85	28 ~ 136
IS 13C12-1,2,3,7,8,9-HxCDF	93	29 ~ 147
IS 13C12-1,2,3,4,6,7,8-HpCDF	85	28 ~ 143
IS 13C12-1,2,3,4,7,8,9-HpCDF	96	26 ~ 138
IS 13C12-2,3,7,8-TeCDD	46	25 ~ 164
IS 13C12-1,2,3,7,8-PeCDD	92	25 ~ 181
IS 13C12-1,2,3,4,7,8-HxCDD	88	32 ~ 141
IS 13C12-1,2,3,6,7,8-HxCDD	93	28 ~ 130
IS 13C12-1,2,3,4,6,7,8-HpCDD	95	23 ~ 140
IS 13C12-OCDD	107	17 ~ 157
CS ³⁷ Cl ₄ -2,3,7,8-TeCDD	43	35 ~ 197

Notes:

- Value in parenthesis means that the concentration of congener was not detected or its concentration is less than MDL or LOR. The half MDL value is reported if the congener was not detected or its concentration is less than MDL. The half LOR value is reported if the concentration of congener is less than LOR but higher than or equal to MDL.
- The values of MDL and LOR of each congener are shown in the last page of this test report.
- Sample was tested as received basis.

Customer's Sample ID: 002

Laboratory ID: 0906002

<u>Analyte</u>	<u>Analyte Concentration (pg/g)</u>	<u>I-TEF</u>	<u>TEQ (pg I-TEQ/g)</u>
2,3,7,8-TeCDF	(0.198)	0.1	(0.0198)
1,2,3,7,8-PeCDF	(0.0900)	0.05	(0.00450)
2,3,4,7,8-PeCDF	(0.0456)	0.5	(0.0228)
1,2,3,4,7,8-HxCDF	(0.0655)	0.1	(0.00655)
1,2,3,6,7,8-HxCDF	(0.0469)	0.1	(0.00469)
2,3,4,6,7,8-HxCDF	(0.0442)	0.1	(0.00442)
1,2,3,7,8,9-HxCDF	(0.0238)	0.1	(0.00238)
1,2,3,4,6,7,8,-HpCDF	(0.304)	0.01	(0.00304)
1,2,3,4,7,8,9-HpCDF	(0.0680)	0.01	(0.000680)
OCDF	(0.0805)	0.001	(0.0000805)
2,3,7,8-TeCDD	(0.0280)	1	(0.0280)
1,2,3,7,8-PeCDD	(0.0725)	0.5	(0.0362)
1,2,3,4,7,8-HxCDD	(0.0925)	0.1	(0.00925)
1,2,3,6,7,8-HxCDD	(0.0600)	0.1	(0.00600)
1,2,3,7,8,9-HxCDD	(0.0595)	0.1	(0.00595)
1,2,3,4,6,7,8-HpCDD	(0.250)	0.01	(0.00250)
OCDD	(0.730)	0.001	(0.000730)
		Total TEQ	0.158

<u>Labelled Compound</u>	<u>Recovery (%)</u>	<u>Control Limit (%)</u>
IS 13C12-2,3,7,8-TeCDF	56	24 ~ 169
IS 13C12-1,2,3,7,8-PeCDF	71	24 ~ 185
IS 13C12-2,3,4,7,8-PeCDF	73	21 ~ 178
IS 13C12-1,2,3,4,7,8-HxCDF	70	26 ~ 152
IS 13C12-1,2,3,6,7,8-HxCDF	83	26 ~ 123
IS 13C12-2,3,4,6,7,8-HxCDF	76	28 ~ 136
IS 13C12-1,2,3,7,8,9-HxCDF	78	29 ~ 147
IS 13C12-1,2,3,4,6,7,8-HpCDF	76	28 ~ 143
IS 13C12-1,2,3,4,7,8,9-HpCDF	82	26 ~ 138
IS 13C12-2,3,7,8-TeCDD	67	25 ~ 164
IS 13C12-1,2,3,7,8-PeCDD	85	25 ~ 181
IS 13C12-1,2,3,4,7,8-HxCDD	78	32 ~ 141
IS 13C12-1,2,3,6,7,8-HxCDD	87	28 ~ 130
IS 13C12-1,2,3,4,6,7,8-HpCDD	86	23 ~ 140
IS 13C12-OCDD	96	17 ~ 157
CS ³⁷ Cl ₄ -2,3,7,8-TeCDD	63	35 ~ 197

Notes:

- Value in parenthesis means that the concentration of congener was not detected or its concentration is less than MDL or LOR. The half MDL value is reported if the congener was not detected or its concentration is less than MDL. The half LOR value is reported if the concentration of congener is less than LOR but higher than or equal to MDL.
- The values of MDL and LOR of each congener are shown in the last page of this test report.
- Sample was tested as received basis.

