

**Decommissioning & Disposal of  
Clinical Waste Incinerator  
at Wai Oi Block of Caritas Medical Centre**

**Project Profile**

**Reference : R325.06**

**Client : Hospital Authority**

**Date : March 2007**

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## **1. Basic Information**

### **1.1 Project Title**

Decommissioning and disposal of clinical waste incinerator at Wai Oi Block of Caritas Medical Centre (CMC).

### **1.2 Purpose and Nature of the Project**

CMC has started a major redevelopment project in order to meet the ever increasing demand and expectation in medical services. Phase I was completed in 2002. Phase II, including ambulatory, rehabilitation and supporting services has already been started. As part of the Phase II redevelopment programme, the existing clinical waste incinerators will be decommissioned and refurbished.

The chimney and associated flue sections connected to the incineration units have been disconnected and removed previously, thus the demolition works to be covered under this Project Profile will be limited within the incinerator room.

### **1.3 Name of Project Proponent**

The Hospital Authority

### **1.4 Location and Scale of Project**

CMC is an acute general hospital located in Sham Shui Po. **Figure 1-1** shows the location of CMC and its surrounding land uses.

The incinerator room to be decommissioned are located in Wai Oi Block of the CMC. The floor plan showing the location of incinerator room is shown in **Figure 1-2**. There are two incineration units inside the incinerator room, powered by a separately individual fuel oil system. The chimney connected to the incineration units was disconnected and removed in Year 2005 as part of the ongoing renovation works for Wai Oi Block.

In order to allow the redevelopment programme to proceed, the existing incinerator room at CMC has to be decommissioned and refurbished. The items inside incinerator room to be removed shall include the combustion furnace as well as its associated panels. The incineration units are constructed mainly with metal except the interior of the incinerator furnace which is lined with fire bricks.

There are two incineration units inside the incinerator room. Each incineration unit has an internal furnace capacity of about 3 m<sup>3</sup>, consisting of the main combustion chamber of 2.05 m<sup>3</sup> and the secondary combustion chamber of 0.88 m<sup>3</sup>. The incineration units were put into service in 1988 and ceased operation in early 1999. The normal operating hours during the period was 08:00 to 16:30 every day and 5 days per week. Maintenance and repairing of the incineration

units were provided by the electrical and mechanical (E&M) staff during its operational period. No accidents were recorded during the operations of the incineration units.

Waste incinerated during the operating period were the clinical waste packaged in “Red Bag” (i.e. clinical waste other than Group 3), including used or contaminated sharps, laboratory waste, infectious materials, dressings, and other wastes.

### **1.5 Number and Type of Designated Project to be covered by this Project Profile**

Under Item 3 in Part II, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO, Cap. 499), decommissioning of clinical waste incinerator at CMC is a Designated Project. Therefore an Environmental Permit (EP) has to be granted from the Environmental Protection Department (EPD) before the decommissioning and disposal works commence.

### **1.6 Name and Telephone Number of Contact Person**

This whole Phase II redevelopment project at CMC is managed by Wong & Ouyang (H.K.) Limited, and CH2M HILL Hong Kong Limited has been commissioned as the Environmental Consultant. The contact details are as shown below.

Mr. David Yeung  
CH2M HILL Hong Kong Limited, Suite 1801, Harcourt House, 39 Gloucester Road, Wanchai, Hong Kong  
Telephone: (852) 2507-2203  
Facsimile: (852) 2507-2293

## **2. Outline of Planning and Implementation Programme**

### **2.1 Project Implementation**

Decommissioning and disposal of the clinical waste incinerators will be carried out by a specialist contractor to be appointed by the Project Proponent or its representatives.

### **2.2 Project Timetable & Programme**

It was planned to commence the decommissioning of the incinerator as soon as possible in 2007 in order to cope with the redevelopment programme at CMC.

A tentative programme for the decommissioning and disposal works is shown in **Table 2-1** below:

Table 2-1 Tentative Programme for the Decommissioning, Removal and Disposal Works of Clinical Waste Incinerator

Tasks and Brief Description	Time required
<b>Site Preparation and Containment Construction (Section 3.3.1)</b>	1 day
Preliminary site decontamination	0.5 day
Construction of containment	5 days
<b>Smoke test (Section 3.3.2)</b>	0.5 day
<b>Removal (Section 3.3.3)</b>	
Removal and decontamination of the clinical waste incinerator	5 days
<b>Disposal (Section 3.4)</b>	Within 1 day from obtaining disposal permit

### 2.3 Interactions with Broader Programme Requirements

Decommissioning of the incinerators will be carried out along with other demolition works under the redevelopment programme at CMC. The whole programme will come to an end in Year 2012.

