

Appendix 10.2

Contamination Assessment Report (CAR)
for the Hong Kong Aviation Club



土木工程拓展署

Civil Engineering and Development Department
Kowloon Development Office

Agreement No. CE 35/2006 (CE)

Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction

Contamination Assessment Report (CAR)
For Hong Kong Aviation Club

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MAUNSELL CONSULTANTS ASIA LTD

**Agreement No. CE 35/2006(CE)
 Kai Tak Development Engineering Study
 cum Design and Construction of Advance Works
 – Investigation, Design and Construction**

**CONTAMINATION ASSESSMENT REPORT
 FOR HONG KONG AVIATION CLUB**

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1 INTRODUCTION

1.1 Background

- 1.1.1 The former Kai Tak Airport started its operation since 1920s and was replaced by the new airport at Chek Lap Kok in 1998. The total area of the former Kai Tak Airport is about 260 hectares covering the North and South Aprons and the Runway areas extending into Kowloon Bay.
- 1.1.2 Kai Tak Development (KTD) is a Designated Project (DP) in accordance with item 1 of schedule 3 under the Environmental Impact Assessment Ordinance (EIAO). The objectives of the Project aim to provide information on the nature and extent of environmental impacts arising from the construction and operation of the developments proposed under the Project and related works that take place concurrently.
- 1.1.3 As commissioned by the Civil Engineering and Development Department (CEDD) to undertake land contamination assessment at Hong Kong Aviation Club (HKAC) and its adjacent car park located near Sung Wong Toi Road (hereinafter called “the Study Area”), under *Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Cruise Terminal Advance Works – Investigation, Design and Construction*, a contamination assessment plan (CAP) was provided covering the Study Area of about 20,000m² with the location as shown in **Drawing 1.1**.
- 1.1.4 The CAP, which outlined the sampling locations as well as the testing schedule for site investigation (SI) in the Study Area, was approved by Environmental Protection Department (EPD) on 28 January 2008. In general, the approved CAP proposed that a total of 10 boreholes within the Study Area are to be drilled for soil and groundwater sampling and testing.
- 1.1.5 The SI works for land contamination assessment in the Study Area were commenced on 27 May 2008 and completed on 4 August 2008. The SI works, including rotary drilling of boreholes, logging of ground materials, installation of groundwater monitoring wells, water level monitoring and reinstatement of excavations, were all conducted by Vibro (H.K.) Limited (Vibro) under CEDD Term Contract No. GE/2007/03 (Works Order No. GE/2007/03.73) while laboratory analyses were carried out by ALS Technichem (HK) Pty Limited under Works Order No. GE/2005/49.43.

1.2 Objectives

- 1.2.1 The objectives of this Contamination Assessment Report (CAR) are to summarize findings of the SI (including fieldworks and laboratory analyses) and to determine the nature and extent of contamination based on the findings. Once contamination is confirmed, remediation proposal suggesting appropriate remediation actions for the contaminated area would be provided as a Remediation Action Plan (RAP).
- 1.2.2 This CAR is submitted to seek endorsement from the Director of Environmental Protection (DEP) in accordance with *Section 3.4.10.5 of the EIA Study Brief for Kai Tak Development (ESB-152/2006)*.

2 FINDINGS OF CONTAMINATION ASSESSMENT PLAN

2.1.1 According to the approved CAP, the activities identified at the Study Area are summarized in **Table 2.1**

Table 2.1 Potential Sources of Land Contamination Identified in the Study Area

Site Concerned	Potential Source of Land Contamination
Chemical Storage Area	<ul style="list-style-type: none"> Several well lidded chemical containers were stored in this corner without any secondary containment or drip tray underneath. Spillage of chemicals might occur within this area and it is considered likely to have potential land contamination.
Filling Point, Flow Meter, Underground Fuel Tank and its Associated Pipeline	<ul style="list-style-type: none"> An abandoned filling point installed in a metallic secondary containment and an abandoned flow meter situated in a wooden cabinet were identified at the north of the Study Area with a concrete bund surrounding both facilities. An abandoned underground tank for aviation fuel was identified at the south-eastern part of the Study Area. Based on the information provided by FSD, fuel pipelines were found connecting the underground tank with the filling point Potential land contamination is likely if chemical leaked from the underground tank and its associated fuel pipelines during their historical operation.
Adjacent Car Park	<ul style="list-style-type: none"> The Car Park Area is still under operation after the approval of the North Apron Decommissioning EIA Study. Site investigation is proposed to demonstrate that there is no contamination due to leakage/spillage since last site investigation conducted under the North Apron Decommissioning EIA.

2.1.2 In light of the potential sources of land contamination identified in the Study Area and the potential migration of the contaminants generated by the site activities, a total of 10 locations were identified as the potential contamination hotspots.

2.1.3 The criteria for identification of contamination hotspots were based upon the site observation of stain/ground discolorization, machine/ chemical storage locations or areas with contamination activities undertaken. Detailed rationales for selecting sampling locations in the CAP are provided in **Appendix A**.

3 CONTAMINATION ASSESSMENT REPORT

3.1 Assessment Methodology

Soil Boring and Sampling

3.1.1 The SI works at the Study Area were carried out from 27 May 2008 to 4 August 2008. Since no information on the actual location of the underground fuel tank (UFT) and the alignment of the underground fuel pipeline was obtainable during the desktop studies conducted for the preparation of CAP in 2007, 3 trial trenches (TT-01, TT-02 and TT-03) have been constructed to identify the boundaries of the UFT and the alignment of the pipelines as far as practical. The dimensions of each of the trial trenches are:

- TT-01: 3.0m (length) X 1.3m (width) X 1.5m (depth)
- TT-02: 3.0m (length) X 1.5m (width) X 1.15m (depth)
- TT-03: 3.5m (length) X 1.5m (width) X 0.85m (depth).

The locations of the trial trenches are shown in **Drawing 3.1**.

3.1.2 With reference to the FSD's drawing (Drawing No. S695C/94), the fuel pipeline consisted of a filling pipe and a delivery pipe was connecting between the underground tank and the filling point and between the pump set and the flowmeter, respectively. However, during the site investigation, only the filling pipe connecting the filling point and the underground fuel tank was identified in TT-02 and TT-03.

3.1.3 Since the actual alignment of the fuel pipeline was not known and only be able to be identified by the trial trenches constructed close to the UFT, in order to assess the potential land contamination resulted from the potential historical leakage from the filling pipe, borehole AC-06 was established immediately west to the known alignment of the underground filling pipe, while borehole AC-04 was established east to the known alignment.

3.1.4 During the SI, soil boring at AC-05 was slightly relocated to the north of the HKAC site due to safety concern of helicopter landing at HKAC. The locations of boreholes are illustrated in **Drawing 3.1**.

3.1.5 Sampling at AC-05 was not able to complete due to the presence of the concrete slab, the metal slab and the metal pipe encountered at 0.3m below ground level (bgl). The borehole location was then re-located to 1m north and further re-located to 1.5m east subsequently. However, the concrete slabs were still confronted at the same depth for both locations. Due to safety reason of helicopter landing, soil boring at AC-05 was finally abandoned. On the other hand, the area for which AC-05 was aimed to investigation was found mainly made up of hard materials like concrete slabs and the potential for contamination was not likely.

3.1.6 A total of 9 boreholes (AC-01 to AC-04 and AC-06 to AC-10) were constructed within the Study Area, locations are illustrated in **Drawing 3.1**.

3.1.7 Soil samples were collected at about 1m, 2.5m, 3.5m, 5m and 6m below base of existing concrete pavement (BBC) at AC-01 to AC-03 while soil samples were collected at about 1m, 2.5m and 3.5m at AC-04 and AC-06 to AC-10;. However, it should be noted that, due to the presence of boulder in the fill materials encountered at 2.82-5.50m BBC in AC-02, sampling at the proposed 3.5m BBC depth was not feasible. For boreholes AC-01 and AC-03, some of the soil samples could not be collected exactly at but close to the desired depths due to the presence of gravel, cobble and/or boulder in the fill materials as well.

3.1.8 Before drilling, the sampler and all equipment in contact with the ground were thoroughly decontaminated prior to use at each borehole by laboratory-grade detergent and steam-cleaning/ high-pressure hot water jet.

- 3.1.9 Soil samples were properly labeled and stored in cool boxes at around 4°C until delivered to the analytical laboratory. All the collected soil samples in the SI were analyzed in accordance with the analysis schedules detailed in the approved CAP.

Strata Logging

- 3.1.10 Strata logging for boreholes was undertaken during the course of drilling and sampling by a qualified geologists. The logs included the general stratigraphic descriptions, depth of soil sampling, sample notation and level of groundwater (if encountered). The presence of rocks/boulders/cobbles and foreign materials such as metals, wood and plastics was also recorded.

Groundwater Sampling

- 3.1.11 After completion of soil sampling, groundwater monitoring wells were installed at all 9 boreholes with groundwater encountered. After installation, well development (approximately 5 well volumes) was carried out to remove silt and drilling fluid, if any, residue from the wells. Groundwater level and thickness of free product layer, if present, were measured at each well before groundwater samples were taken.
- 3.1.12 Prior to groundwater sampling, monitoring wells were purged (at least 3 well volumes) to remove fine-grained materials and to collect freshly refilled representative groundwater samples.
- 3.1.13 Immediately after collection, groundwater samples were transferred to new, clean, laboratory-prepared, “darken” type sample containers. Groundwater samples were placed in the glass jars with zero headspace and promptly sealed with a septum-lined cap. All samples were clearly labeled. Immediately following collection, samples were subsequently stored in cool box at about 4°C and delivered to analytical laboratory on the same day. All groundwater samples were analyzed in accordance with the analysis schedules detailed in the approved CAP (**Appendix A**).

3.2 Assessment Criteria

Criteria for Soil and Groundwater Contamination

- 3.2.1 The assessment methodology of this Study was developed in accordance with the *Guidance Note for Contaminated Land Assessment and Remediation* (Guidance Note), *Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management* (Guidance Manual) and *Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards, and Car Repair/Dismantling Workshops* issued by the EPD..
- 3.2.2 Interpretation of results should make reference to those Risk-based Remediation Goals (RBRGs) presented in Table 2.1 and Table 2.2 as stipulated in the Guidance Manual.
- 3.2.3 The new RBRGs are developed based on a risk assessment approach to suit the local environmental conditions and community needs in Hong Kong. Decisions on contaminated soil and groundwater remediation are based on the nature and extent of the potential risks that are posed to human receptors as a result of exposure to chemicals in the soil and/or groundwater. RBRGs are developed for four different land use scenarios reflecting the typical physical settings in Hong Kong under which people could be exposed to contaminated soil and groundwater. A description of each land use scenario is as follows:
- **Urban residential** – Sites located in an urban area where main activities involve habitation by individuals. The typical physical setting is a high rise residential building situated in a housing estate that has amenity facilities such as landscaped yards and children’s playgrounds. The receptors are residents who stay indoors most of the time except for a short period each day, during which they are outdoors and have the

chance of being in direct contact with soil at landscaping or play areas within the estate.

- **Rural residential** – Sites located in a rural area where the main activities involve habitation by individuals. These sites typically have village-type houses or low rise residential blocks surrounded by open space. The receptors are rural residents who stay at home and spend some time each day outdoors on activities such as gardening or light sports. The degree of contact with the soil under the rural setting is more than that under the urban setting both in terms of the intensity and frequency of contact.
- **Industrial** – Any site where activities involve manufacturing, chemical or petrochemical processing, storage of raw materials, transport operations, energy production or transmission, etc. Receptors include those at sites where part of the operation is carried out directly on land and the workers are more likely to be exposed to soil than those working in multi-storey factory buildings.
- **Public parks** – Receptors include individuals and families who frequent parks and play areas where there is contact with soil present in lawns, walkways, gardens and play areas. Parks are considered to be predominantly hard covered with limited areas of predominantly landscaped soil. Furthermore, public parks are not considered to have buildings present on them.

3.2.4 In addition to the RBRGs, screening criteria (soil saturation limits, C_{sat} , developed for Non-aqueous Phase Liquid [NAPL] in soil and water solubility limits for NAPL in groundwater) for the more mobile organic chemicals must be considered to determine whether a site requires further action.

3.2.5 As reviewed in the approved CAP, the Study Area will be redeveloped as institution and community facilities and regional open space in the future, the corresponding RBRGs land use would be Urban Residential and Public Parks respectively. Since the RBRGs for Urban Residential are generally more stringent than that for the Public Parks, as a conservative approach, the RBRGs for Urban Residential was adopted as the assessment criteria for this land contamination assessment. Relevant soil and groundwater RBRGs levels for this land contamination study including the Soil Saturation Limits and the Solubility Limits are presented in **Table 3.1**.

Table 3.1 Relevant RBRGs for Soil and Groundwater

Chemical	Soil (mg/kg)		Groundwater (µg/L)	
	RBRGs for Urban Residential	Soil Saturation Limits (C_{sat})	RBRGs for Urban Residential	Solubility Limits
VOCs				
Acetone	9590	***	10000000	***
Benzene	0.704	336	3860	1750000
Bromodichloromethane	0.317	1030	2220	6740000
2-Butanone	10000	***	10000000	***
Chloroform	0.132	1100	956	7920000
Ethylbenzene	709	138	1020000	169000
Methyl tert-Butyl Ether	6.88	2380	153000	***
Methylene Chloride	1.3	921	19000	***
Styrene	3220	497	3020000	310000
Tetrachloroethene	0.101	97.1	250	200000

Chemical	Soil (mg/kg)		Groundwater (µg/L)	
	RBRGs for Urban Residential	Soil Saturation Limits (C_{sat})	RBRGs for Urban Residential	Solubility Limits
Toluene	1440	235	5110000	526000
Trichloroethene	0.523	488	1210	1100000
Xylenes (Total)	95	150	112000	175000
SVOCs				
Acenaphthene	3510	60.2	10000000	4240
Acenaphthylene	2340	19.8	1410000	3930
Anthracene	10000	2.56	10000000	43.4
Benzo(a)anthracene	12	NA	NA	NA
Benzo(a)pyrene	1.2	NA	NA	NA
Benzo(b)fluoranthene	9.88	NA	539	1.5
Benzo(g,h,i)perylene	1800	NA	NA	NA
Benzo(k)fluoranthene	120	NA	NA	NA
bis-(2-Ethylhexyl)phthalate	30	NA	NA	NA
Chrysene	871	NA	58100	1.6
Dibenzo(a,h)anthracene	1.2	NA	NA	NA
Fluoranthene	2400	NA	10000000	206
Fluorene	2380	54.7	10000000	1980
Hexachlorobenzene	0.243	NA	58.9	6200
Indeno(1,2,3-cd)pyrene	12	NA	NA	NA
Naphthalene	182	125	61700	31000
Phenanthrene	10000	28	10000000	1000
Phenol	10000	7260	NA	NA
Pyrene	1800	NA	10000000	135
Metals				
Antimony	29.5	NA	NA	NA
Arsenic	22.1	NA	NA	NA
Barium	10000	NA	NA	NA
Cadmium	73.8	NA	NA	NA
Chromium III	10000	NA	NA	NA
Chromium VI	221	NA	NA	NA
Cobalt	1480	NA	NA	NA
Copper	2950	NA	NA	NA
Lead	258	NA	NA	NA
Manganese	10000	NA	NA	NA
Mercury	11	NA	486	NA

Chemical	Soil (mg/kg)		Groundwater (µg/L)	
	RBRGs for Urban Residential	Soil Saturation Limits (C _{sat})	RBRGs for Urban Residential	Solubility Limits
Molybdenum	369	NA	NA	NA
Nickel	1480	NA	NA	NA
Tin	10000	NA	NA	NA
Zinc	10000	NA	NA	NA
Petroleum Carbon Ranges				
C6 - C8	1410	1000	82200	5230
C9 - C16	2240	3000	714000	2800
C17 - C35	10000	5000	12800	2800

Note: NA - Not Available

*** indicates that the C_{sat} value/ solubility limit exceeds the 'ceiling limit' therefore the RBRG applies,

3.3 Analytical Results and Interpretation

Fieldwork and On-site Measurements

- 3.3.1 The SI was undertaken in accordance with the sampling plan detailed in the approved CAP.
- 3.3.2 No distinctive, characteristic smell of soil and groundwater sample exhibiting signs of contamination was noticeable.
- 3.3.3 Soil boring logs are presented in **Appendix B**.