Customer's Sample ID: 003

Laboratory ID: 0906003

<u>Analyte</u>	<u>Analyte Concentration</u> (pg/g)	<u>I-TEF</u>	<u>TEQ</u> (pg I-TEQ/g)
2,3,7,8-TeCDF	2.99	0.1	0.299
1,2,3,7,8-PeCDF	(0.900)	0.05	(0.0450)
2,3,4,7,8-PeCDF	2.06	0.5	1.03
1,2,3,4,7,8-HxCDF	1.85	0.1	0.185
1,2,3,6,7,8-HxCDF	1.07	0.1	0.107
2,3,4,6,7,8-HxCDF	(0.442)	0.1	(0.0442)
1,2,3,7,8,9-HxCDF	(0.238)	0.1	(0.0238)
1,2,3,4,6,7,8,-HpCDF	2.53	0.01	0.0253
1,2,3,4,7,8,9-HpCDF	(0.680)	0.01	(0.00680)
OCDF	1.98	0.001	0.00198
2,3,7,8-TeCDD	(0.280)	1	(0.280)
1,2,3,7,8-PeCDD	(0.725)	0.5	(0.362)
1,2,3,4,7,8-HxCDD	(0.925)	0.1	(0.0925)
1,2,3,6,7,8-HxCDD	1.53	0.1	0.153
1,2,3,7,8,9-HxCDD	1.22	0.1	0.122
1,2,3,4,6,7,8-HpCDD	6.37	0.01	0.0637
OCDD	6.53	0.001	0.00653
Total TEQ			2.85

<u>Labelled Compound</u>	<u>Recovery (%)</u>	<u>Control Limit (%)</u>
IS 13C12-2,3,7,8-TeCDF	59	24 ~ 169
IS 13C12-1,2,3,7,8-PeCDF	79	24 ~ 185
IS 13C12-2,3,4,7,8-PeCDF	73	21 ~ 178
IS 13C12-1,2,3,4,7,8-HxCDF	80	26 ~ 152
IS 13C12-1,2,3,6,7,8-HxCDF	95	26 ~ 123
IS 13C12-2,3,4,6,7,8-HxCDF	89	28 ~ 136
IS 13C12-1,2,3,7,8,9-HxCDF	83	29 ~ 147
IS 13C12-1,2,3,4,6,7,8-HpCDF	85	28 ~ 143
IS 13C12-1,2,3,4,7,8,9-HpCDF	89	26 ~ 138
IS 13C12-2,3,7,8-TeCDD	72	25 ~ 164
IS 13C12-1,2,3,7,8-PeCDD	79	25 ~ 181
IS 13C12-1,2,3,4,7,8-HxCDD	89	32 ~ 141
IS 13C12-1,2,3,6,7,8-HxCDD	99	28 ~ 130
IS 13C12-1,2,3,4,6,7,8-HpCDD	98	23 ~ 140
IS 13C12-OCDD	104	17 ~ 157
CS ³⁷ Cl ₄ -2,3,7,8-TeCDD	69	35 ~ 197

Notes:

- Value in parenthesis means that the concentration of congener was not detected or its concentration is less than MDL or LOR. The half MDL value is reported if the congener was not detected or its concentration is less than MDL. The half LOR value is reported if the concentration of congener is less than LOR but higher than or equal to MDL.
- The values of MDL and LOR of each congener are shown in the last page of this test report.
- Sample was tested as received basis.