## 3. Possible Impact on the Environment & Environmental Protection Measures

### 3.1 Residual Ash

Residual ash generated from the incinerator operation could be potential contaminated waste. A preliminary visual inspection of the incineration site has been conducted in November 2006 and it was revealed that there was minimal quantity of residual ash left inside the combustion furnaces of the incinerators and among the exhaust sections. There was also miscellaneous construction materials such as floor tiles, wooden boards, racks, etc. placed within the incinerator room.

Detailed ash sampling and analysis have been carried out inside the each incineration units as well as some potential “hot spots” inside the incinerator room. The details are as presented below.

#### 3.1.1 Ash Sampling

Two (2) samples of residual ash have been collected from combustion furnace of each incineration units (i.e. a total of four (4) samples for the two incineration units). This is considered sufficiently representative given the small capacity of the incineration units (about 3 m<sup>3</sup> for each incineration unit). In addition, two (2) samples have been collected for the ash deposits within the incinerator room, including walls and ground surfaces of the incinerator room.

### 3.1.2 Sampling Procedure

A Hong Kong Laboratory Accreditation Scheme (HKOLAS) Laboratory has been appointed to carry out the ash sampling. The technician with proper personal protective equipment (PPE) opened the doors of furnaces and used clean ceramic spoon to collect residual ash samples from the chambers of each incineration unit. The collected ash samples were separately put into clean glass container and properly sealed. The sampling procedure was repeated at each sampling location, including those additional samples for the ash deposits. The samples were then stored in a cooler box (at or below 4 °C but not frozen) and delivered to the Laboratory for analysis.

### 3.1.3 Sampling Analysis

All ash samples were tested by the Laboratory. The testing results (except dioxins/furans) were compared against the Dutch B standard for assessment of contamination. For dioxins/furans parameters, on the other hand, the USEPA criterion of 1 ppb TEQ was adopted.

The test methods, analytical reporting limits as well the assessment criteria are summarised in the following tables (**Table 3-1** to **Table 3-3**):-

Table 3-1 Dioxins / Furans Parameters to be Tested for Residual Ash Samples

Parameters	Analytical Method	Reporting Limit <sup>1</sup>	Toxic Equivalent Factor <sup>2</sup>	Assessment Criteria <sup>3</sup>	
Dibenzodioxins	USEPA Method 8290 or Equivalent			(Total) 1 ppb TEQ	
2,3,7,8-TeCDD		4.4	1.0		
1,2,3,7,8-PeCDD		5.4	0.5		
1,2,3,4,7,8-HxCDD		12	0.1		
1,2,3,6,7,8-HxCDD		12	0.1		
1,2,3,7,8,9-HxCDD		12	0.1		
1,2,3,4,6,7,8-HpCDD		8.7	0.01		
OCDD		28	0.001		
Dibenzofurans					
2,3,7,8-TeCDF		5.1	0.1		
1,2,3,7,8-PeCDF		5.1	0.05		
2,3,4,7,8-PeCDF		5.1	0.5		
1,2,3,4,7,8-HxCDF		6.8	0.1		
1,2,3,6,7,8-HxCDF		6.8	0.1		
2,3,4,6,7,8-HxCDF		6.8	0.1		
1,2,3,7,8,9-HxCDF		6.8	0.1		
1,2,3,4,6,7,8-HpCDF		6.9	0.01		
1,2,3,4,7,8,9-HpCDF	6.9	0.01			
OCDF	20	0.001			

<sup>1</sup> All values are in the unit of pg/g unless otherwise specified.  
<sup>2</sup> Toxic Equivalent Factor (TEF) of the above seventeen 2,3,7,8-positional chlorinated congeners of dioxins/furans are developed by NATO/CCSM.  
<sup>3</sup> Assessment criterion is referenced to the USEPA standard of 1 ppb TEQ (equivalent to 1 ng TEQ/g or 1000 pg TEQ/g). TEQ refers to "Toxic Equivalent", which is calculated by  $\Sigma[(\text{concentration}) \times (\text{TEF})]$