On-site PID Measurement

- 3.3.4 The volatile organic compounds (VOCs) concentrations in the soil samples obtained were measured by a photoionization detector (PID).
- 3.3.5 In general, the VOC levels in the soil samples are low (below 7.09ppm), which is considered minimal to pose any harmful effects to site workers during decontamination. Slightly elevated PID readings were only recorded at 2 soil samples at AC-10 (1.85-2.3m BBC and 3.35-3.8m BBC with readings at 24.2ppm and 23.6ppm respectively). No petroleum / kerosene smell was noted during soil sampling at these boreholes. However, as a conservative approach, it is recommended that personal protective equipment (e.g. mask) should be used by construction workers for the future development works at these areas.
- 3.3.6 Results of PID measurement are presented in **Appendix C**.

Thickness of Free Product Measurement

- 3.3.7 Floating oil / free product (of TPH) were not found in all 9 boreholes during the SI.

Laboratory Analytical Results

Results of Soil Analysis

- 3.3.8 A total of 32 soil samples, excluding those for QA/QC purposes, were collected during the SI for laboratory analysis. The laboratory testing results for all soil samples are presented in **Appendix D**. Among these samples collected, no exceedances to the RBRG levels for

Urban Residential were recorded.

- 3.3.9 In addition to the point-to-point comparison, the maximum detected concentrations of the Chemicals Of Concern (COC) is compared to the relevant RBRG and NAPL trigger criteria as presented in **Appendix E**. The findings of analysis indicated that the maximum detected chemical concentrations in soil did not exceed the C_{sat} and thus the potential occurrence of NAPL was considered to be minimal. Field observation also supported the findings as stained, unnaturally colored or wet soil was not observed above the water table and no odour of petroleum or solvent were found in the soil samples during the site investigation. As such, soil remediation is considered not necessary.

Results of Groundwater Analysis

- 3.3.10 During the SI, groundwater was encountered in all drilled boreholes. A total of 9 groundwater samples were therefore collected from these boreholes. **Table 3.2** shows the termination depth of each borehole and the corresponding groundwater level. The measured groundwater level contour is presented in **Drawing 3.2**.

Table 3.2 Summary of the Borehole Termination Depths and Groundwater Level

Sample I.D.	Groundwater Level		Termination Depth of Borehole
	m Below Ground	mPD	m Below Ground
AC-01	2.45	2.81	6.50
AC-02	0.87	4.31	6.50
AC-03	0.22	4.97	6.50
AC-04	0.70	4.38	6.30
AC-06	0.30	4.80	6.00
AC-07	1.69	3.66	6.26
AC-08	0.4	4.94	4.60
AC-09	1.04	4.93	6.10
AC-10	1.72	4.22	6.27

- 3.3.11 Based on the results of laboratory analysis, no exceedances to the RBRG levels for Urban Residential are recorded. The laboratory testing results for all groundwater samples are also provided in **Appendix D**.
- 3.3.12 The maximum detected chemical concentrations in groundwater are also compared with the solubility limits and presented in **Appendix E**. Based on the findings of the analysis, no exceedance of solubility limit is found. As no petroleum or solvent odours and sheen were detected in the water samples during site investigation, the presence of NAPL is unlikely. No cleanup for groundwater is therefore required.

Results of QA/QC Analysis

- 3.3.13 QA/QC is the practice of making sure that collection and analysis techniques provide precise and accurate information. This process is to ensure the levels of contamination measured in the environmental samples reflect the actual environmental levels and are not due to accidental contamination of the sample or sample container. In this Study, 4 sets of field blank, equipment blank and trip blank were sampled and analyzed. The laboratory results for QA/QC samples are presented in **Appendix D**.
- 3.3.14 The laboratory results showed that detectable chloroform was found in one of the field and equipment blanks. The potential source of contamination in the blanks could be due to (1) sampling or laboratory testing equipments not being decontaminated completely; (2) cross-

contamination from the ambient conditions during sampling and laboratory testing; and 3) contaminated from the blank container itself. As reported by the site supervision personnel and the laboratory, all procedures were implemented in accordance to the requirement set in the approved CAP during sampling at the site and analysis in the laboratory. Though, there is possible cross-contamination which would cause a higher reported value than actual, given that the chemical-of-concerns do not exceed the relevant RBRG values, the results would not influence the outcome of this assessment. QA/QC procedures for sample collection and preparation are therefore considered acceptable.

3.4 Estimation of Soil Contamination Extent and Remediation

- 3.4.1 Based on the analytical results of soil presented above, it is revealed that no testing parameters for the soil samples showed exceedance in the relevant RBRG levels and soil remediation is considered not necessary.

3.5 Conclusions and Recommendations

- 3.5.1 According to the results of site investigation, a total of 32 soil samples and 9 groundwater samples were collected at AC-01 to AC-04 and AC-06 to AC-10. No exceedances in RBRGs levels for Urban Residential were found among all soil samples and groundwater samples collected. As no apparent floating free products were recorded in all groundwater samples and the maximum detected chemical concentrations in soil or groundwater did not exceed the Csat or the solubility limit respectively, it is considered that no remediation is required.

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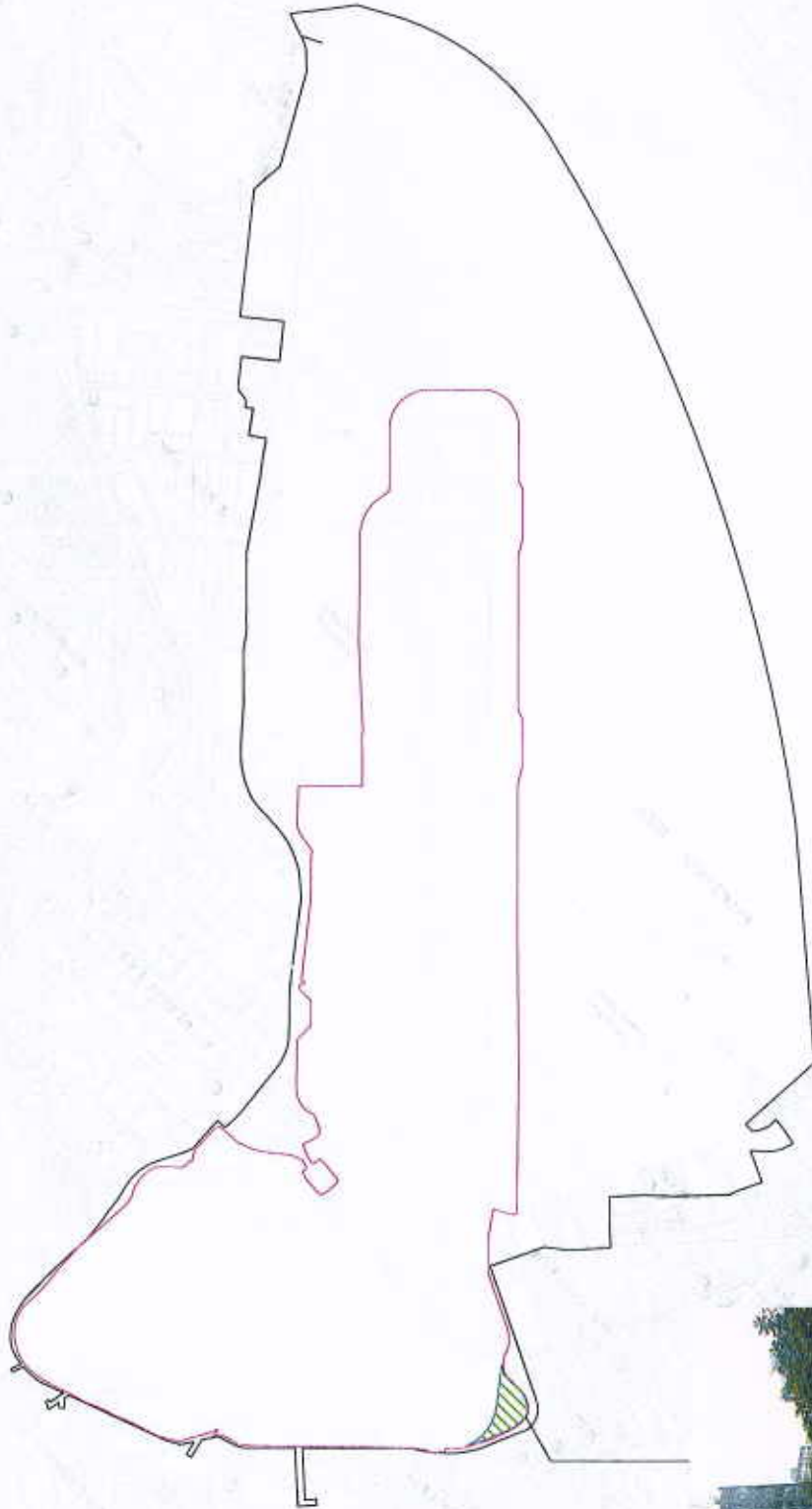
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Drawings



HONG KONG AVIATION CLUB



LEGEND



STUDY AREA

BOUNDARY OF THE FORMER KAI TAK AIRPORT
(PLAN NO. KM 19659, DATED 1.11.1994)
(LANDS DEPT. LETTER REF: (20) IN LND KEPD/103/13(11))

STUDY AREA COVERED BY KAI TAK DEVELOPMENT

AGREEMENT NO. CE 35/2006 (CE1)
KAI TAK DEVELOPMENT ENGINEERING STUDY CLM DESIGN AND
CONSTRUCTION OF ADVANCE WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION

SITE LOCATION PLAN

MAUNSELL

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DATE AUG 08

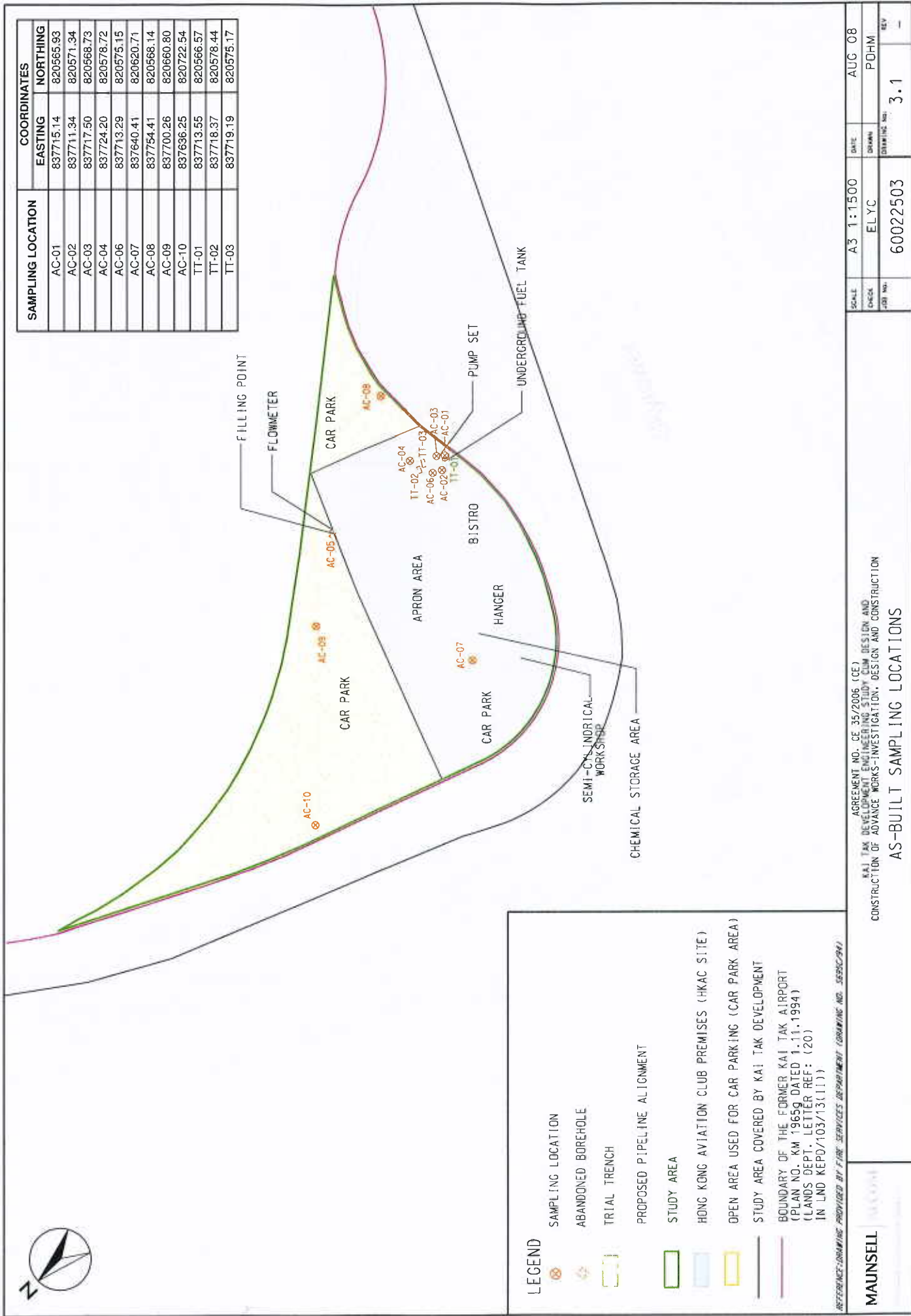
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LEGEND