Customer's Sample ID: 004

Laboratory ID: 0906004

<u>Analyte</u>	<u>Analyte Concentration</u> (pg/g)	<u>I-TEF</u>	<u>TEQ</u> (pg I-TEQ/g)
2,3,7,8-TeCDF	2.17	0.1	0.217
1,2,3,7,8-PeCDF	(0.900)	0.05	(0.0450)
2,3,4,7,8-PeCDF	1.61	0.5	0.804
1,2,3,4,7,8-HxCDF	(0.655)	0.1	(0.0655)
1,2,3,6,7,8-HxCDF	(0.469)	0.1	(0.0469)
2,3,4,6,7,8-HxCDF	1.02	0.1	0.102
1,2,3,7,8,9-HxCDF	(0.238)	0.1	(0.0238)
1,2,3,4,6,7,8,-HpCDF	1.98	0.01	0.0198
1,2,3,4,7,8,9-HpCDF	(0.680)	0.01	(0.00680)
OCDF	(0.805)	0.001	(0.000805)
2,3,7,8-TeCDD	(0.280)	1	(0.280)
1,2,3,7,8-PeCDD	(0.725)	0.5	(0.362)
1,2,3,4,7,8-HxCDD	(0.925)	0.1	(0.0925)
1,2,3,6,7,8-HxCDD	(0.600)	0.1	(0.0600)
1,2,3,7,8,9-HxCDD	(0.595)	0.1	(0.0595)
1,2,3,4,6,7,8-HpCDD	2.54	0.01	0.0254
OCDD	2.74	0.001	0.00274
		Total TEQ	2.21

<u>Labelled Compound</u>	<u>Recovery (%)</u>	<u>Control Limit (%)</u>
IS 13C12-2,3,7,8-TeCDF	61	24 ~ 169
IS 13C12-1,2,3,7,8-PeCDF	81	24 ~ 185
IS 13C12-2,3,4,7,8-PeCDF	76	21 ~ 178
IS 13C12-1,2,3,4,7,8-HxCDF	84	26 ~ 152
IS 13C12-1,2,3,6,7,8-HxCDF	99	26 ~ 123
IS 13C12-2,3,4,6,7,8-HxCDF	88	28 ~ 136
IS 13C12-1,2,3,7,8,9-HxCDF	86	29 ~ 147
IS 13C12-1,2,3,4,6,7,8-HpCDI	88	28 ~ 143
IS 13C12-1,2,3,4,7,8,9-HpCDI	92	26 ~ 138
IS 13C12-2,3,7,8-TeCDD	72	25 ~ 164
IS 13C12-1,2,3,7,8-PeCDD	98	25 ~ 181
IS 13C12-1,2,3,4,7,8-HxCDD	92	32 ~ 141
IS 13C12-1,2,3,6,7,8-HxCDD	100	28 ~ 130
IS 13C12-1,2,3,4,6,7,8-HpCDI	101	23 ~ 140
IS 13C12-OCDD	105	17 ~ 157
CS ³⁷ Cl ₄ -2,3,7,8-TeCDD	71	35 ~ 197

Notes:

- Value in parenthesis means that the concentration of congener was not detected or its concentration is less than MDL or LOR. The half MDL value is reported if the congener was not detected or its concentration is less than MDL. The half LOR value is reported if the concentration of congener is less than LOR but higher than or equal to MDL.
- The values of MDL and LOR of each congener are shown in the last page of this test report.
- Sample was tested as received basis.

Customer's Sample ID: 005
Laboratory ID: 0906005

<u>Analyte</u>	<u>Analyte Concentration</u> (pg/g)	<u>I-TEF</u>	<u>TEQ</u> (pg I-TEQ/g)
2,3,7,8-TeCDF	110	0.1	11.0
1,2,3,7,8-PeCDF	73.4	0.05	3.67
2,3,4,7,8-PeCDF	120	0.5	59.9
1,2,3,4,7,8-HxCDF	64.5	0.1	6.45
1,2,3,6,7,8-HxCDF	65.0	0.1	6.50
2,3,4,6,7,8-HxCDF	71.7	0.1	7.17
1,2,3,7,8,9-HxCDF	20.0	0.1	2.00
1,2,3,4,6,7,8,-HpCDF	109	0.01	1.09
1,2,3,4,7,8,9-HpCDF	15.4	0.01	0.154
OCDF	27.1	0.001	0.0271
2,3,7,8-TeCDD	11.5	1	11.5
1,2,3,7,8-PeCDD	25.8	0.5	12.9
1,2,3,4,7,8-HxCDD	27.9	0.1	2.79
1,2,3,6,7,8-HxCDD	60.9	0.1	6.09
1,2,3,7,8,9-HxCDD	47.3	0.1	4.73
1,2,3,4,6,7,8-HpCDD	442	0.01	4.42
OCDD	769	0.001	0.769
Total TEQ			141