Table 3-2 PCB, TPH and PAH Parameters to be Tested for Residual Ash Samples

<u>Parameters</u>	<u>Analytical Method</u>	<u>Reporting Limit</u> <sup>1</sup>	<u>Assessment Criteria</u> <sup>2</sup>
Polychlorinated Biphenyls (PCB)	USEPA Method 8270 or Equivalent	0.1	(Total) 1
Total Petroleum Hydrocarbon (TPH)			
C6-C9	USEPA Method 8015/8260 or Equivalent	2	(Total) 1,000
C10-C14		50	
C15-C28		100	
C25-C36		100	
Polynuclear Aromatic Hydrocarbon (PAH)			
Total PAH	USEPA Method 8270 or Equivalent	-	(Total) 20
Naphthalene		0.5	5
Anthracene		0.5	10
Fenanthrene		0.5	10
Flouranthene		0.5	10
Pyrene		0.5	10
1,2-benzopyrene		0.5	1
<sup>1</sup> All values are in the unit of mg/kg dry weight basis unless otherwise specified. <sup>2</sup> Assessment criteria are referenced to the Dutch B Standard for assessment of land contamination.			

Table 3-3 Heavy Metals Parameters to be Tested for Residual Ash Samples

<u>Parameters</u>	<u>Analytical Method</u>	<u>Reporting Limit</u> <sup>1</sup>	<u>Assessment Criteria</u> <sup>2</sup>
Heavy Metals			
Chromium	USEPA Method 6020 or Equivalent	0.05	250
Cobalt		0.5	50
Nickel		0.05	100
Copper		0.05	100
Zinc		0.5	500
Arsenic		0.5	30
Molybdenum		0.5	40
Cadmium		0.02	5
Tin		0.5	50
Barium		0.5	400
Mercury		0.02	2
Lead		0.05	150
<sup>1</sup> All values are in the unit of mg/kg dry weight basis unless otherwise specified. <sup>2</sup> Assessment criteria are referenced to the Dutch B Standard for assessment of land contamination.			

## 3.2 Field Sampling, Laboratory Results and Interpretation

### 3.2.1 Field Sampling

Ash sampling & analysis works have been procured by the Consultant under a standalone contract. Ash sampling has been conducted by the appointed Laboratory on 12 December 2006, according to the residual ash sampling works described in Section 3.1 above and under full supervision by Environmental



Consultant's representatives. A total of six (6) ash samples have been collected, namely:-

- Sampling Point 1 ("Back") – ambient sampling at ground level;
- Sampling Point 2 ("Front") – ambient sampling at ground level and wall;
- Sampling Point 3 ("R2-1") – interior of incinerator at ground & wall level;
- Sampling Point 4 ("R2-2") – residual ash inside incinerator;
- Sampling Point 5 ("R1-1") – interior of incinerator at ground & wall level; and
- Sampling Point 6 ("R1-2") – residual ash inside incinerator.

The indicative ash sampling locations are illustrated in **Figure 3-1**. Photo record is attached in **Appendix A** of this Project Profile.

### 3.2.2 Laboratory Analysis and Interpretation

The detailed test reports issued by the Laboratory are contained in **Appendix B** of this Project Profile. The results summary is presented in **Table 3-4** below:-

Table 3-4 Summary of Laboratory Analyses

<u>Parameters</u>	<u>Assessment Criteria</u> <sup>1</sup>	<u>Sampling Result</u>		<u>Compliance</u>
		<u>Average</u>	<u>Range</u>	
<b>Dioxins/Furans</b>				
Total Dioxins/Furans	1 ppb TEQ	14.29 ppb TEQ	0.52 to 37 ppb TEQ	<b>No</b>
<b>PCB, TPH and PAH</b>				
Total PCB	1	0.1	0.1 to 0.1	Yes
Total TPH	1,000	794	252 to 1572	<b>No</b>
Total PAH	20	3.2	3 to 3.9	Yes
Naphthalene	5	0.5	0.5 to 0.5	Yes
Anthracene	10	0.5	0.5 to 0.5	Yes
Fenanthrene	10	0.7	0.5 to 1.3	Yes
Flouranthene	10	0.5	0.5 to 0.6	Yes
Pyrene	10	0.5	0.5 to 0.5	Yes
1,2-benzopyrene	1	0.5	0.5 to 0.5	Yes
<b>Heavy Metals</b>				
Chromium	250	5702	230 to 30000	<b>No</b>
Cobalt	50	45	14.4 to 136	<b>No</b>
Nickel	100	3528	145 to 18400	<b>No</b>
Copper	100	1759	355 to 3370	<b>No</b>
Zinc	500	5387	4600 to 6670	<b>No</b>
Arsenic	30	8.7	2.6 to 22.5	Yes
Molybdenum	40	101	18.3 to 467	<b>No</b>
Cadmium	5	6.11	4.24 to 11.1	<b>No</b>
Tin	50	160	62.4 to 245	<b>No</b>
Barium	400	1279	153 to 3380	<b>No</b>
Mercury	2	7.55	0.67 to 27.8	<b>No</b>
Lead	150	558	364 to 738	<b>No</b>