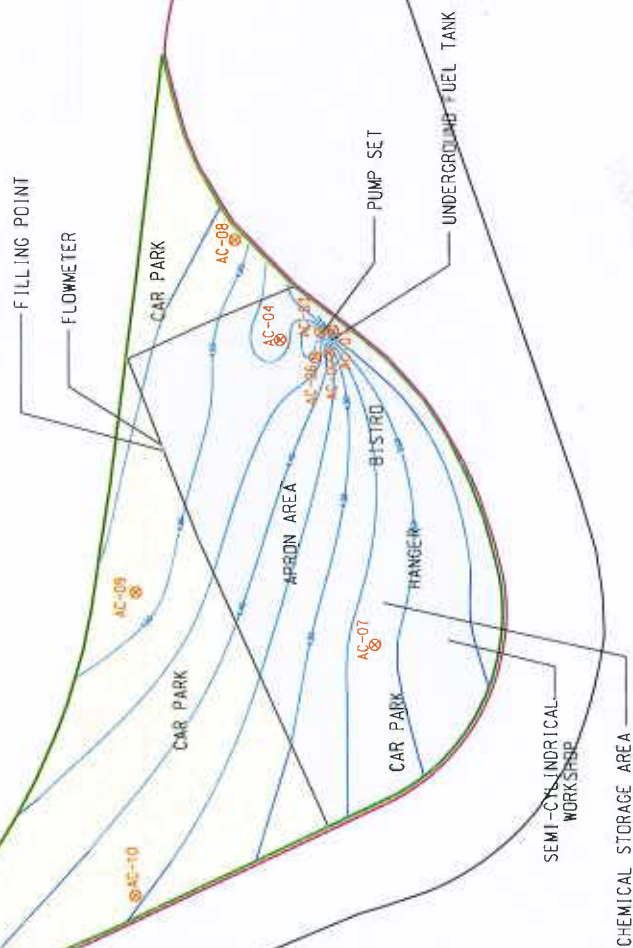
- SAMPLING LOCATION
- CONTOURS OF ESTIMATED GROUNDWATER LEVEL
- STUDY AREA
- HONG KONG AVIATION CLUB PREMISES (HKAC SITE)
- OPEN AREA USED FOR CAR PARKING (CAR PARK AREA)
- STUDY AREA COVERED BY KAI TAK DEVELOPMENT
- BOUNDARY OF THE FORMER KAI TAK AIRPORT (PLAN NO. KM 1965Q DATED 1.11.1994) (LANDS DEPT. LETTER REF: (20) IN LND KEPD/103/13(1))

REFERENCE-DRAWING PROVIDED BY FIRE SERVICES DEPARTMENT (DRAWING NO. 5695C/194)

MAUNSELL

AGREEMENT NO. CE 35/2006 (CE)
KAI TAK DEVELOPMENT ENGINEERING STUDY CUM DESIGN AND
CONSTRUCTION OF ADVANCE WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION
CONTOURS OF MEASURED GROUNDWATER LEVEL

Sample ID.	Groundwater Level m Below Ground	mPD
AC-01	2.45	2.81
AC-02	0.87	4.31
AC-03	0.22	4.97
AC-04	0.70	4.38
AC-06	0.30	4.80
AC-07	1.69	3.66
AC-08	0.40	4.94
AC-09	1.04	4.93
AC-10	1.72	4.22



SCALE	A3 1:1500	DATE	AUG 08
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Appendices

Appendix A

(Sampling and Testing Schedule Proposed in the CAP)

Sampling and Testing Plan for the Study Area
(Concerned Site Area: ~20,000m²; Proposed 10 Sampling Locations)

Proposed Sampling Location	Sampling Method	Sample Matrix	Parameters to be Tested				Rationale of Sampling
			Petroleum Carbon Ranges	VOC*	SVOC**	Metals	
AC-01 (Underground Fuel Tank)	Borehole to 6m BBC	Soil	1m BBC	X	X		In order to assess potential land contamination impacts from any leakage /spillage from the underground fuel tank, 3 boreholes are proposed to be located at the surrounding of the tank area.
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
		Soil	At GW Level [^]	X	X		
AC-02 (Underground Fuel Tank)	Borehole to 6m BBC	G.W.	If present	X	X [#]		
		Soil	1m BBC	X	X		
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
AC-03 (Underground Fuel Tank)	Borehole to 6m BBC	Soil	At GW Level [^]	X	X		
		G.W.	If present	X	X [#]		
		Soil	1m BBC	X	X		
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
		Soil	At GW Level [^]	X	X		
		G.W.	If present	X	X [#]		
		Soil	1m BBC	X	X		
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
		Soil	At GW Level [^]	X	X		
		G.W.	If present	X	X [#]		
		Soil	1m BBC	X	X		
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
		Soil	At GW Level [^]	X	X		
		G.W.	If present	X	X [#]		
		Soil	1m BBC	X	X		
		Soil	2.5m BBC	X	X		
		Soil	3.5m BBC	X	X		
		Soil	5m BBC	X	X		
		Soil	6m BBC	X	X		
		Soil	At GW Level [^]	X	X		
		G.W.	If present	X	X [#]		

Proposed Sampling Location	Sampling Method	Sample Matrix	Parameters to be Tested				Rationale of Sampling
			Petroleum Carbon Ranges	VOC*	SVOC**	Metals	
AC-04 (Fuel pipeline)	Borehole down to 6m	Soil	X	X	X		In order to assess potential land contamination impacts from any leakage from the underground fuel pipeline, 3 boreholes are proposed to be located along the pipeline
		Soil		X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
AC-05 (Fuel pipeline)	Borehole down to 6m	GW	X	X	X [#]		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
AC-06 (Fuel pipeline)	Borehole down to 6m	Soil	X	X	X		In order to assess potential land contamination impacts from any leakage /spillage of the chemicals, 1 borehole was proposed in the chemical storage area.
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
		Soil	X	X	X		
AC-07 (Chemical Storage Area)	Borehole down to 6m	Soil	X	X	X	X	In order to assess potential land contamination impacts from any leakage /spillage of the chemicals, 1 borehole was proposed in the chemical storage area.
		Soil	X	X	X	X	
		Soil	X	X	X	X	
		Soil	X	X	X	X	
		Soil	X	X	X	X	
		Soil	X	X	X	X	
		Soil	X	X	X	X	

Proposed Sampling Location	Sampling Method	Sample Matrix	Parameters to be Tested				Rationale of Sampling
			Petroleum Carbon Ranges	VOC*	SVOC**	Metals	
AC-08 (Open Area for Car parking)	Borehole down to 6m	Soil	1m BBC	X	X	X	In order to assess potential land contamination impacts from any leakage /spillage of the chemicals, 3 boreholes are proposed in the Car Park Area.
		Soil	2.5m BBC	X	X	X	
		Soil	3.5m BBC	X	X	X	
		Soil	At GW Level [^]	X	X	X	
		GW	If present	X	X [#]	X (Mercury only)	
AC-09 (Open Area for Car parking)	Borehole down to 6m	Soil	1m BBC	X	X	X	
		Soil	2.5m BBC	X	X	X	
		Soil	3.5m BBC	X	X	X	
		Soil	At GW Level [^]	X	X	X	
		GW	If present	X	X [#]	X (Mercury only)	
AC-10 (Open Area for Car parking)	Borehole down to 6m	Soil	1m BBC	X	X	X	
		Soil	2.5m BBC	X	X	X	
		Soil	3.5m BBC	X	X	X	
		Soil	At GW Level [^]	X	X	X	
		GW	If present	X	X [#]	X (Mercury only)	

Remarks:

BBC = Below Base of Existing Concrete Pavement; GW=groundwater; X = testing proposed

* For proposed sampling locations AC-01 to AC-06 and AC-08 to AC-10, only BTEX would be selected as the potential COC. The parameters to be tested included *Benzene*, *Toluene*, *Ethylbenzene* and *Xylene*.

** For proposed sampling locations AC-01 to AC-06 and AC-08 to AC-10, only PAHs would be selected as the potential COC. The parameters to be tested included the whole list of COC listed under group of SVOCs in the RBRG Table except *bis-(2-Ethylhexyl)phthalate*, *Hexachlorobenzene* and *Phenol*.

Since the RBRG value of *Benzo(a)anthracene*, *Benzo(a)pyrene*, *Benzo(g,h,i)perylene*, *Benzo(k)fluoranthene*, *bis-(2-Ethylhexyl)phthalate*, *Dibenzo(a,h)anthracene*, *Indeno(1,2,3-cd)pyrene* and *Phenol* were not available, the captioned chemicals parameters would not be tested.

[^] Samples will only be collected if groundwater is encountered during excavation. Analyses of the samples collected shall be determined based on the actual site condition and as instructed by both the Engineer and the land contamination specialist.

Appendix B
(Site Boring Log)



DRILLHOLE RECORD

HOLE NO. AC-01

CONTRACT NO. GE/2007/03

SHEET 1 OF 1

PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area

METHOD	Rotary	CO-ORDINATES	W.O.NO.
MACHINE & NO.	VBM51	E 837715.14 N 820565.93	GE/2007/03.73
FLUSHING MEDIUM	Water	ORIENTATION Vertical	DATE : 13/06/2008 to 19/06/2008
			GROUND LEVEL + 5.26 mPD


Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +5.26	Depth (m) 0.00	Legend	Grade	Description
13/06/2008	HW								A 0.50					Dark brown (7.5YR 3/4), spotted white and black, silty fine to coarse SAND with some angular fine to coarse gravel sized highly decomposed rock fragments. (FILL)
13/06/2008		Dry at 18:00							CB INSPECTION PIT 1.00					
14/06/2008		Dry at							D 1.50	+3.76	1.50			
14/06/2008		02:00							1.70	+3.56	1.70			White (N 8), spotted black, dappled brown and black, sandy angular fine to coarse GRAVEL sized highly decomposed rock fragments. (FILL)
15/06/2008		Dry at 18:00					NI		9 T2101 2.45				II	Strong, light grey (N 7), spotted white and black, dappled brown, slightly decomposed medium grained GRANITE. (CORESTONE)
		08:00			79	79			2.89					Joints are widely spaced, rough planar, very narrow, iron stained, kaolin coated, dipping 40° to 50° and 50° to 60°.
		18:00							T2101					
		08:00		100	100	100			1 3.58	+1.70	3.58		V	Extremely weak, pinkish brown and reddish brown, spotted white, grey and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND)
15/06/2008		0.00m at 18:00						96 bis	2 3.96					
15/06/2008		0.93m at 08:00						132 bis	3 4.01					
									4 4.46					
								153 bis	5 5.00					
									6 5.40					
								90 bis	7 6.03					
19/06/2008	HW	1.14m at 18:00							8 6.40					
19/06/2008	6.50								6.45	-1.24	6.50			End of Investigation Hole at 6.50m.

↑ Disturbed sample	Standard penetration test
□ Piston sample	In-situ vane shear test
▨ Split spoon sample	Permeability test
▨ U78 undisturbed sample	Impression packer test
▨ U100 undisturbed sample	Pressuremeter test
▨ Mazier sample	Packer Test
▨ SPT liner sample	Acoustic or optical televiwer survey
▲ Water sample	Piezometer tip
En Environmental Sample	Standpipe
	Groundwater monitoring well
	Extensometer

LOGGED	T. C. Yip
DATE	20/06/2008
CHECKED	C. M. Sham
DATE	21/06/2008

REMARKS

1. An inspection pit was excavated to a depth of 1.70m.
2. Groundwater monitoring well was installed at 6.50m below ground level on 20/06/2008.
3. A groundwater sample was taken from monitoring well on 23/06/2008. The water level in the well prior to sampling was 2.45m below the top of the well.

		DRILLHOLE RECORD		HOLE NO. AC-02											
		CONTRACT NO. GE/2007/03		SHEET 1 OF 1											
PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area															
METHOD Rotary		CO-ORDINATES		W.O.NO. GE/2007/03.73											
MACHINE & NO. BM51		E 837711.34 N 820571.34		DATE : 07/07/2008 to 09/07/2008											
FLUSHING MEDIUM Water		ORIENTATION Vertical		GROUND LEVEL + 5.18 mPD											
Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +5.18	Depth (m)	Legend	Grade	Description	
07/07/2008	HW													Dark brown (7.5YR 3/4), spotted and mottled white, slightly silty fine to coarse SAND with some angular fine gravel sized moderately decomposed rock fragments and shell fragments. (FILL)	
07/07/2008 08/07/2008		Dry at 18:00 Dry at 08:00							A 0.50 B 0.87 C 1.00 D 1.50 E 1.80 INSPECTION PIT				V	Extremely weak, reddish brown and brown, spotted white, grey and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND)	
1								200 bis	1 2.50 2 2.77 2.82	+2.39	2.82		II	Strong, grey, spotted white and black, slightly decomposed medium grained GRANITE (CORESTONE) No joint encountered.	
2									T2101						
3									4.38						
4									T2101						
5															
6		0.80m at 18:00 0.30m at 08:00						37 bis	3 5.50	-0.32	5.50		V	Extremely weak, reddish brown, spotted white, grey and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND)	
7								59 bis	4 5.90 5 5.95 6.00						
8	HW 5.50	0.50m at 18:00							6 6.40 6.45	-1.32	6.50			End of Investigation Hole at 6.50m.	
9															
10															
LOGGED T. C. Yip DATE 14/07/2008 CHECKED C. M. Sham DATE 15/07/2008									REMARKS 1. An inspection pit was excavated to a depth of 1.80m. 2. Groundwater monitoring well was installed at 6.50m below ground level on 09/07/2008. 3. A groundwater sample was taken from monitoring well on 11/07/2008. The water level in the well prior to sampling was 0.87m below the top of the well.						

PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area

METHOD	Rotary	CO-ORDINATES	W.O.NO.
MACHINE & NO.	VBM51	E 837717.50 N 820568.73	GE/2007/03.73
FLUSHING MEDIUM	Water	ORIENTATION Vertical	DATE : 20/06/2008 to 24/06/2008
			GROUND LEVEL + 5.19 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TOR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +5.19	Depth (m) 0.00	Legend	Grade	Description
20/06/2008	HW								9 0.22				V	Extremely weak, reddish brown and brown, spotted white and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND with some angular fine to medium gravel highly decomposed and moderately decomposed rock fragments)
20/06/2008		Dry at 18:00							A 0.50					
23/06/2008		Dry at 08:00							CB 1.00					
									D 1.50					
									E 1.70	+3.49	1.70		V	Moderately strong, locally weak to moderately weak, pink, spotted white, grey and black, dappled brown and reddish brown, moderately decomposed medium grained GRANITE. (CORESTONE)
			50	87	57	57	NR		T6-13I	+2.91	2.28		IV	Joints are widely spaced, locally closely spaced, rough planar, very narrow, iron stained, kaolin coated, dipping 20° to 30° and 60° to 70°.
										+2.74	2.45		III	From 1.70m to 2.28m : No recovery, inferred to be completely decomposed medium grained GRANITE.
							1.7							From 2.28m to 2.45m : Weak to moderately weak, highly decomposed medium grained GRANITE.
			50	100	100	100	4.5		T6-13I	+1.75	3.44		IV	From 3.44m to 3.66m : Weak to moderately weak, highly decomposed medium grained GRANITE.
23/06/2008		2.91m at 18:00						57 bls	1 3.66	+1.53	3.66		V	Extremely weak, pink and reddish brown, spotted white and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND)
24/06/2008		2.62m at 08:00						100 bls	2 4.06					
									3 4.11					
									4 4.18					
								35 bls	5 4.58					
									6 4.61					
									5 5.00					
									6 5.40					
									7 5.45					
								57 bls	7 6.00					
									8 6.40					
24/06/2008	HW	2.91m at 13:00							8 6.45	-1.31	6.50			End of Investigation Hole at 6.50m.