<u>Labelled Compound</u>	<u>Recovery (%)</u>	<u>Control Limit (%)</u>
IS 13C12-2,3,7,8-TeCDF	75	24 ~ 169
IS 13C12-1,2,3,7,8-PeCDF	80	24 ~ 185
IS 13C12-2,3,4,7,8-PeCDF	79	21 ~ 178
IS 13C12-1,2,3,4,7,8-HxCDF	84	26 ~ 152
IS 13C12-1,2,3,6,7,8-HxCDF	86	26 ~ 123
IS 13C12-2,3,4,6,7,8-HxCDF	86	28 ~ 136
IS 13C12-1,2,3,7,8,9-HxCDF	88	29 ~ 147
IS 13C12-1,2,3,4,6,7,8-HpCDF	84	28 ~ 143
IS 13C12-1,2,3,4,7,8,9-HpCDF	94	26 ~ 138
IS 13C12-2,3,7,8-TeCDD	80	25 ~ 164
IS 13C12-1,2,3,7,8-PeCDD	92	25 ~ 181
IS 13C12-1,2,3,4,7,8-HxCDD	91	32 ~ 141
IS 13C12-1,2,3,6,7,8-HxCDD	92	28 ~ 130
IS 13C12-1,2,3,4,6,7,8-HpCDD	100	23 ~ 140
IS 13C12-OCDD	107	17 ~ 157
CS ³⁷ Cl ₄ -2,3,7,8-TeCDD	79	35 ~ 197

Notes:

- Value in parenthesis means that the concentration of congener was not detected or its concentration is less than MDL or LOR. The half MDL value is reported if the congener was not detected or its concentration is less than MDL. The half LOR value is reported if the concentration of congener is less than LOR but higher than or equal to MDL.
- The values of MDL and LOR of each congener are shown in the last page of this test report.
- Sample was tested as received basis.

<u>Analyte</u>	Method Detection Limit (pg/g)	Limit of Reporting (pg/g)
2,3,7,8-TeCDF	0.0397	0.397
1,2,3,7,8-PeCDF	0.180	1.80
2,3,4,7,8-PeCDF	0.0911	0.911
1,2,3,4,7,8-HxCDF	0.131	1.31
1,2,3,6,7,8-HxCDF	0.0938	0.938
2,3,4,6,7,8-HxCDF	0.0883	0.883
1,2,3,7,8,9-HxCDF	0.0476	0.476
1,2,3,4,6,7,8,-HpCDF	0.0609	0.609
1,2,3,4,7,8,9-HpCDF	0.136	1.36
OCDF	0.161	1.61
2,3,7,8-TeCDD	0.0561	0.561
1,2,3,7,8-PeCDD	0.145	1.45
1,2,3,4,7,8-HxCDD	0.185	1.85
1,2,3,6,7,8-HxCDD	0.120	1.20
1,2,3,7,8,9-HxCDD	0.119	1.19
1,2,3,4,6,7,8-HpCDD	0.0501	0.501
OCDD	0.146	1.46

END OF REPORT

附錄丁

石棉調查報告（只提供英文版本）

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

Materialab

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MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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1.0 INTRODUCTION

Materialab Consultants Limited was appointed by Parsons Brinkerhoff Ltd. to conduct an asbestos survey at the Incinerator Room at the Basement of Block B, Yan Chai Hospital. The surveyed areas were shown in Appendix 1.

The surveyed areas were built in 1990's and were occupied at the time of survey. There are no sensitive receivers identified in the immediate vicinity.

2.0 PARTICULARS OF CONCERNED PARTIES

Owner's Representative

Parsons Brinkerhoff Limited
Address: 7/F, One Kowloon,
1 Wang Yuen Street,
Kowloon Bay, Kowloon
Tel. : 2579 8899
Fax : 2856 9902
Contact Person: Ms. Fleur Parkinson

Registered Asbestos Consultant

Mr. Steven Wong (1071)
Address: Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun,
N.T., Hong Kong.
Tel. : 2450 8238
Fax : 2450 6138

Registered Asbestos Laboratory

Fugro Technical Services Limited
Materialab Division (4001)
Address: Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun,
N.T., Hong Kong.
Tel. : 2450 8233
Fax : 2450 6138
Contact Person: Mr. John Ho

3.0 SCOPE OF WORKS

MaterialLab Consultants Limited was appointed by Parsons Brinkerhoff Limited to:

- conduct an asbestos survey at the project site;
- identify and locate asbestos-containing materials at the project site;
- collect suspected asbestos-containing materials for further analysis; and
- prepare an Asbestos Investigation Report (AIR) and Asbestos Abatement Plan (AAP), if any.