<sup>1</sup> All values are in the unit of mg/kg dry weight basis unless otherwise specified.

The laboratory results for the ash samples revealed the below findings:-

- Total dioxins/furans levels of ash samples obtained at ground level in the incinerator room and all ash samples obtained inside the two incinerator furnances were above the 1 ppb TEQ requirement as stipulated by USEPA. This indicates dioxin contamination within the incinerator room is evident.
- Other contaminants were compared with the Dutch standard for land contamination as referenced to the precedent cases for clinical waste incinerator decommissioning & disposal at Pok Oi Hospital and Tang Shiu Kin Hospital.
- Within the heavy metal group, only Arsenic complied with the Dutch B requirement; heavy contamination (i.e. exceeding Dutch C requirement) including Chromium, Nickel, Copper, Zinc, Molybdenum, Mercury, and Lead were observed in all the collected samples. This suggests that contamination due to the previous operation of the clinical waste incinerators (presumably residual ash) has spread to the environment within the incinerator room.
- Only one Dutch B exceedance in TPH (sample R1-2) was noted.
- PCB and PAH levels were within the Dutch B requirements.

Therefore, the contaminants of concern found at the incinerator room are heavy metals, TPH, and dioxin. The ash inside the incinerator furnaces as well as those attached to the walls, ground and ceiling surfaces are therefore considered as contaminated. Decommissioning of the whole incinerator room shall be carried out with special care and protection to ensure that all residue ash inside the incinerator room (including those inside incineration furnaces and attached to the walls, ground and ceiling surfaces) are handled, transported and disposed of properly.

### **3.3 Decommissioning Method - Containment Approach**

Decommissioning of the incinerator room shall be conducted under full containment to avoid the release of any residual ash to the environment, which could be generated during the decommissioning works.

#### **3.3.1 Site Preparation and Containment Construction**

Preliminary site decontamination of all debris shall be carried out by using High Efficiency Particulate Air (HEPA) vacuum cleaner. Except the incineration units, all other existing items shall be removed from the incinerator room as far as practicable to avoid obstructing the subsequent work activities. The grille of the incinerator room facing to the staircase in the western direction shall be lined with 3 layers of fire retardant polythene sheets on the external of walls of the incinerator room.

At the entrance to incinerator room, a 3-compartment decontamination unit shall be constructed for entry and exit from the works area. The unit shall comprise a dirty room, a shower room, and a clean room of at least (1m x 1m) base each with 3 layers of fire retardant polythene sheet where all workers shall carry out decontamination procedures before leaving the work area. Warning signs in both Chinese and English shall be put up in conspicuous location outside the incinerator room throughout the entire course of the decommissioning works.

An air mover shall be provided at the incinerator room to exhaust air from the works area. A stand-by air mover shall also be installed with each of the air movers. Sufficient air movement shall be maintained to give a minimum of 6 air changes per hour (ACH) to the works area, and maintain a negative pressure of 1.5-4 mm of water within the works area throughout the entire course of the decommissioning works. A pressure monitor with printout records and audible alarm shall be installed at an easily accessible location to demonstrate that negative pressure is maintained. A standby air mover shall be made available for use. New pre-filters shall be used at the air movers. HEPA filters shall only be installed in the maintenance workshop.

A copy of the maintenance records of the air movers shall be kept on site for inspection upon request. The appointed specialist contractor shall also check the differential pressure of the air mover to make sure the filter is not blocked. A differential pressure above 5 mm of water indicates that the filters will need to be changed. All items remain inside the containment shall be covered with at least 2 layers of fire retardant polythene sheets before the decommissioning works proceed.

The proposed plan layout of containment during decommissioning and disposal works of the clinical waste incinerator is illustrated in **Figure 3-2**.