<ul style="list-style-type: none"> Disturbed sample Piston sample Split spoon sample U76 undisturbed sample U100 undisturbed sample Mazier sample SPT liner sample Water sample Environmental Sample 	<ul style="list-style-type: none"> Standard penetration test In-situ vane shear test Permeability test Impression packer test Pressuremeter test Packer Test Acoustic or optical televiewer survey Piezometer tip Standpipe Groundwater monitoring well Extensometer 	LOGGED T. C. Yip DATE 02/07/2008 CHECKED C. M. Sham DATE 02/07/2008	REMARKS 1. An inspection pit was excavated to a depth of 1.70m. 2. Groundwater monitoring well was installed at 6.30m below ground level on 24/06/2008. 3. A groundwater sample was taken from monitoring well on 30/06/2008. The water level in the well prior to sampling was 0.22m below the top of the well.
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		DRILLHOLE RECORD		HOLE NO. AC-04										
		CONTRACT NO. GE/2007/03		SHEET 1 OF 1										
PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area														
METHOD Rotary		CO-ORDINATES E 837724.20 N 820578.72		W.O.NO. GE/2007/03.73										
MACHINE & NO. BM51				DATE : 02/07/2008 to 04/07/2008										
FLUSHING MEDIUM NA		ORIENTATION Vertical		GROUND LEVEL + 5.08 mPD										
Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level +5.08 +4.98 +4.33 +4.08 +3.18 +2.62 +2.28	Depth (m) 0.00 0.10 0.75 1.00 1.90 2.46 2.80	Legend	Grade	Description
02/07/2008 HW									INSPECTION PIT A 0.50 B 0.70 CB 1.00					CONCRETE (Ground Surface) Dark brown (7.5YR 3/4), fine to coarse SAND with some angular fine to coarse gravel sized moderately decomposed rock fragments and occasional refuse. (FILL)
02/07/2008 03/07/2008		Dry at 18:00 Dry at 08:00	50	100	100	100	0		T2101				V	Extremely weak, brown, spotted white, grey and black, dappled reddish brown, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND with some angular fine to medium gravel)
			50	0	0	0	NR		T2101				V	Moderately strong to strong, pink, spotted white, grey and black, dappled brown, moderately decomposed medium grained GRANITE. (CORESTONE) No joint encountered
			50	50	0	0	NR	79 bls	T2101				III	Moderately strong, pink, spotted white, grey and black, dappled brown, moderately decomposed medium grained GRANITE. (CORESTONE) Rocks are non-intact
		2.50m at 18:00							1 3.20 2 3.25				V	Extremely weak, brown and pinkish brown, spotted white, grey and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND with some angular fine gravel)
03/07/2008 04/07/2008		2.45m at 08:00		100				67 bls	3 3.50 4 3.90 5 3.95					
									6 6.00					
04/07/2008 HW	2.44m at 18:00								7 6.30	-1.22	8.30			End of Investigation Hole at 6.30m.
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p> Disturbed sample Piston sample Split spoon sample U76 undisturbed sample U100 undisturbed sample Mazier sample SPT liner sample Water sample Environmental Sample </p> <p> Standard penetration test In-situ vane shear test Permeability test Impression packer test Pressuremeter test Packer Test Acoustic or optical televiewer survey Piezometer tip Standpipe Groundwater monitoring well Extensometer </p> </div> <div style="width: 45%;"> <p> LOGGED T. C. Yip DATE 08/07/2008 CHECKED C. M. Sham DATE 10/07/2008 </p> </div> </div>														
REMARKS 1. An inspection pit was excavated to a depth of 1.00m. 2. Groundwater monitoring well was installed at 6.30m below ground level on 04/07/2008. 3. A groundwater sample was taken from monitoring well on 14/07/2008. The water level in the well prior to sampling was 0.70m below the top of the well.														

		DRILLHOLE RECORD		HOLE NO. AC-07										
		CONTRACT NO. GE/2007/03		SHEET 1 OF 1										
PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area														
METHOD Rotary		CO-ORDINATES E 837640.41 N 820620.71		W.O.NO. GE/2007/03.73										
MACHINE & NO. VBM51				DATE : 10/06/2008 to 12/06/2008										
FLUSHING MEDIUM NA		ORIENTATION Vertical		GROUND LEVEL + 5.35 mPD										
Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
10/06/2008	HW	Dry at 15:00								+5.35	0.00			CONCRETE (Ground Surface)
10/06/2008 11/06/2008		Dry at 08:00								+5.25	0.10			Brown (7.5YR 5/4) and dark brown (7.5YR 3/4), spotted white, slightly silty fine to coarse SAND. (FILL)
1								7 bls	1 2.10 2 2.50 2 2.55					
2								25 bls	3 3.50 4 3.90 4 3.85					
3									5 5.00					
4									6 6.00					
5		1.65m at 18:00							7 6.26	-0.91	6.26			
6		1.64m at 08:00												
7	HW	1.58m at 13:00												End of Investigation Hole at 6.26m.
8														
9														
10														

Disturbed sample
 Piston sample
 Split spoon sample
 U76 undisturbed sample
 U100 undisturbed sample
 Mazier sample
 SPT liner sample
 Water sample
 Environmental Sample

Standard penetration test
 In-situ vane shear test
 Permeability test
 Impression packer test
 Pressuremeter test
 Packer Test
 Acoustic or optical televiewer survey
 Piezometer tip
 Standpipe
 Groundwater monitoring well
 Extensometer

LOGGED T. C. Yip

DATE 12/06/2008

CHECKED C. M. Sham

DATE 13/06/2008

REMARKS

1. An Inspection pit was excavated to a depth of 1.50m.

2. Groundwater monitoring well was installed at 6.26m below ground level on 12/06/2008.

3. A groundwater sample was taken from monitoring well on 13/06/2008. The water level in the well prior to sampling was 1.69m below the top of the well.



DRILLHOLE RECORD

HOLE NO. AC-08

CONTRACT NO. GE/2007/03

SHEET 1 OF 1

PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area

METHOD Rotary

CO-ORDINATES

W.O.NO. GE/2007/03.73

MACHINE & NO. VBM52

E 837754.41

N 820568.14

DATE : 11/06/2008 to 11/06/2008

FLUSHING MEDIUM NA

ORIENTATION Vertical

GROUND LEVEL + 5.34 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
11/06/2008	HW								No. Type Depth	+5.34	0.00			Asphalt. (Ground Surface)
										+5.24	0.10			Dark brown (7.5YR 3/4), spotted white, dappled brown, slightly silty fine to coarse SAND with some angular fine to medium gravel sized highly decomposed rock fragments. (FILL)
								6 Ms	1 2.50					
									2 2.90 2.95					
								6 bls	3 3.50					
									4 3.90 3.95					
12/06/2008	HW	0.80m at 18:00							5 4.60	+0.74	4.60			End of Investigation Hole at 4.60m.

↑ Disturbed sample	↓ Standard penetration test
□ Piston sample	□ In-situ vane shear test
□ Split spoon sample	□ Permeability test
□ U76 undisturbed sample	□ Impression packer test
□ U100 undisturbed sample	□ Pressuremeter test
□ Mazier sample	□ Packer Test
□ SPT liner sample	□ Acoustic or optical televiwer survey
▲ Water sample	□ Piezometer tip
En Environmental Sample	□ Standpipe
	□ Groundwater monitoring well
	□ Extensometer

LOGGED T. C. Yip
DATE 12/06/2008
CHECKED C. M. Sham
DATE 13/06/2008

REMARKS

1. An inspection pit was excavated to a depth of 1.50m.
2. Groundwater monitoring well was installed at 4.60m below ground level on 12/06/2008.
3. A groundwater sample was taken from monitoring well on 13/06/2008. The water level in the well prior to sampling was 0.40m below the top of the well.

		DRILLHOLE RECORD		HOLE NO. AC-09										
		CONTRACT NO. GE/2007/03		SHEET 1 OF 1										
PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area														
METHOD Rotary		CO-ORDINATES E 837700.26 N 820660.80		W.O.NO. GE/2007/03.73										
MACHINE & NO. VBM52				DATE : 04/06/2008 to 05/06/2008										
FLUSHING MEDIUM NA		ORIENTATION Vertical		GROUND LEVEL + 5.97 mPD										
Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	FI	Tests	Samples No. Type Depth	Reduced Level	Depth (m)	Legend	Grade	Description
04/06/2008	HW								A 0.50 N 1.00 I 1.04 E 1.10 D 1.50	+5.87	0.10			Asphalt (Ground Surface)
										+5.22	0.75			Dark grey (N 4), very silty fine to coarse SAND with some angular fine to coarse gravel sized highly decomposed rock fragments and occasional asphalt fragments. (FILL)
04/06/2008 05/06/2008		Dry at 19:00 1.45m at 08:00						23 bls	1 2.20 2 2.80 2.65					Reddish brown (2.5YR 5/4), spotted white and black, dappled white, silty fine to coarse SAND. (FILL)
								21 bls	3 3.50 4 3.00 3.95					
									5 5.10					
05/06/2008	HW								6 6.10	-0.13	6.10			End of Investigation Hole at 6.10m.
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p> Disturbed sample Piston sample Split spoon sample U76 undisturbed sample U100 undisturbed sample Mazier sample SPT liner sample Water sample Environmental Sample </p> <p> Standard penetration test In-situ vane shear test Permeability test Impression packer test Pressuremeter test Packer Test Acoustic or optical televiwer survey Piezometer tip Standpipe Groundwater monitoring well Extensometer </p> </div> <div style="width: 45%;"> <p> LOGGED T. C. Yip DATE 05/06/2008 CHECKED C. M. Sham DATE 06/06/2008 </p> </div> </div>														
REMARKS 1. An inspection pit was excavated to a depth of 1.50m. 2. Groundwater monitoring well was installed at 6.10m below ground level on 05/06/2008. 3. A groundwater sample was taken from monitoring well on 10/06/2008. The water level in the well prior to sampling was 1.04m below the top of the well.														



DRILLHOLE RECORD

HOLE NO. AC-10

CONTRACT NO. GE/2007/03

SHEET 1 OF 1

PROJECT Agreement No. CE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area

METHOD Rotary

CO-ORDINATES

W.O.NO. GE/2007/03.73

MACHINE & NO. VBM51















E 837636.25 N 820722.54

DATE : 03/06/2008 to 05/06/2008

FLUSHING MEDIUM NA

ORIENTATION Vertical

GROUND LEVEL + 5.94 mPD

Drilling Progress	Casing Depth/Size	Water Level (m) Shift start / end	Water Returns %	TCR %	SCR %	RQD %	PI	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
03/06/2008	PW								No. Type Depth	+5.94	0.00			
03/06/2008 04/06/2008		Dry at 18:00 Dry at 08:00								+5.79	0.15			CONCRETE. (Ground Surface) Dark brown (7.5YR 3/4), spotted white and grey, mottled grey and reddish brown, slightly silty fine to coarse SAND with some angular fine to coarse gravel sized highly decomposed rock fragments, occasional concrete and brick fragments. (FILL)
04/06/2008 05/06/2008		Dry at 18:00 1.59m at 08:00						10 bbs	1  2.00 2  2.40 2.45	+4.19	1.75			Brown (7.5YR 5/4), very silty fine to coarse SAND. (FILL)
								15 bbs	3  3.50 4  3.90 3.95	+1.44	4.50			Reddish brown (2.5YR 5/4), spotted white and grey, silty fine to coarse SAND. (FILL)
	PW 5.80 HW								5  5.00					
05/06/2008	HW 6.27	1.36m at 18:00							6  6.00	-0.21 -0.33	8.15 6.27		V	Extremely weak, reddish brown, spotted white and black, completely decomposed medium grained GRANITE. (Slightly silty fine to coarse SAND) End of Investigation Hole at 6.27m.

↑ Disturbed sample	Standard penetration test
↓ Piston sample	In-situ vane shear test
Split spoon sample	Permeability test
U76 undisturbed sample	Impression packer test
U100 undisturbed sample	Pressuremeter test
Mazier sample	Packer Test
SPT liner sample	Acoustic or optical
Water sample	televiwer survey
Environmental Sample	Piezometer tip
	Standpipe
	Groundwater monitoring well
	Extensometer

LOGGED T. C. Yip
DATE 05/06/2008
CHECKED C. M. Sham
DATE 06/06/2008

REMARKS

1. An inspection pit was excavated to a depth of 1.50m.
2. Groundwater monitoring well was installed at 6.27m below ground level on 05/06/2008.
3. A groundwater sample was taken from monitoring well on 10/06/2008. The water level in the well prior to sampling was 1.72m below the top of the well.