4.0 WORK UNDERTAKEN

4.1 Record Review

Drawings, specifications and previous survey records regarding asbestos-containing materials of the building were not available for review.

4.2 Field Work

The asbestos survey was carried out on 1 June 2009 at the above project site. The survey consisted of visual inspection of each occurrence and representative sampling of suspected materials. The survey was limited to exposed areas of the building, which were accessible to the consultant without the removal of any external or internal building fabrics, fixtures and fittings. The consultant did not for the purpose of this survey, examine any unexposed areas of the buildings such as concealed or underground water pipes, cables, mains etc and any areas of the buildings which were dangerous or hazardous to the consultant. There were no inaccessible areas to the consultant at the time of survey.

The following materials were inspected during the survey and are summarised in Table 1. Photographic records of these materials are enclosed in Appendix 2.

Table 1

Items Inspected	Location	Composition
Chimney Gasket *	Near Ceiling Level	Suspected asbestos-containing Chimney Gasket
Incinerator Insulation *	Surface of Incinerator	Suspected asbestos-containing Glass Gasket
Insulation Brick *	Inside Incinerator	Suspected asbestos-containing Insulation Brick
Water Pipe	Front of Incinerator No. 1	Metal
Incinerator Door Insulation	Incinerator Door	Nylon

* Samples were taken for laboratory analysis

4.3 Sampling

Sampling and analysis of suspected asbestos-containing materials were carried out by Fugro Technical Services Limited (MaterialLab Division), the Laboratory. The following sampling strategies were adopted as far as practicable:-

Type of Materials	Area or Length	Number of Samples
Homogeneous surface materials e.g. coating, plaster, etc.	<100 sq.m.	At least 3
	100 - 500 sq.m.	5
	> 500 sq.m.	At least 7
Thermal insulation e.g. pipe lagging, boiler insulation, etc.	Each homogeneous run	At least 3
Miscellaneous materials e.g. corrugated sheet, etc.	Each homogeneous material	At least 2

4.4 Laboratory Analysis

6 samples of suspected asbestos-containing materials were collected. The samples were then analysed for the presence and type of asbestos according to the Laboratory's HOKLAS accredited testing procedures. The results are summarised in Table 2.

Table 2

Sample Code	Sample Nature	Sampling Location	Photo No.	Type and Content of Asbestos Present
PE90592/1	Insulation Brick	Incinerator No. 1, Incinerator Room, B/F, Block B	1	Non – ACM
PE90592/2	Insulation Brick	Incinerator No. 2, Incinerator Room, B/F, Block B	2	Non – ACM
PE90592/3	Chimney Gasket	Incinerator No. 1, Incinerator Room, B/F, Block B	3	Non – ACM
PE90592/4	Chimney Gasket	Incinerator No. 2, Incinerator Room, B/F, Block B	4	Non – ACM
PE90592/5	Incinerator Insulation	Incinerator No. 1, Incinerator Room, B/F, Block B	5	Non – ACM
PE90592/6	Incinerator Insulation	Incinerator No. 2, Incinerator Room, B/F, Block B	6	Non – ACM

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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5.0 RECOMMENDATIONS AND CONCLUSIONS

- 5.1 Based on the information gathered during the survey, it is concluded that asbestos-containing materials were not identified in the project site.
- 5.2 Every effort has been made to visually examine all materials within the scope of this project and, where appropriate and accessible to us, these materials have been sampled and tested by the Laboratory to ascertain the presence or otherwise of asbestos. The ACMs identified in this report, if any, may not be the only ACMs within the premises.
- 5.3 It should be noted that the information presented in this report describes the conditions at the time of survey. If suspected ACMs not identified or sampled during this survey are revealed, a registered asbestos consultant should be consulted before proceeding with any asbestos abatement work in the premises.