### **3.3.2 Smoke Test**

Before commencement of the decommissioning works, a smoke test with non-toxic smoke shall be carried out to ensure the air-tightness of the containment, and to check whether there are stagnant air pockets indicated by an aggregate of smoke that cannot be effectively extracted. After a successful test, the air mover shall be switched on to exhaust smoke from the containment and to give a minimum of 6 ACH, and visually check that the absolute filters screen out the smoke effectively and if the pressure gauges read normal. The normal reading of pressure range for maintaining 6 ACH shall be 1.5-4 mm of water (negative pressure). The audible alarm's integrity shall also be checked, and the trigger shall be at <1.5 mm of water (negative pressure).

### **3.3.3 Removal Method**

All workers shall wear full PPE – disposable protective coverall (such as Tyvek) with hood and shoe covers, inner & outer nitrile gloves, rubber boots (or boot

covers), and full-face positive pressure respirators equipped with a combination cartridge that filters particulate and removes organic vapour.

Miscellaneous construction materials stored in the incinerator room shall be removed prior to dismantling and disposal of the incinerators. All stored materials shall be wrapped with two layers of fire retardant polythene sheets, and the third layer shall be wrapped and secured with duct tape.

#### Removal of Residual Ash

The residual ash inside the incineration units and attached on walls, ground and ceiling surfaces shall be removed by scrubbing. The inside of the incineration units, wall, ground and ceiling shall then be cleaned with HEPA vacuum cleaner followed by wet wiping.

The scrubbed materials as well as the filtered materials from the HEPA vacuum cleaner shall be packaged on site and placed into polythene lined steel drums for subsequent disposal at the Chemical Waste Treatment Facilities (CWTF).

#### Removal of Incineration Units

Any detached sections of the incineration units shall be wrapped with two layers of fire retardant polythene sheets, and the third layer shall be wrapped and secured with duct tape. On the other hand, the combustion furnace, with a size of approximately 3 m<sup>3</sup>, upon removal, shall be wrapped with three layers of fire retardant polythene sheets, and the outermost layer shall be secured with duct tape. The outer layer of wrapping shall be decontaminated by wet wiping through the decontamination unit prior to disposal.

The metallic ventilation grille installed at the opening on the wall shall also be removed. The removed grille, bolts and nuts shall be wrapped with two layers of fire retardant polythene sheets, and the third layer shall be wrapped and secured with duct tape.

Wastes generated from the decontamination works including the fire retardant polythene sheets, used PPE such as the coverall, inner & outer nitrile gloves, rubber boots, and materials used for wet wiping shall be disposed of at designated landfill.

All wastewater generated within the decontamination unit shall pass through a filtration system for removal of particles down to 5 µm in suspension, before being discharged into the drainage system.

After completion of removal works, all surfaces shall be decontaminated by wet wiping and HEPA vacuuming. Then spray the innermost layer of the fire retardant polythene sheet covering the louvers with Polyvinyl Alcohol (PVA). Upon drying, peel off this innermost layer of the polythene sheet covering the louvers and dispose of at designated landfill as chemical waste.

The above decontamination procedure shall be repeated for the second innermost layer of fire retardant polythene sheet by wet wiping and HEPA

vacuuming. After spraying with PVA, peel off this second innermost layer of the polythene sheet covering the louvers and dispose of at designated landfill as chemical waste. Finally, the last layer of polythene sheet shall then be taken down after spraying with PVA and be disposed of at designated landfill as chemical waste.

Detailed waste disposal methods are illustrated in the following section.

### **3.4 Waste Disposal**

#### **3.4.1 Type of Wastes**

According to “A Guide to the Registration of Chemical Waste Producers” issued by EPD, ash generated from incineration of wastes is classified as chemical waste.

As a prudent approach, wastes including the combustion furnaces and its associated panels, as well as wastes generated from the decommissioning works (including the grills) would be considered as contaminated waste and shall be properly handled and disposed of.

Other wastes such as the polythene wrapping sheets, waste generated from the dismantlement of the containment & decontamination units, and cloth used in wet wrapping, etc. as described in Section 3.3 of this Project Profile would also be classified as contaminated waste.

#### **3.4.2 Disposal Method**

##### Waste to be Disposed of at Chemical Waste Treatment Facilities

All contaminated residual ash removed from the incineration units as well as the used HEPA filters shall be sent to the CWTF in Tsing Yi by licensed collector for proper treatment and disposal. The estimated total volume of such waste stream would be 10 m<sup>3</sup>.