TRIAL TRENCH RECORD

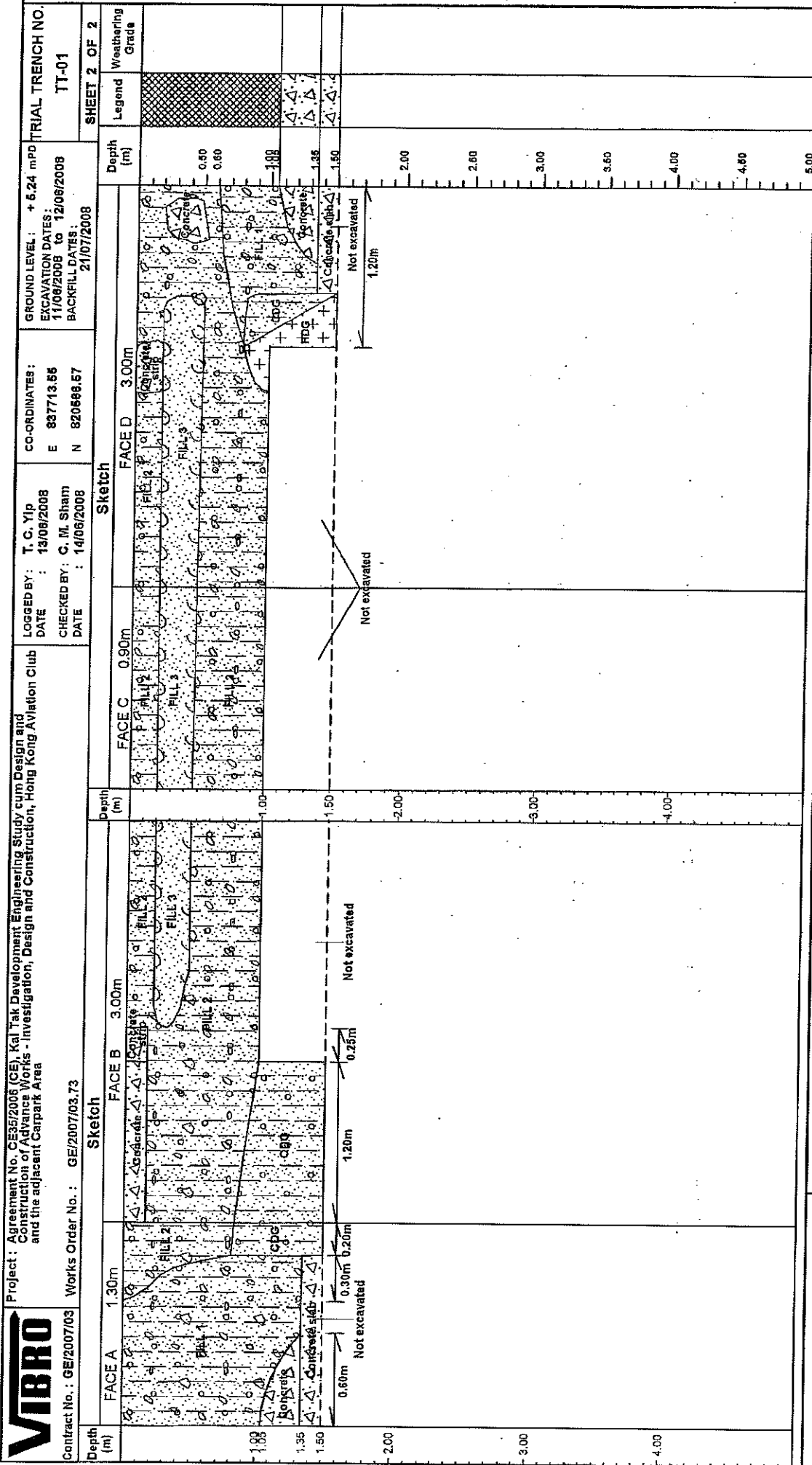
Contract No. : GE/2007/03		Project : Agreement No. GE35/2005 (GE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area		Logged by : T. C. Yip DATE : 13/06/2008 Checked by : C. M. Sham DATE : 14/06/2008		CO-ORDINATES : E 837713.55 N 820566.57		GROUND LEVEL : +6.24 mPD EXCAVATION DATES : 11/06/2008 to 12/06/2008 BACKFILL DATES : 21/07/2008		TRIAL TRENCH NO. TT-01 SHEET 1 OF 2	
Works Order No. : GE/2007/03.73		Sketch						Description			
Depth (m)	Face A	Face B	Face C	Face D	Face E	Face F	Face G	Depth (m)	Weathering Grade	Legend	
0.50								0.50			
1.00								1.00			
1.50								1.50			
2.00								2.00			
2.50								2.50			
3.00								3.00			
3.50								3.50			
4.00								4.00			
4.50								4.50			
5.00								5.00			

SKETCH (See sheet 2 of 2)

Loose, Dense, moist, reddish brown (2.5YR 5/4), slightly silty fine to coarse SAND with much angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular cobbles (MDG, SDG). (FILL 1)
From 0.20m to 1.00m : Dense, moist, reddish brown (2.5YR 5/4), very silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized moderately decomposed and slightly decomposed rock fragments and occasional angular cobbles (MDG, SDG). (FILL 2)
From 0.20m to 0.60m (Faces B, C and D) : Loose, moist, light grey (N 7), fine to coarse SAND with much shell fragments. (FILL 3)
From 0.80m to 1.50m (Faces A, B and D) : Extremely weak, reddish brown, spotted light grey, completely decomposed medium grained GRANITE. (Silty fine to coarse SAND with much angular fine gravel)
From 0.80m to 1.50m (Face D) : Very weak, greyish brown, dappled brown, highly decomposed medium grained GRANITE. CONCRETE.
Concrete slab.
End of Trial Pit at 1.50m.

PLAN	SECTION	SYMBOL	REMARKS
	TT01	Disturbed Sample Undisturbed Sample Horiz. Undisturbed Sample Vert. Block Sample In Situ Density Test Water Seepage Water Sample Standpipe Tip N - Schmidt Hammer Test	Shoring : Timber shoring over the full height Stability : Stable Maximum Depth : 1.50 m Average Depth : 1.50 m Water Seepage : NIL 1. All sample depths are related to mid-point of Face A below ground level. 2. Small disturbed samples were taken at 0.50m and 1.00m. 3. GDG = Completely decomposed GRANITE. 4. HDG = Highly decomposed GRANITE.

TRIAL TRENCH RECORD



PLAN	SECTION	SYMBOL	REMARKS
	TT01 		<p>Shoring : Timber shoring over the full height Stability : Stable Maximum Depth : 1.50 m Average Depth : 1.50 m</p> <p>Water Seepage : NIL</p> <p>1. All sample depths are related to mid-point of Face A below ground level. 2. Small disturbed samples were taken at 0.50m and 1.00m. 3. CCG = Completely decomposed GRANITE. 4. HDG = Highly decomposed GRANITE.</p>

TRIAL TRENCH RECORD

Contract No. : GE/2007/03		Project : Agreement No. GE35/2008 (GE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area		LOGGED BY : T. C. Yip DATE : 20/06/2008 CHECKED BY : C. M. Sham DATE : 21/06/2008		CO-ORDINATES : E 837718.37 N 820578.44		GROUND LEVEL : +5.16 mPD EXCAVATION DATES : 12/06/2008 to 13/06/2008 BACKFILL DATES : 30/07/2008		TRIAL TRENCH NO. : TT-02			
Works Order No. : GE/2007/03.73		Description Firm, moist, dark brown (7.5YR 3/4), dappled brown, slightly sandy SILT with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional brick fragments. (FILL 1) From 0.10m to 0.35m (Faces A and C) : Dense, moist, dark grey (N 3), slightly silty fine to coarse SAND with some angular fine gravel sized moderately decomposed rock fragments and much shell fragments. (FILL 2) From 0.30m to 0.45m (Faces C and D) : Concrete slab. Firm, moist, brown (7.5YR 5/4), silty CLAY. (FILL 3) Extremely weak, pinkish grey, spotted and mottled red and white, completely decomposed medium grained GRANITE. (Silty fine to coarse SAND with much angular fine gravel) From 1.05m to 1.15m Base (Face B, C and D) : Very weak, pinkish grey, spotted and mottled pink and white, highly decomposed medium grained GRANITE. End of Trial Pit at 1.45m.											
Weathering Grade		Legend		Depth (m)		Face A		Face B		Face C		Face D	

PLAN 		SECTION TT02 		SYMBOL Disturbed Sample Undisturbed Sample Horiz. Undisturbed Sample Vert. Block Sample Environmental Sample In Situ Density Test Water Seepage Water Sample Standpipe Tip N - Schmidt Hammer Test		REMARKS Shoring : No shoring Stability : Stable Maximum Depth : 1.15 m Water Seepage : NIL Average Depth : 1.10 m 1. All sample depths are related to mid-point of Face A below ground level. 2. Small disturbed samples were taken at 0.50m and 1.00m. 3. CDG = Completely decomposed GRANITE. 4. HDG = Highly decomposed GRANITE.	
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TRIAL TRENCH RECORD

Project : Agreement No. CE35/2008 (GE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area Works Order No. : GE/2007/03.73				LOGGED BY : T. C. Yip DATE : 03/07/2008 CHECKED BY : C. M. Sham DATE : 04/07/2008		CO-ORDINATES : E 837719.19 N 820575.17		GROUND LEVEL : +5.10 mPD EXCAVATION DATES : 20/06/2008 to 23/08/2008 BACKFILL DATES : 21/07/2008		TRIAL TRENCH NO. TT-03 SHEET 1 OF 2	
Sketch			Depth (m)		Weathering Grade		Description				
Face A	Face B	Face C	Face D	Legend	Depth (m)	Weathering Grade	Description				
SKETCH (See sheet 2 of 2)					0.10 0.15 0.40 0.80 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00		Soft to firm, moist, dark brown (7.5YR 3/4), slightly sandy SILT with occasional angular to subangular fine gravel-sized highly decomposed and moderately decomposed rock fragments. (FILL 1) Firm, moist, light brown (7.5YR 6/4), sandy clayey SILT with occasional angular to subangular fine gravel sized highly decomposed rock fragments. (FILL 2) From 0.10m to 0.86m (Faces A, B and C) : Extremely weak to very weak, yellowish brown, dappled pinkish brown, spotted light grey and white, completely decomposed medium grained GRANITE. (Very silty fine to coarse SAND with some angular fine gravel) Dense, moist, brown (7.5YR 6/4), dappled greyish brown and brown, silty fine to coarse SAND with some angular to subangular fine to coarse gravel sized highly decomposed and moderately decomposed rock fragments and occasional angular cobbles (SDG). (FILL 3) Moderately strong, locally moderately weak, greyish brown, dappled brown, moderately decomposed medium grained GRANITE. Joints are widely spaced, rough planar, extremely narrow, iron and manganese stained, dipping 036°/68° and 125°/25°. End of Trial Pit at 0.86m.				
PLAN			SECTION		SYMBOL		REMARKS				
			TT03 		Disurbed Sample Undisturbed Sample Horiz. Undisturbed Sample Vert. Block Sample In Situ Density Test Water Seepage Water Sample Standpipe Tip N - Schmidt Hammer Test		Shoring : No shoring Stability : Stable Maximum Depth : 0.85 m Water Seepage : NIL Average Depth : 0.60 m 1. All sample depths are related to mid-point of Face A below ground level. 2. Small disturbed samples were taken at 0.60m. 3. CDG = Completely decomposed GRANITE. 4. MDG = Moderately decomposed GRANITE. 5. SDG = Slightly decomposed GRANITE.				

Contract No.: GE/2007/03
Works Order No.: GE/2007/03.73

Project: Agreement No. GE35/2006 (CE), Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction, Hong Kong Aviation Club and the adjacent Carpark Area

LOGGED BY: T. C. Yip
DATE: 03/07/2008
CHECKED BY: C. M. Sham
DATE: 04/07/2008

CO-ORDINATES:
E 837719.19
N 820576.17

GROUND LEVEL: +5.10 mPD
EXCAVATION DATES: 20/06/2008 to 23/06/2008
BACKFILL DATES: 21/07/2008

TT-03
SHEET 2 OF 2

Legend
 Weathering Grade
 III

Sketch
FACE A 3.50m
FACE B 1.50m
FACE C 3.50m
FACE D 1.50m

Depth (m)
 0.10
 0.15
 0.40
 0.85
 1.00
 1.50
 2.00
 2.50
 3.00
 3.50
 4.00
 4.50
 5.00

Labels:
 FILL 1
 FILL 2
 FILL 3
 CDG
 MDG
 Not excavated
 0.60m
 0.80m
 Pipes (dia. 15mm & 80mm)
 Concrete pipe (dia. 60mm)
 TMDG

PLAN	SECTION	SYMBOL	REMARKS
	<p>TT03</p>	<p>Disturbed Sample</p> <p>Undisturbed Sample Hori.</p> <p>Undisturbed Sample Vert.</p> <p>Block Sample</p> <p>In Situ Density Test</p> <p>Water Seepage</p> <p>Water Sample</p> <p>Standpipe Tip</p> <p>N - Schmidt Hammer Test</p>	<p>Shoring : No shoring</p> <p>Stability : Stable</p> <p>Maximum Depth : 0.86 m</p> <p>Average Depth : 0.60 m</p> <p>Water Seepage : NIL</p> <p>1. All sample depths are related to mid-point of Face A below ground level.</p> <p>2. Small disturbed samples were taken at 0.50m.</p> <p>3. CDG = Completely decomposed GRANITE.</p> <p>4. MDG = Moderately decomposed GRANITE.</p> <p>5. SDG = Slightly decomposed GRANITE.</p>

Appendix C

(On-site Measurement Results)

Appendix C PID Measurement

Sample ID	Type	Sampling Depth		PID Results (ppm)
		m Below Base of Existing Concrete Pavement		
		From	To	
AC-01	Grab	1	1	0
	U-76	3.56	4.01	1.1
	U-76	4.06	4.51	1.6
	U-76	5	5.45	0
	U-76	6	6.45	0
AC-02	Grab	1	1	0
	U-76	2.5	2.82	0
	U-76	5.5	5.95	0
	U-76	6	6.45	0
AC-03	Grab	1	1	0
	U-76	3.66	4.11	0.2
	U-76	4.16	4.61	0.1
	U-76	5	5.45	0
	U-76	6	6.45	0
AC-04	Grab	0.9	0.9	0
	U-76	2.7	3.15	0
	U-76	3.4	3.85	0
AC-06	Grab	1	1	0
	U-76	2.5	2.95	0
	U-76	3.5	3.95	0
AC-07	Grab	1	1	0.2
	U-76	2	2.45	1
	U-76	3.4	3.85	1
AC-08	Grab	1	1	0.1
	U-76	2.4	2.85	0.2
	U-76	3.4	3.85	0.6
AC-09	Grab	1	1	0
	U-76	2.1	2.55	7.09
	U-76	3.4	3.85	6.48
AC-10	Grab	1	1	0
	U-76	1.85	2.3	24.2
	U-76	3.35	3.8	23.6

Bold value indicates PID value over 20ppm

Appendix D

(Laboratory Results)

Category	Meas	Petroleum Carbon Ranges					SVOCs										Add Extractable Surrogate										VOCs										TPH (Total)/ BTEX Surrogate																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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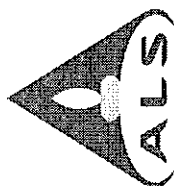
Note:
BBL= Below Base of Existing Concrete
LOH= Level of Reporting
The RBRG Petroleum Carbon Ranges fractions was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited proscribed procedure for TPH ranges C6-C9, C10-C14, C15-C28 and C29-C36
*** indicates that the solubility value exceeds the ceiling limit therefore the RBRG applies
Shaded square indicates exceedance of RBRG Level
HK080932004
Full analytical results should be referred to laboratory report