Prepared by : **Leung Cheok Wai**

Certified by : **Steven Wong**
Registered Asbestos Consultant

Date : _____

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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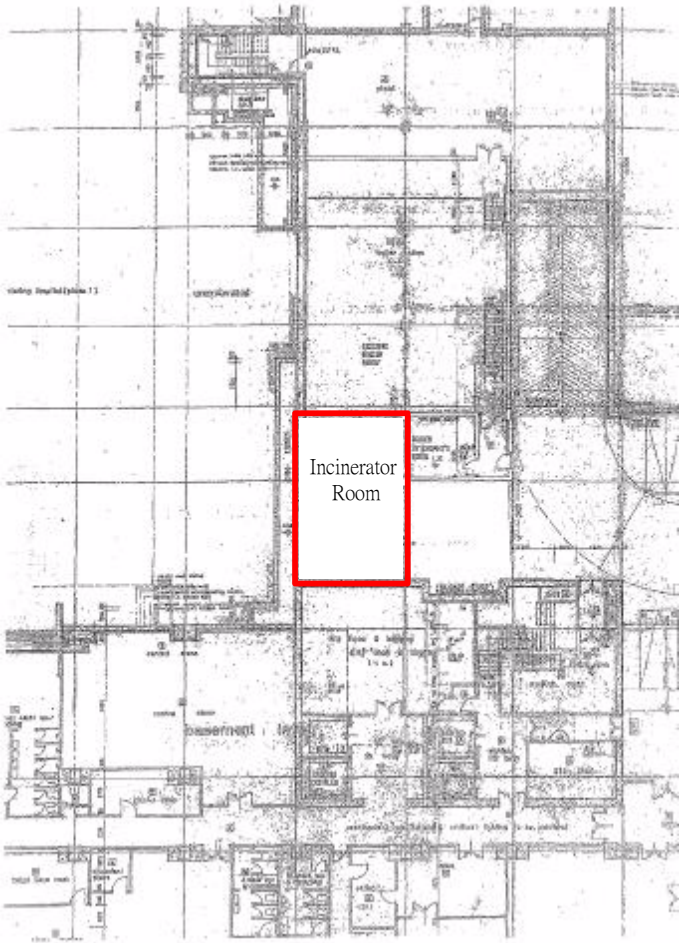
APPENDIX 1

Scope of Investigation

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk



Block B, Basement of Yan Chai Hospital

Figure:	1
Project Title:	Asbestos Survey for the Decommissioning of the Incinerators at Yan Chai Hospital, Tsuen Wan
Drawing Title:	Scope of Investigation
Our ref. no.:	0026/09/ED/0032
Prepared by:	Leung Cheok Wai
Scale:	Not to Scale
Legend:	<div><div></div>Scope of Investigation</div>
Rev.	Date
0	16/06/2009

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Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

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APPENDIX 2

Photographic Records of Site Survey

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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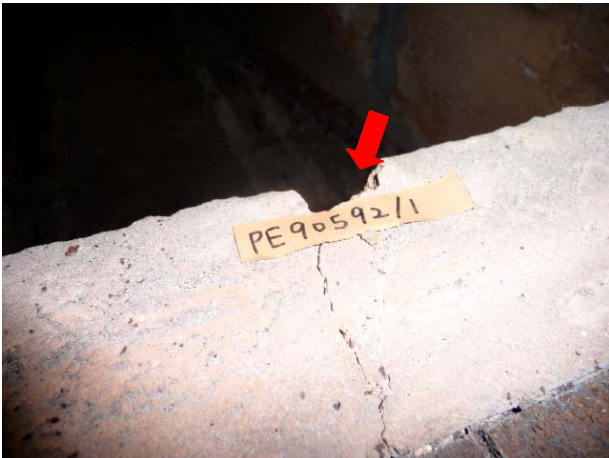


Photo 1. Insulation Brick (PE90592/1) sampled at Incinerator 1, Incinerator Room, B/F was confirmed as Non-ACM.



Photo 2. Insulation Brick (PE90592/2) sampled at Incinerator 2, Incinerator Room, B/F was confirmed as Non-ACM.



Photo 3. Chimney Gasket (PE90592/3) sampled at Chimney of Incinerator 1 was confirmed as Non-ACM.



Photo 4. Chimney Gasket (PE90592/4) sampled at Chimney of Incinerator 2 was confirmed as Non-ACM.

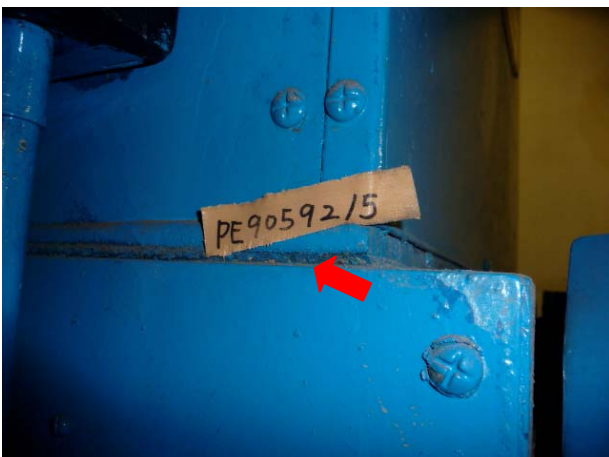


Photo 5. Incinerator Insulation (PE90592/5) sampled at Incinerator 1 was confirmed as Non-ACM.