##### Waste to be Disposed of at Landfill Site

Other wastes including the combustion furnaces and its associated panels, as well as wastes generated from the decommissioning works (including the grills) would be considered as contaminated waste. They shall be placed into appropriate containers such as drums, jerricans, or heavy duty and leak-proof plastic as a prudent approach. This waste stream shall be disposed of at a designated landfill under the surveillance of trip ticket system.

The estimated total volume of such waste stream would be 130 m<sup>3</sup>. A permit shall be obtained from EPD prior to disposal. The disposal trip ticket will be required to be made available as record throughout the disposal process.

## **4. Other Potential Environmental Impacts**

### **4.1 Land Contamination**

The incinerator, with the furnace capacity of about 3 m<sup>3</sup>, was constructed with a durable steel fabrication structure with internal surfacing lining of high temperature resistant and insulating castable refractory. It was placed on a concrete solid base which was built on top of a concrete slab of the incinerator room, which was observed to be in good condition. Given the above conditions and the position of the incinerator room is one storey above the adjacent ground level, potential land contamination arising from the past operation of the clinical waste incinerator was not identified to be a key concern.

### **4.2 Air Quality**

No significant gaseous/dust emission is expected during the decommissioning of the incinerator because the works shall be carried out in an air-tight condition under the negative pressure. With regards to the demolition of the associated structure (i.e. incinerator room), the requirements under the *Air Pollution Control (Construction Dust) Regulation* will be followed.

### **4.3 Noise**

The demolition of incinerator would be carried out by hand-tools only. The demolition activities are not expected to give rise to any significant noise impact. Demolition activities will be performed in an indoor environment and unlikely be affecting other areas outside the concerned premise.

Given the limited quantity of demolition waste associated with the decommissioning works, traffic-associated environmental impact is not identified to be a key concern.

### **4.4 Water Quality**

Wastewater generated from the decontamination process would be very small and the specialist contractor should take precautionary measures to minimise the quantity of contaminated water arising. Nevertheless, if any contaminated wastewater needs to be discharged out of the works area, it has to be properly treated according to the Water Pollution Control Ordinance (WPCO, Cap. 358) requirements with prior consensus from the EPD on the discharge standards.

#### **4.5 Asbestos-Containing Materials**

Thorough asbestos inspection of CMC was carried out in Year 2005. No asbestos-containing materials (ACM) were found in any part of the concerned incineration room located at Wai Oi Block of CMC.

#### **4.6 Unsightly Visual Appearance**

The decommissioning of the clinical waste incinerator will be carried out inside the existing incinerator room; no particular unsightly visual appearance would be envisaged.

### **5. Use of Previously Approved EIA Reports**

The nature of this project is found to be similar to previous projects at Pok Oi Hospital and Tang Shiu Kin Hospital in terms of the decommissioning method as well as the type and size of incinerator involved.

The previously approved Project Profiles for the decommissioning works of clinical waste incinerator at Pok Oi Hospital (*Project Profile ref.: DIR-062/2001 and Environmental Permit ref.: EP-117/2002*) and at Tang Shiu Kin Hospital (*Project Profile ref.: DIR-074/2002 and Environmental Permit ref.: EP-154/2003*) shall serve as references for this Project. The findings of these Project Profiles suggested that it was not necessary to carry out full-scale Environmental Impact Assessment (EIA) study for the decommissioning of the clinical waste incinerators at the respective hospitals.

### **6. Conclusion**

The key focus from an environmental perspective is to avoid release of residue ash to the environment and contamination of the on-site facilities, as well as to implement other standard environmental control measures to mitigate any potential environmental impact. Given the small size of the incinerator, decommissioning and disposal of the clinical waste incinerator is not expected to generate any significant environmental impact on the surrounding environment.

## **Decommissioning and Disposal of Clinical Waste Incinerator at Wai Oi Block of Caritas Medical Centre – Project Profile**

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Works of Clinical Waste Incinerator



## **Decommissioning and Disposal of Clinical Waste Incinerator at Wai Oi Block of Caritas Medical Centre - Project Profile**

### **Appendix**

Appendix A Photo Record

# **Decommissioning and Disposal of Clinical Waste Incinerator at Wai Oi Block of Caritas Medical Centre – Project Profile**

## **Appendix**

Appendix B Laboratory Results