Category	Meats	Petroleum Carbon Ranges										SVOCs										Add Extractable Surrogates										VOCs										TPH (Vol%)/ BTEX Surrogate					
Analysis Description	Unit	Mercury	C8 - C9 Fraction	C10 - C14 Fraction	C15 - C26 Fraction	C29 - C36 Fraction	C6 - C8 Fraction#	C9 - C16 Fraction#	C17 - C35 Fraction#	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Chrysene	Benzo(b) & Benzo(k)fluoranthene	Hexachlorobenzene (HCB)	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene -d5	2-Fluorobiphenyl	4-Terphenyl-d14	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Xylenes (Total)	Styrene	2-Butanone (MEK)	Trichloroethane	Tetrachloroethane	Chloroform	Bromodichloromethane	2-Propanone (Acetone)	Methylene chloride	Methyl tert-Butyl Ether (MTBE)	Indeno(1,2,3-cd)pyrene	Toluene-D8	Benzo(g,h,i)perylene			
	LOI	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%				
	RBFG for Urban Residential (ug/L)	486	0.05	20	50	100	50	20	20	500	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	5	5	5	10	5	15	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Solidity Limit (ug/L)		NA	-	-	-	-	5220	2800	2800	31000	3920	4240	1880	1000	43.4	206	135	1.6	1.5	6200	-	-	-	-	-	-	3860	6110000	1020000	-	-	112000	3020000	10000000	1210	250	958	2220	10000000	16000	16000	-	-	-			
Sample Identification			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ALS Lab ID	Sample ID	Date of Sampling																																													
HK0809079003	EQUIPMENT BLANK (1)	10-Jun-08	<0.05	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	31.1	31.0	82.6	71.7	60.4	92.5	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
HK0809193010	EQUIPMENT BLANK (2)	11-Jun-08	<0.05	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	<4	35.4	27.7	65.1	70.2	55.3	95.2	<5	<5	<5	<10	<5	<5	<50	<5	<5	<50	<5	<5	<50	<5	<5	-	-	-	-	-	
HK0809320003	EQUIPMENT BLANK (3)	23-Jun-08	-	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	26.2	21.6	53.7	46.2	43.8	98.4	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HK0810947003	EQUIPMENT BLANK (4)	11-Jul-08	-	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	33.7	22.1	21.4	35.8	46.1	84.0	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0809079004	FIELD BLANK (1)	10-Jun-08	<0.05	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	33.8	30.2	72.8	67.1	55.7	90.9	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0809193009	FIELD BLANK (2)	11-Jun-08	<0.05	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	<4	34.4	31.3	59.5	66.8	56.3	97.6	<5	<5	<5	<10	<5	<5	<50	<5	<5	<50	<5	<5	<50	<5	<5	-	-	-	-	-	
HK0809320002	FIELD BLANK (3)	23-Jun-08	-	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	32.8	22.7	34.6	64.8	48.6	82.6	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0810947002	FIELD BLANK (4)	11-Jul-08	-	<20	<50	<100	<50	<20	<500	<500	<2	<2	<2	<2	<2	<2	<2	<2	<4	-	27.9	30.6	21.1	41.9	49.4	94.7	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0809079005	THIP BLANK (1)	10-Jun-08	-	<20	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0809193011	THIP BLANK (2)	11-Jun-08	-	<20	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0809320004	THIP BLANK (3)	23-Jun-08	-	<20	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HK0810947005	THIP BLANK (4)	11-Jul-08	-	<20	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<10	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
BQC= Below Base of Existing Concrete
LOF= Level of Reporting
The RBFG Petroleum Carbon Ranges fractions was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure for TPH ranges C6-C8, C10-C14, C15-C28 and C29-C36
*** Indicates that the solubility value exceeds the ceiling limit therefore the RBFG applies
Shaded square indicates exceedance of RBFG Level
Square in bold line indicates exceedance of soil saturation limit

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0811137
Address	: 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 15-JUL-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002299			No. of samples	: Received : 1
Site	: KAI TAK				: Analysed : 1

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics

ALS Laboratory Group
Trading Name: **ALS Technichem (HK) Pty Ltd**
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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0811137

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0811137 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0811137 :

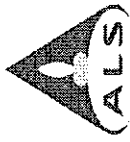
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedited procedure EP-071.

Sample(s) were received in an ambient condition.

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

"m BGL" denoted that sample depth in the unit of "meter below ground level".



Analytical Results

Sub-Matrix: GROUNDWATER

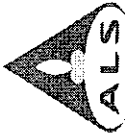
Client sample ID
AC-06 GW_0.30m BGL
Client sampling date / time
15-JUL-2008 16:00

HK0811137-001

Compound	CAS Number	LOR	Unit	
EP-071: Total Petroleum Hydrocarbons (TPH)				
C10 - C14 Fraction	---	50	µg/L	<50
C15 - C28 Fraction	---	100	µg/L	100
C29 - C36 Fraction	---	50	µg/L	130
C6 - C9 Fraction	---	20	µg/L	<20
EP-080: BTEX				
Benzene	71-43-2	5	µg/L	<5
Toluene	108-88-3	5	µg/L	<5
Ethylbenzene	100-41-4	5	µg/L	<5
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10
ortho-Xylene	95-47-6	5	µg/L	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH)				
C9 - C16 Fraction	---	500	µg/L	<500
C17 - C35 Fraction	---	500	µg/L	<500
C6 - C8 Fraction	---	20	µg/L	<20
EP-075B: Polyaromatic Hydrocarbons (PAHs)				
Naphthalene	91-20-3	2	µg/L	<2
Acenaphthylene	208-96-8	2	µg/L	<2
Acenaphthene	83-32-9	2	µg/L	<2
Fluorene	86-73-7	2	µg/L	<2
Phenanthrene	85-01-8	2	µg/L	<2
Anthracene	120-12-7	2	µg/L	<2
Fluoranthene	206-44-0	2	µg/L	<2
Pyrene	129-00-0	2	µg/L	<2
Chrysene	218-01-9	2	µg/L	<2
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4
EP-080S: TPH(Volatile)/BTEX Surrogate				
Dibromofluoromethane	1868-53-7	0.1	%	113
Toluene-D8	2037-26-5	0.1	%	101
4-Bromofluorobenzene	460-00-4	0.1	%	90.0
Dibromofluoromethane	1868-53-7	0.1	%	113
Toluene-D8	2037-26-5	0.1	%	101
4-Bromofluorobenzene	460-00-4	0.1	%	90.0
EP-075S: Acid Extractable Surrogates				
2-Fluorophenol	367-12-4	0.1	%	51.0
Phenol-d5	13127-88-3	0.1	%	45.0
2,4,6-Trifluorophenol	118-79-6	0.1	%	93.8

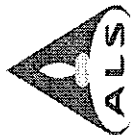
Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



Page Number : 4 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0811137

Sub-Matrix: GROUNDWATER		Client sample ID		AC-06 GW 0.30m BGL	
		Client sampling date / time		15-JUL-2008 16:00	
		CAS Number		HK0811137-001	
Compound		LOR	Unit	Surrogate control limits listed at end of this report.	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	75.8	
2-Fluorobiphenyl	321-60-8	0.1	%	83.1	
4-Terphenyl-d14	1718-51-0	0.1	%	101	

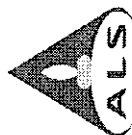


Laboratory Duplicate (DUP) Report

Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705479)									
HK0810947-002	Anonymous	C6 - C9 Fraction	----	20	µg/L	<20		<20	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 706968)									
HK0811030-003	Anonymous	C15 - C28 Fraction	---	100	µg/L	200		200	0.0
		C10 - C14 Fraction	---	50	µg/L	<50		<50	0.0
		C29 - C36 Fraction	----	50	µg/L	120		120	0.0
EP-080: BTEX (QC Lot: 705479)									
HK0810947-002	Anonymous	meta- & para-Xylene	108-38-3	10	µg/L	<10		<10	0.0
			106-42-3						
		Benzene	71-43-2	5	µg/L	<5		<5	0.0
		Toluene	108-88-3	5	µg/L	<5		<5	0.0
		Ethylbenzene	100-41-4	5	µg/L	<5		<5	0.0
		ortho-Xylene	95-47-6	5	µg/L	<5		<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705480)									
HK0810947-002	Anonymous	C6 - C8 Fraction	---	0.02	mg/L	<0.02		<0.02	0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 706969)									
HK0811030-003	Anonymous	Naphthalene	91-20-3	2	µg/L	<2		<2	0.0
		Acenaphthylene	208-96-8	2	µg/L	<2		<2	0.0
		Acenaphthene	83-32-9	2	µg/L	<2		<2	0.0
		Fluorene	86-73-7	2	µg/L	<2		<2	0.0
		Phenanthrene	85-01-8	2	µg/L	<2		<2	0.0
		Anthracene	120-12-7	2	µg/L	<2		<2	0.0
		Fluoranthene	206-44-0	2	µg/L	<2		<2	0.0
		Pyrene	129-00-0	2	µg/L	<2		<2	0.0
		Chrysene	218-01-9	2	µg/L	<2		<2	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4		<4	0.0
			207-08-9						

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

Matrix: WATER				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Method Blank (MB) Report				RPDs (%)							
Method: Compound				Spike Recovery (%)				Recovery Limits (%)			
CAS Number	LOR	Unit	Result	Spike Concentration	LCS	DCS	Low	High	Value	Control Limit	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705479)											
C6 - C9 Fraction	—	20	µg/L	<20	200 µg/L	100	—	78	126	—	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 706968)											
C10 - C14 Fraction	—	50	µg/L	<50	150 µg/L	89.3	—	37	129	—	
C15 - C28 Fraction	—	100	µg/L	<100	350 µg/L	84.2	—	39	128	—	
C29 - C36 Fraction	—	50	µg/L	<50	300 µg/L	91.6	—	15	137	—	
EP-080: BTEX (QC Lot: 705479)											



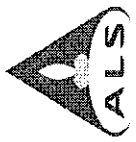
Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit
EP-080: BTEX (QCLot: 705479) - continued														
Benzene	71-43-2	2	µg/L	<2	10 µg/L	102	—	—	85	109	—	—	—	—
Toluene	108-88-3	2	µg/L	<2	10 µg/L	96.6	—	—	76	116	—	—	—	—
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	102	—	—	79	116	—	—	—	—
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	104	—	—	85	112	—	—	—	—
ortho-Xylene	106-42-3	—	—	—	—	—	—	—	—	—	—	—	—	—
95-47-6	2	µg/L	<2	—	10 µg/L	104	—	—	79	115	—	—	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 704958)														
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.25 mg/L	69.4	—	—	50	130	—	—	—	—
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	77.2	—	—	50	130	—	—	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 705480)														
C6 - C8 Fraction	—	0.02	mg/L	<0.02	—	—	—	—	—	—	—	—	—	—
103	—	—	0.15 mg/L	—	—	103	—	—	50	130	—	—	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 706969)														
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	76.1	—	—	42	105	—	—	—	—
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	75.0	—	—	44	108	—	—	—	—
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	78.6	—	—	41	108	—	—	—	—
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	80.0	—	—	52	104	—	—	—	—
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	81.2	—	—	60	105	—	—	—	—
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	81.1	—	—	58	106	—	—	—	—
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	82.4	—	—	67	105	—	—	—	—
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	83.8	—	—	62	109	—	—	—	—
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	87.8	—	—	63	109	—	—	—	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	85.2	—	—	34	130	—	—	—	—
207-08-9	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

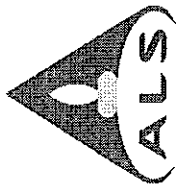


Page Number : 7 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0811137

Sub-Matrix: GROUNDWATER		CAS Number	Recovery Limits (%)	
Compound			Low	High
EP-075S: Acid Extractable Surrogates				
2-Fluorophenol		367-12-4	21	100
Phenol-d6		13127-88-3	20	94
2,4,6-Tribromophenol		118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates				
Nitrobenzene -d5		4165-60-0	35	114
2-Fluorobiphenyl		321-60-8	43	116
4-Terphenyl-d14		1718-51-0	33	141

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

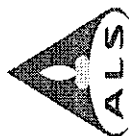
Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 12
Contact Address	: MR VINCENT AU-YEUNG : 7/F, EMPIRE CENTRE : 68 MODY ROAD, TSIM SHA TSUI : KOWLOON HONG KONG : vincent.auyeung@maunsell.com.hk	Contact Address	: Wong Wai Man, Alice : 11/F., Chung Shun Knitting Centre, : 1 - 3 Wing Yip Street, : Kwai Chung, N.T., Hong Kong : Alice.Wong@alsenviro.com	Work Order	: HK0811030
E-mail	: ---	E-mail	: ---		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 14-JUL-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002298			No. of samples	: - Received : 3
Site	: KAI TAK				: - Analysed : 3

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
Trading Name: **ALS Technichem (HK) Pty Ltd**
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Page Number : 2 of 12
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0811030

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0811030 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0811030 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 8020.

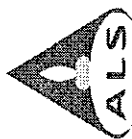
The RERG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in a chilled condition.

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

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BGL" denoted that sample depth in the unit of "meter below ground level" and "m BBC" denoted that sample depth in the unit of "meter below base of concrete".

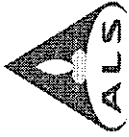


Analytical Results

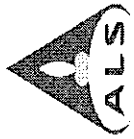
Sub-Matrix: GROUNDWATER		Client sample ID		AC-04 GW_0.7m BGL	
		Client sampling date / time		14-JUL-2008 16:00	
Compound	CAS Number	LOR	Unit	HK0811030-003	
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	---	50	µg/L	<50	
C15 - C28 Fraction	---	100	µg/L	200	
C29 - C36 Fraction	---	50	µg/L	120	
C6 - C9 Fraction	---	20	µg/L	<20	
EP-080: BTEX					
Benzene	71-43-2	5	µg/L	<5	
Toluene	108-88-3	5	µg/L	<5	
Ethylbenzene	100-41-4	5	µg/L	<5	
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	
ortho-Xylene	95-47-6	5	µg/L	<5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	---	500	µg/L	<500	
C17 - C35 Fraction	---	500	µg/L	<500	
C6 - C8 Fraction	---	20	µg/L	<20	
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	2	µg/L	<2	
Acenaphthylene	208-96-8	2	µg/L	<2	
Acenaphthene	83-32-9	2	µg/L	<2	
Fluorene	86-73-7	2	µg/L	<2	
Phenanthrene	85-01-8	2	µg/L	<2	
Anthracene	120-12-7	2	µg/L	<2	
Fluoranthene	208-44-0	2	µg/L	<2	
Pyrene	129-00-0	2	µg/L	<2	
Chrysene	218-01-9	2	µg/L	<2	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	114	
Toluene-D8	2037-26-5	0.1	%	102	
4-Bromofluorobenzene	460-00-4	0.1	%	90.1	
Dibromofluoromethane	1868-53-7	0.1	%	114	
Toluene-D8	2037-26-5	0.1	%	102	
4-Bromofluorobenzene	460-00-4	0.1	%	90.1	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	43.0	
Phenol-d6	13127-88-3	0.1	%	41.3	
2,4,6-Tribromophenol	118-79-6	0.1	%	66.9	
Surrogate control limits listed at end of this report.					

Surrogate control limits listed at end of this report.

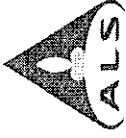
Surrogate control limits listed at end of this report.



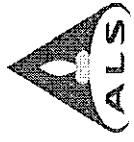
Sub-Matrix: GROUNDWATER		Client sample ID AC-04 GW_0.7m BGL	
		Client sampling date / time 14-JUL-2008 16:00	
Compound	CAS Number	LOR	Unit
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	0.1	%
2-Fluorobiphenyl	321-60-8	0.1	%
4-Terphenyl-d14	1718-51-0	0.1	%
			Surrogate control limits listed at end of this report.