Photo 6. Incinerator Insulation (PE90592/6) sampled at Incinerator 2 was confirmed as Non-ACM.

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Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
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Photo 7. Metal Water Pipe, photo taken at Incinerator Room.



Photo 8. Metal Chimney with no gasket, photo taken at the outside of Incinerator Room.



Photo 9 The general view of Incinerator 1.



Photo 10. The general view of Incinerator 2.



Photo 11. The general view inside the incinerator.



Photo 12. Glass fibre insulation of the incinerator, photo taken at Incinerator 2.

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Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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Photo 13. Nylon Insulation of the Incinerator Door, photo taken at Incinerator 1.

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5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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APPENDIX 3

Sampling Location Plans

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

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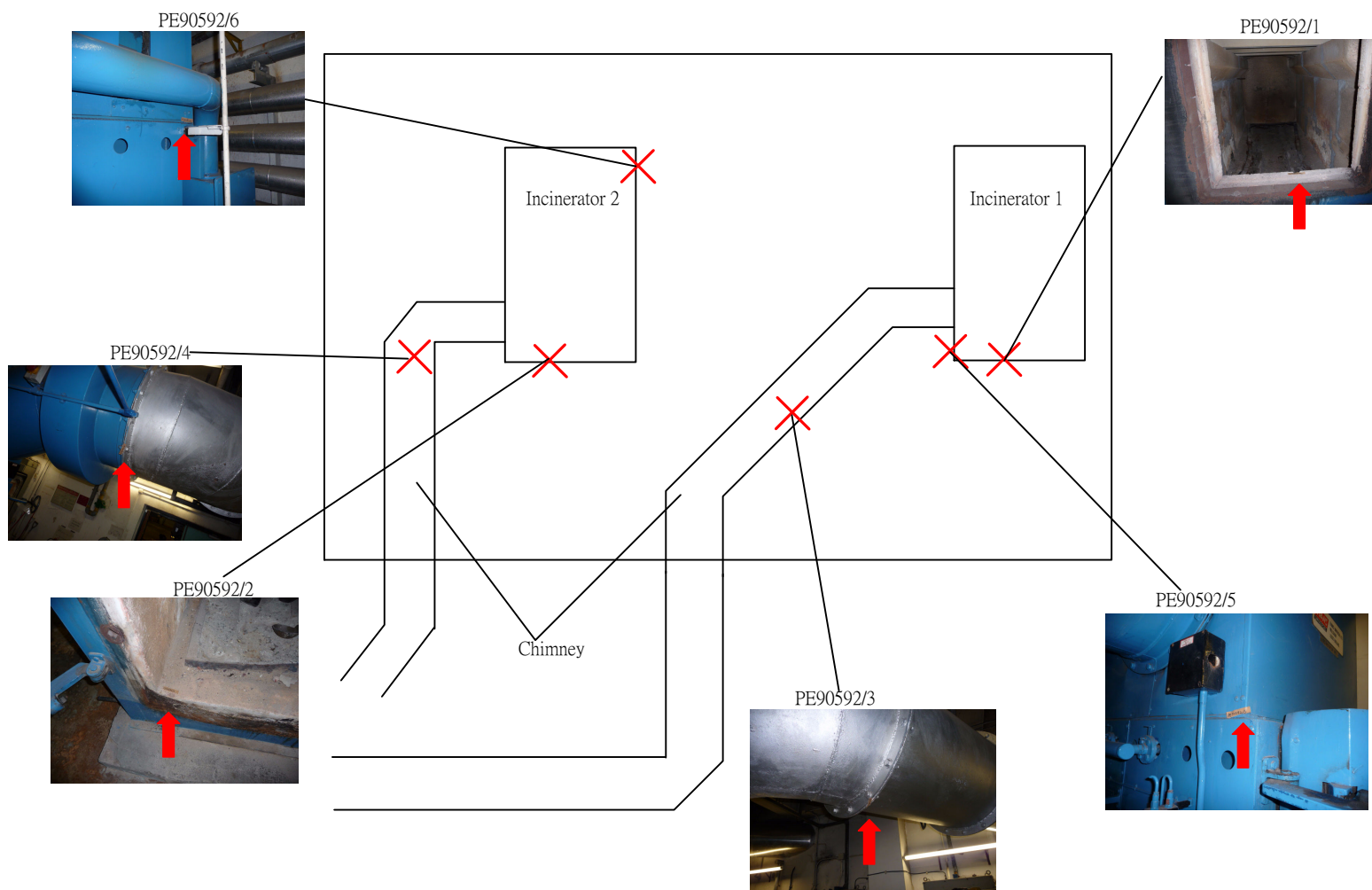