Sub-Matrix: SOIL		Client sample ID		AC-06_2.50-2.95m		AC-06_3.50-3.95m	
		Client sampling date / time		BBC		BBC	
		Unit		14-JUL-2008 08:30		14-JUL-2008 10:45	
Compound	CAS Number	LOR	Unit	HK0811030-001	HK0811030-002	HK0811030-002	HK0811030-002
EAI/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	17.2	20.8	20.8	20.8
EP-071: Total Petroleum Hydrocarbons (TPH)							
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100
C6 - C9 Fraction	—	2	mg/kg	<2	<2	<2	<2
EP-080: BTEX							
Benzene	71-43-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)							
C9 - C16 Fraction	—	200	mg/kg	<200	<200	<200	<200
C17 - C35 Fraction	—	500	mg/kg	<500	<500	<500	<500
C6 - C8 Fraction	—	5	mg/kg	<5	<5	<5	<5
EP-076B: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	<1	<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-080S: TPH(Volatile)/BTX Surrogate							
Dibromofluoromethane	1868-53-7	0.1	%	104	102	102	102
Toluene-28	2037-26-5	0.1	%	97.5	97.7	97.7	97.7
				Surrogate control limits listed at end of this report.			

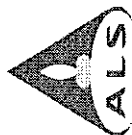


Sub-Matrix: SOIL		Client sample ID		AC-06_2.50-2.95m	AC-06_3.50-3.95m	
		Client sampling date / time		BBC	BBC	
				14-JUL-2008 09:30	14-JUL-2008 10:45	
				HK0811030-001	HK0811030-002	
Compound	CAS Number	LOR	Unit	Surrogate control limits listed at end of this report.		
EP-080S: TPH(Volatile)/BTX Surrogate - Continued						
4-Bromofluorobenzene	460-00-4	0.1	%	93.4	93.3	
Dibromofluoromethane	1868-53-7	0.1	%	104	102	
Toluene-D8	2037-26-5	0.1	%	97.5	97.7	
4-Bromofluorobenzene	460-00-4	0.1	%	93.4	93.3	
EP-075S: Acid Extractable Surrogates						
2-Fluorophenol	367-12-4	0.1	%	84.5	76.5	
Phenol-d6	13127-88-3	0.1	%	84.3	75.6	
2,4,6-Tribromophenol	118-79-6	0.1	%	71.4	65.2	
EP-075T: Base/Neutral Extractable Surrogates						
Nitrobenzene -d5	4165-60-0	0.1	%	83.6	74.3	
2-Fluorobiphenyl	321-60-8	0.1	%	80.9	72.5	
4-Terphenyl-d14	1718-51-0	0.1	%	100	94.9	
Surrogate control limits listed at end of this report.						



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 (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 706968)								
HK0811008-003	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	12.1	12.2	1.2
HK0811005-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	5.2	6.1	15.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)								
HK0810427-001	Anonymous	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: 699395)								
HK0810427-001	Anonymous	C6 - C9 Fraction	---	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 699395)								
HK0810427-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
			106-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 706953)								
HK0811030-001	AC-06_2.50-2.95m BBC	C6 - C8 Fraction	---	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 706960)								
HK0811030-001	AC-06_2.50-2.95m BBC	C9 - C16 Fraction	---	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	---	500	mg/kg	<500	<500	0.0
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 703699)								
HK0810697-001	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					



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Work Order HK0811030

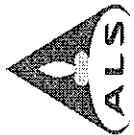
Matrix: WATER									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705479)									
HK0810947-002	Anonymous	C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 706968)									
HK0811030-003	AC-04 GW_0.7m BGL	C15 - C28 Fraction	—	100	µg/L	200	200	0.0	
		C10 - C14 Fraction	—	50	µg/L	<50	<50	0.0	
		C29 - C36 Fraction	—	50	µg/L	120	120	0.0	
EP-080: BTEX (QC Lot: 705479)									
HK0810947-002	Anonymous	meta- & para-Xylene	108-38-3	10	µg/L	<10	<10	0.0	
			106-42-3						
		Benzene	71-43-2	5	µg/L	<5	<5	0.0	
		Toluene	108-88-3	5	µg/L	<5	<5	0.0	
		Ethylbenzene	100-41-4	5	µg/L	<5	<5	0.0	
		ortho-Xylene	95-47-6	5	µg/L	<5	<5	0.0	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705480)									
HK0810947-002	Anonymous	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02	0.0	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 706969)									
HK0811030-003	AC-04 GW_0.7m BGL	Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	
		Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	
		Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	
		Fluorene	86-73-7	2	µg/L	<2	<2	0.0	
		Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	
		Anthracene	120-12-7	2	µg/L	<2	<2	0.0	
		Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	
		Pyrene	129-00-0	2	µg/L	<2	<2	0.0	
		Chrysene	218-01-9	2	µg/L	<2	<2	0.0	
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	<4	0.0	
			207-08-9						

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										
	Method: Compound					Spike					Recovery Limits (%)					RPDs (%)					
											Spike Recovery (%)					Value					
	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit										
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)																					
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	69.7	—	47	132	—	—										
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	65.3	—	46	126	—	—										
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	61.6	—	37	122	—	—										
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)																					
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	86.2	—	58	126	—	—										
EP-080: BTEX (QCLot: 699395)																					
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	—	66	127	—	—										
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	—	75	118	—	—										



Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report										
Method Blank (MB) Report					Recovery Limits (%)					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Low	High
RPDs (%)										
Control Limit										
Matrix: SOIL										
EP-080: BTEX (QCLot: 699395) - continued										
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---	---	87	115
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---	---	87	116
ortho-Xylene	106-42-3									
	95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---	---	83	116
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 706953)										
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	106	---	---	63	135
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 706950)										
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	# 124	---	---	34	123
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	104	---	---	27	132
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 703699)										
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	84.7	---	---	57	98
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	81.5	---	---	63	99
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	84.8	---	---	62	102
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	---	---	62	109
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	86.0	---	---	66	100
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	84.5	---	---	61	101
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.1	---	---	73	105
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.9	---	---	73	105
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	89.0	---	---	45	113
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	92.5	---	---	65	112
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	---	---	---	---	---	---
	207-08-9			---	0.50 mg/kg	91.5	---	---	71	107
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	90.0	---	---	51	109
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.8	---	---	46	119
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	99.7	---	---	62	113
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	92.8	---	---	58	117
RPDs (%)										
Control Limit										
Matrix: WATER										
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 705479)										
C6 - C9 Fraction	---	20	µg/L	<20	200 µg/L	100	---	---	78	126
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 706968)										
C10 - C14 Fraction	---	50	µg/L	<50	150 µg/L	89.3	---	---	37	129
C15 - C28 Fraction	---	100	µg/L	<100	350 µg/L	84.2	---	---	39	128
C29 - C36 Fraction	---	50	µg/L	<50	300 µg/L	91.6	---	---	15	137
EP-080: BTEX (QCLot: 705479)										
Benzene	71-43-2	2	µg/L	<2	10 µg/L	102	---	---	85	109
Toluene	108-86-3	2	µg/L	<2	10 µg/L	96.6	---	---	76	116
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	102	---	---	79	116

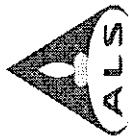


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Work Order : HK0811030

Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report									
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)			Recovery Limits (%)		RPDs (%)		
						LCS	DCS		Low	High	Value	Control Limit	
EP-080: BTEX (QCLot: 705479) - continued													
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	104	—	—	85	112	—	—	
	106-42-3												
ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	104	—	—	79	115	—	—	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 704958)													
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.25 mg/L	69.4	—	—	50	130	—	—	
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	77.2	—	—	50	130	—	—	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 705480)													
C6 - C8 Fraction	—	0.02	mg/L	<0.02	—	—	—	—	—	—	—	—	
				—	0.15 mg/L	103	—	—	50	130	—	—	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 706969)													
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	76.1	—	—	42	105	—	—	
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	75.0	—	—	44	108	—	—	
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	78.6	—	—	41	108	—	—	
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	80.0	—	—	52	104	—	—	
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	81.2	—	—	60	105	—	—	
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	81.1	—	—	58	106	—	—	
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	82.4	—	—	67	105	—	—	
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	83.8	—	—	62	109	—	—	
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	87.8	—	—	63	109	—	—	
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	85.2	—	—	34	130	—	—	
	207-08-9												

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

Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report				RPDs (%)			
Laboratory sample ID	Client sample ID	Method: Compound	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)											
HK0810427-002	Anonymous	C10 - C14 Fraction	16 mg/kg	50.8	—	—	50	130	—	—	—
		C15 - C28 Fraction	53 mg/kg	59.5	—	—	50	130	—	—	—
		C29 - C36 Fraction	45 mg/kg	58.6	—	—	50	130	—	—	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)											
HK0810427-002	Anonymous	C6 - C9 Fraction	4 mg/kg	72.3	—	—	50	130	—	—	—
EP-080: BTEX (QCLot: 699395)											
HK0810427-002	Anonymous	Benzene	0.2 mg/kg	72.5	—	—	50	130	—	—	—
		Toluene	0.2 mg/kg	75.2	—	—	50	130	—	—	—
		Ethylbenzene	0.2 mg/kg	83.8	—	—	50	130	—	—	—
		meta- & para-Xylene	0.4 mg/kg	86.9	—	—	50	130	—	—	—



Matrix: SOIL		Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	RPDs (%)
EP-080: BTEX (QCLot: 699395) - continued											
HK0810427-002	Anonymous	ortho-Xylene	95-47-6	0.2 mg/kg	82.4	—	—	50	130	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 706953)											
HK0811030-002	AC-06_3.50-3.95m BBC	C6 - C8 Fraction	—	3 mg/kg	85.6	—	—	50	130	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 706960)											
HK0811030-002	AC-06_3.50-3.95m BBC	C9 - C16 Fraction	—	31 mg/kg	119	—	—	50	130	—	—
		C17 - C35 Fraction	—	75 mg/kg	96.2	—	—	50	130	—	—

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)			
Compound	CAS Number	Low	High	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane	1868-53-7	86	118		
Toluene-D8	2037-26-5	88	110		
4-Bromofluorobenzene	460-00-4	86	115		
Dibromofluoromethane	1868-53-7	86	118		
Toluene-D8	2037-26-5	88	110		
4-Bromofluorobenzene	460-00-4	86	115		
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	21	100		
Phenol-d6	13127-88-3	20	94		
2,4,6-Tribromophenol	118-79-6	20	123		
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	35	114		
2-Fluorobiphenyl	321-60-8	43	116		
4-Terphenyl-d14	1718-51-0	33	141		
Sub-Matrix: SOIL					
Compound	CAS Number	Low	High	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane	1868-53-7	80	120		
Toluene-D8	2037-26-5	81	117		
4-Bromofluorobenzene	460-00-4	74	121		
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		

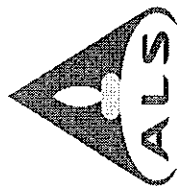


Page Number : 12 of 12
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0811030

Sub-Matrix: SOIL		CAS Number	Recovery Limits (%)	
Compound			Low	High
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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 14
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0810947
Address	: 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 11-JUL-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002297			No. of samples	: Received : 5
Site	: KAI TAK				: Analysed : 5

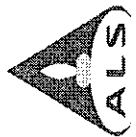
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This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of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

Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group

Trading Name: **ALS Technichem (HK) Pty Ltd**
11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong
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A Campbell Brothers Limited Company



Page Number : 2 of 14
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0810947

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810947 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0810947 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.

Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

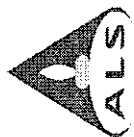
Sample(s) were received in an ambient condition.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedited procedure EP-071.

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

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BGL" denoted that sample depth in the unit of "meter below ground level" and "m BBC" denoted that sample depth in the unit of "meter below base of concrete".

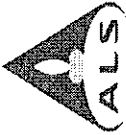


Page Number : 3 of 14
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0810947

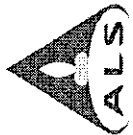
Analytical Results

Sub-Matrix: GROUNDWATER
Client sample ID AC-02 GW_0.87m BGL
Client sampling date / time 11-JUL-2008 15:30
CAS Number LOR Unit HK0810947-004

Compound	CAS Number	LOR	Unit	Surrogate control limits listed at end of this report.
EP-071: Total Petroleum Hydrocarbons (TPH)				
C10 - C14 Fraction	---	50	µg/L	<50
C15 - C28 Fraction	---	100	µg/L	100
C29 - C38 Fraction	---	50	µg/L	80
C6 - C9 Fraction	---	20	µg/L	<20
EP-080: BTEX				
Benzene	71-43-2	5	µg/L	<5
Toluene	108-88-3	5	µg/L	<5
Ethylbenzene	100-41-4	5	µg/L	<5
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10
ortho-Xylene	95-47-6	5	µg/L	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH)				
C9 - C16 Fraction	---	500	µg/L	<500
C17 - C35 Fraction	---	500	µg/L	<500
C6 - C8 Fraction	---	20	µg/L	<20
EP-075B: Polyaromatic Hydrocarbons (PAHs)				
Naphthalene	91-20-3	2	µg/L	<2
Acenaphthylene	208-96-8	2	µg/L	<2
Acenaphthene	83-32-9	2	µg/L	<2
Fluorene	86-73-7	2	µg/L	<2
Phenanthrene	85-01-8	2	µg/L	<2
Anthracene	120-12-7	2	µg/L	<2
Fluoranthene	206-44-0	2	µg/L	<2
Pyrene	129-00-0	2	µg/L	<2
Chrysene	218-01-9	2	µg/L	<2
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4
EP-080S: TPH(Volatile)/BTEX Surrogate				
Dibromofluoromethane	1868-53-7	0.1	%	117
Toluene-D8	2037-26-5	0.1	%	103
4-Bromofluorobenzene	460-00-4	0.1	%	92.8
Dibromofluoromethane	1868-53-7	0.1	%	117
Toluene-D8	2037-26-5	0.1	%	103
4-Bromofluorobenzene	460-00-4	0.1	%	92.8
EP-075S: Acid Extractable Surrogates				
2-Fluorophenol	367-12-4	0.1	%	40.6
Phenol-d6	13127-88-3	0.1	%	28.8
2,4,6-Trifluorophenol	118-79-6	0.1	%	25.1

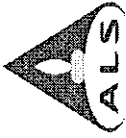


Sub-Matrix: GROUNDWATER		Client sample ID		AC-02 GW_0.87m BGL	
		Client sampling date / time		11-JUL-2008 15:30	
Compound	CAS Number	LOR	Unit	HK0810947-004	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	36.7	
2-Fluorobiphenyl	321-60-8	0.1	%	44.4	
4-Terphenyl-d14	1718-51-0	0.1	%	88.4	
				Surrogate control limits listed at end of this report.	