Figure: 2

Project Title:
Asbestos Survey for the
Decommissioning of the
Incinerators at Yan Chai
Hospital, Tsuen Wan

Drawing Title:
Sampling Location

Our ref. no.:
0026/09/ED/0032

Prepared by:
Leung Cheok Wai

Scale: Not to Scale

Legend:
X Sampling Location

Rev.	Date
0	16/06/2009

MATERIALAB CONSULTANTS LIMITED

Fugro Development Centre,
5 Lok Yi Street,
17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : (852)-24508238
Fax : (852)-24506138
Email : mcl@fugro.com.hk

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The "Material" part is in a lighter weight, and the "Lab" part is in a bolder weight. The logo is framed by two thick horizontal black bars, one above and one below the text.

APPENDIX 4

Laboratory Test Results

FUGRO TECHNICAL SERVICES LIMITED

MaterialLab Division,
Fugro Development Centre,
5 Lok Yi Street, 17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T., Hong Kong.

Tel : +852-2450 8233
Fax : +852-2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materiallab.com.hk

MaterialLab

Report No. : 090549PE90592

**I. TEST REPORT ON SAMPLING AND ANALYSIS OF BULK MATERIALS****Information Supplied by Client**

Page 1 of 2

Client : MaterialLab Consultants Limited
Client's address : Fugro Development Centre, 5 Lok Yi Street, 17 M.S. Castle Peak Road,
Tai Lam, Tuen Mun, N.T.
Project : Asbestos Survey for the Decommissioning of the Incinerators at Yan Chai
Hospital, Tsuen Wan
Test required : 1. Presence of asbestos
2. Type of asbestos, if present
3. Determination of ACM by visual examination

Laboratory Information

Lab. sample I.D. : PE90592/1 to 6
Sample description : 6 nos. bulk materials sampled from the project site
Date of sampling : 01/06/2009
Sampling method : In-house methods G-T-021 & G-T-022
Sampled by : K.L. Yung
Date of test completed : 15/06/2009
Test method : In-house methods G-T-023 & G-T-028

Test Results :

Lab. Sample I.D.	Sample Nature	Sampling Location	Sampling Method	Asbestos Fibres		ACM / Non-ACM
				Presence	Type	
PE90592/1	Insulation Brick	Incinerator No. 1, Incinerator Room, B/F, Block B	G-T-022	Not detected	-	Non-ACM
PE90592/2	Insulation Brick	Incinerator No. 2, Incinerator Room, B/F, Block B	G-T-022	Not detected	-	Non-ACM
PE90592/3	Chimney Gasket	Incinerator No. 1, Incinerator Room, B/F, Block B	G-T-021	Not detected	-	Non-ACM

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MaterialLab

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Page 2 of 2

Test Results :

Lab. Sample I.D.	Sample Nature	Sampling Location	Sampling Method	Asbestos Fibres		ACM / Non-ACM
				Presence	Type	
PE90592/4	Chimney Gasket	Incinerator No. 2, Incinerator Room, B/F, Block B	G-T-021	Not detected	-	Non-ACM
PE90592/5	Incinerator Insulation	Incinerator No. 1, Incinerator Room, B/F, Block B	G-T-021	Not detected	-	Non-ACM
PE90592/6	Incinerator Insulation	Incinerator No. 2, Incinerator Room, B/F, Block B	G-T-021	Not detected	-	Non-ACM

Remarks: 1. The sample is either classified as an ACM (>1% asbestos by weight) or a non-ACM (not >1% asbestos by weight) as defined in the Air Pollution Control Ordinance.
2. Sampling location plans and photographic records are detailed in asbestos investigation report.

Tested by : C.F. LamCertified by : 
Approved Signatory : LEUNG Man Wai, Donney
Assistant Manager – Micro-Materials SectionDate : 19/06/2009