Sub-Matrix: SOIL		Client sample ID		AC-06_1.00m BBC	
		Client sampling date / time		11-JUL-2008 11:20	
Compound	CAS Number	LOR	Unit	HK0810947-001	
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)		—	0.1	%	19.2
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	—	50	mg/kg		<50
C15 - C28 Fraction	—	100	mg/kg		<100
C29 - C36 Fraction	—	100	mg/kg		<100
C6 - C9 Fraction	—	2	mg/kg		<2
EP-080: BTEX					
Benzene	71-43-2	0.5	mg/kg		<0.5
Toluene	108-88-3	0.5	mg/kg		<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	—	200	mg/kg		<200
C17 - C35 Fraction	—	500	mg/kg		<500
C6 - C8 Fraction	—	5	mg/kg		<5
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	0.5	mg/kg		<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%		87.0
Toluene-D8	2037-26-5	0.1	%		93.9
4-Bromofluorobenzene	460-00-4	0.1	%		107
					Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



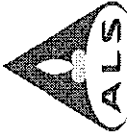
Sub-Matrix: SOIL		Client sample ID		AC-06_1.00m BBC	
		Client sampling date / time		11-JUL-2008 11:20	
		CAS Number	LOR	Unit	HK0810947-001
Surrogate control limits listed at end of this report.					
EP-080S: TPH(Volatile)/BTX Surrogate - Continued					
Dibromofluoromethane		1868-53-7	0.1	%	87.0
Toluene-D8		2037-26-5	0.1	%	93.9
4-Bromofluorobenzene		480-00-4	0.1	%	107
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol		367-12-4	0.1	%	65.5
Phenol-d6		13127-88-3	0.1	%	65.0
2,4,6-Tribromophenol		118-79-6	0.1	%	52.5
Surrogate control limits listed at end of this report.					
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5		4165-60-0	0.1	%	65.6
2-Fluorobiphenyl		321-60-8	0.1	%	63.3
4-Terphenyl-d14		1718-51-0	0.1	%	96.3
Surrogate control limits listed at end of this report.					



Sub-Matrix: WATER		Client sample ID		FIELD BLANK (4)	EQUIPMENT BLANK (4)	TRIP BLANK (4)
		Client sampling date / time		11-JUL-2008 11:20	11-JUL-2008 13:30	11-JUL-2008 16:00
Compound	CAS Number	LOR	Unit	HK0810947-002	HK0810947-003	HK0810947-005
EP-071: Total Petroleum Hydrocarbons (TPH)						
C10 - C14 Fraction	---	50	µg/L	<50	<50	---
C15 - C28 Fraction	---	100	µg/L	<100	<100	---
C29 - C36 Fraction	---	50	µg/L	<50	<50	---
C6 - C9 Fraction	---	20	µg/L	<20	<20	<20
EP-080: BTEX						
Benzene	71-43-2	5	µg/L	<5	<5	<5
Toluene	108-88-3	5	µg/L	<5	<5	<5
Ethylbenzene	100-41-4	5	µg/L	<5	<5	<5
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	<10	<10
ortho-Xylene	95-47-6	5	µg/L	<5	<5	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH)						
C9 - C16 Fraction	---	500	µg/L	<500	<500	---
C17 - C35 Fraction	---	500	µg/L	<500	<500	---
C6 - C8 Fraction	---	20	µg/L	<20	<20	<20
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	91-20-3	2	µg/L	<2	<2	---
Acenaphthylene	208-96-8	2	µg/L	<2	<2	---
Acenaphthene	83-32-9	2	µg/L	<2	<2	---
Fluorene	86-73-7	2	µg/L	<2	<2	---
Phenanthrene	85-01-8	2	µg/L	<2	<2	---
Anthracene	120-12-7	2	µg/L	<2	<2	---
Fluoranthene	206-44-0	2	µg/L	<2	<2	---
Pyrene	129-00-0	2	µg/L	<2	<2	---
Chrysene	218-01-9	2	µg/L	<2	<2	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	---
EP-080S: TPH(Volatile)/BTEX Surrogate						
Dibromofluoromethane	1868-53-7	0.1	%	117	117	116
Toluene-D8	2037-26-5	0.1	%	103	103	102
4-Bromofluorobenzene	460-00-4	0.1	%	92.5	92.6	92.5
Dibromofluoromethane	1868-53-7	0.1	%	117	117	116
Toluene-D8	2037-26-5	0.1	%	103	103	102
4-Bromofluorobenzene	460-00-4	0.1	%	92.5	92.6	92.5
EP-075S: Acid Extractable Surrogates						
2-Fluorophenol	367-12-4	0.1	%	27.9	33.7	---
Phenol-d6	13127-88-3	0.1	%	30.6	22.1	---
2,4,6-Tribromophenol	118-79-6	0.1	%	21.1	21.4	---

Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.

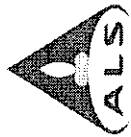


Sub-Matrix: WATER		Client sample ID		FIELD BLANK (4)	EQUIPMENT BLANK (4)	TRIP BLANK (4)
		Client sampling date / time		11-JUL-2008 11:20	11-JUL-2008 13:30	11-JUL-2008 16:00
		CAS Number	LOR	Unit	HK0810947-002	HK0810947-003
EP-075T: Base/Neutral Extractable Surrogates						
Nitrobenzene -d5	4165-60-0	0.1	%	41.9	35.8	---
2-Fluorobiphenyl	321-60-8	0.1	%	49.4	46.1	---
4-Terphenyl-d14	1718-51-0	0.1	%	94.7	84.0	---
				Surrogate control limits listed at end of this report.		



Laboratory Duplicate (DUP) Report

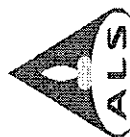
Matrix: SOIL		Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EAJED: Physical and Aggregate Properties (QC Lot: 705303)								
HK0810911-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	19.2	19.2	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)								
HK0810427-001	Anonymous	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: 699395)								
HK0810427-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 699395)								
HK0810427-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
			108-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 704959)								
HK0810947-001	AC-06_1.00m BBC	C9 - C16 Fraction	—	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	—	500	mg/kg	<500	<500	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 704962)								
HK0810947-001	AC-06_1.00m BBC	C6 - C8 Fraction	—	5	mg/kg	<5	<5	0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 703699)								
HK0810697-001	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	58-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					
Matrix: WA TER								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)



Matrix: WATER									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699386)									
HK0810427-006	Anonymous	C15 - C28 Fraction	—	100	µg/L	<100	<100	0.0	
		C10 - C14 Fraction	—	50	µg/L	<50	<50	0.0	
		C29 - C36 Fraction	—	50	µg/L	<50	<50	0.0	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705479)									
HK0810947-002	FIELD BLANK (4)	C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	
EP-080: BTEX (QC Lot: 705479)	FIELD BLANK (4)	meta- & para-Xylene	108-38-3	10	µg/L	<10	<10	0.0	
			106-42-3						
			71-43-2	5	µg/L	<5	<5	0.0	
			108-88-3	5	µg/L	<5	<5	0.0	
			100-41-4	5	µg/L	<5	<5	0.0	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 705480)	FIELD BLANK (4)	ortho-Xylene	95-47-6	5	µg/L	<5	<5	0.0	
HK0810947-002		C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02	0.0	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 699387)									
HK0810427-006	Anonymous	Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	
		Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	
		Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	
		Fluorene	86-73-7	2	µg/L	<2	<2	0.0	
		Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	
		Anthracene	120-12-7	2	µg/L	<2	<2	0.0	
		Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	
		Pyrene	129-00-0	2	µg/L	<2	<2	0.0	
		Chrysene	218-01-9	2	µg/L	<2	<2	0.0	
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	<4	0.0	
			207-08-9						

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

Matrix: SOIL										Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method Blank (MB) Report										Spike Recovery (%)					
Method/Compound	CAS Number	LOR	Unit	Result	Concentration	Spike	LCS	DCS	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)															
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	69.7	69.7	—	47	132	—	—	—	—	—
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	65.3	65.3	—	46	126	—	—	—	—	—
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	61.6	61.6	—	37	122	—	—	—	—	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699395)															
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	86.2	86.2	—	58	128	—	—	—	—	—
EP-080: BTEX (QC Lot: 699395)															
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	85.9	—	66	127	—	—	—	—	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	89.4	—	75	118	—	—	—	—	—



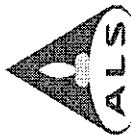
Matrix: SOIL	Method Blank (MB) Report					Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
	Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)			RPDs (%)		
							LCS	DCS	Low	High	Value	Control Limit
EP-080: BTEX (QCLot: 699395) - continued												
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---	---	87	115	---	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---	---	87	116	---	---
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---	---	83	116	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 704959)												
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	81.2	---	---	34	123	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	81.8	---	---	27	132	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 704962)												
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	79.8	---	---	63	135	---	---
EP-076B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 703699)												
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	84.7	---	---	57	98	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	81.5	---	---	63	99	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	84.8	---	---	62	102	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	---	---	62	109	---	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	86.0	---	---	66	100	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	84.5	---	---	61	101	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.1	---	---	73	105	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.9	---	---	73	105	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	89.0	---	---	45	113	---	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	92.5	---	---	65	112	---	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	---	---	---	---	---	---	---	---
	207-08-9			---	0.50 mg/kg	91.5	---	---	71	107	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	90.0	---	---	51	109	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.8	---	---	46	119	---	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	99.7	---	---	62	113	---	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	92.8	---	---	58	117	---	---
Matrix: WATER												
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	DCS	Low	High	Value	Control Limit	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699386)												
C10 - C14 Fraction	---	50	µg/L	<50	150 µg/L	85.0	---	---	37	129	---	---
C15 - C28 Fraction	---	100	µg/L	<100	350 µg/L	82.3	---	---	39	128	---	---
C29 - C36 Fraction	---	50	µg/L	<50	300 µg/L	66.0	---	---	15	137	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 705479)												
C6 - C9 Fraction	---	20	µg/L	<20	200 µg/L	100	---	---	78	126	---	---
EP-080: BTEX (QCLot: 705479)												
Benzene	71-43-2	2	µg/L	<2	10 µg/L	102	---	---	85	109	---	---
Toluene	108-88-3	2	µg/L	<2	10 µg/L	96.6	---	---	76	116	---	---
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	102	---	---	79	116	---	---



Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)		Value	RPDs (%)
									Low	High		Control Limit
EP-080: BTEX (QCLot: 705479) - continued												
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	104	—	—	85	112	—	—
	106-42-3											
ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	104	—	—	79	115	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 704958)												
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.25 mg/L	69.4	—	—	50	130	—	—
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	77.2	—	—	50	130	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 705480)												
C6 - C8 Fraction	—	0.02	mg/L	<0.02	—	—	—	—	—	—	—	—
				—	0.15 mg/L	103	—	—	50	130	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 699387)												
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	70.0	—	—	42	105	—	—
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	70.1	—	—	44	108	—	—
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	64.1	—	—	41	108	—	—
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	68.9	—	—	52	104	—	—
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	75.5	—	—	60	105	—	—
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	74.0	—	—	58	106	—	—
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	86.9	—	—	67	105	—	—
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	86.4	—	—	62	109	—	—
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	90.4	—	—	63	109	—	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	89.8	—	—	34	130	—	—
	207-08-9											

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

Matrix: SOIL			Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)		RPDs (%)		
								Low	High	Value	Control Limit	
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)												
HK0810427-002	Anonymous	C10 - C14 Fraction	---	16 mg/kg	50.8	---	---	50	130	---	---	
		C15 - C28 Fraction	---	53 mg/kg	59.5	---	---	50	130	---	---	
		C29 - C36 Fraction	---	45 mg/kg	58.6	---	---	50	130	---	---	
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)												
HK0810427-002	Anonymous	C6 - C9 Fraction	---	4 mg/kg	72.3	---	---	50	130	---	---	
EP-080: BTEX (QCLot: 699395)												
HK0810427-002	Anonymous	Benzene	71-43-2	0.2 mg/kg	72.5	---	---	50	130	---	---	
		Toluene	108-88-3	0.2 mg/kg	75.2	---	---	50	130	---	---	
		Ethylbenzene	100-41-4	0.2 mg/kg	83.8	---	---	50	130	---	---	
		meta- & para-Xylene	108-38-3	0.4 mg/kg	86.9	---	---	50	130	---	---	
			106-42-3									



Page Number : 13 of 14
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810947

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report					
			Spike Concentration	CAS Number	MSD	Recovery Limits (%)	Value	Control Limit
EP-080: BTEX (QCLOT: 699395) - continued								
HK0810427-002	Anonymous	ortho-Xylene	0.2 mg/kg	95-47-6	82.4	50	130	---

Surrogate Control Limits

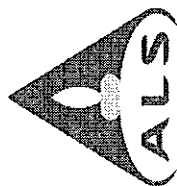
Sub-Matrix: GROUNDWATER		CAS Number	Recovery Limits (%)	
Compound			Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate				
Dibromofluoromethane	1868-53-7		86	118
Toluene-D8	2037-26-5		88	110
4-Bromofluorobenzene	460-00-4		86	115
Dibromofluoromethane	1868-53-7		86	118
Toluene-D8	2037-26-5		88	110
4-Bromofluorobenzene	460-00-4		86	115
EP-075S: Acid Extractable Surrogates				
2-Fluorophenol	367-12-4		21	100
Phenol-d6	13127-88-3		20	94
2,4,6-Tribromophenol	118-79-6		20	123
EP-075T: Base/Neutral Extractable Surrogates				
Nitrobenzene -d5	4165-60-0		35	114
2-Fluorobiphenyl	321-60-8		43	116
4-Terphenyl-d14	1718-51-0		33	141
Sub-Matrix: SOIL				
Compound		CAS Number	Recovery Limits (%)	
			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
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



Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	21	100
Phenol-d6	13127-88-3	20	94
2,4,6-Tribromophenol	118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	35	114
2-Fluorobiphenyl	321-60-8	43	116
4-Terphenyl-d14	1718-51-0	33	141

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

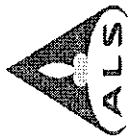
Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact Address	: MR VINCENT AU-YEUNG 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Contact Address	: Wong Wai Man, Alice 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Work Order	: HK0810756
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Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---		
Order number	: ---			Date received	: 09-JUL-2008
C-O-C number	: H002296			Date of issue	: 13-AUG-2008
Site	: KAI TAK			No. of samples	: Received : 2
					: Analysed : 2

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810756

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810756 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0810756 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.

Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

Sample(s) were received in an ambient condition.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".

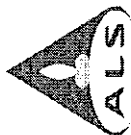


Page Number : 3 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810756

Analytical Results

Sub-Matrix: SOIL

Client sample ID		Client sampling date / time		Unit	
AC-02_5.50-5.95m		AC-02_6.00-6.45m		BBC	
09-JUL-2008 09:40		09-JUL-2008 10:15		HK0810756-001	
CAS Number		LOR		Unit	
EAIED: Physical and Aggregate Properties		EA055: Moisture Content (dried @ 103° C)		15.4	
EP-071: Total Petroleum Hydrocarbons (TPH)		EP-080: BTEX			
C10 - C14 Fraction	50	mg/kg	<50		<50
C15 - C28 Fraction	100	mg/kg	<100		<100
C29 - C36 Fraction	100	mg/kg	<100		<100
C6 - C9 Fraction	2	mg/kg	<2		<2
Benzene	71-43-2	0.5	mg/kg		<0.5
Toluene	108-88-3	0.5	mg/kg		<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)		EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)			
C9 - C16 Fraction	200	mg/kg	<200		<200
C17 - C35 Fraction	500	mg/kg	<500		<500
C6 - C8 Fraction	5	mg/kg	<5		<5
Naphthalene	91-20-3	0.5	mg/kg		<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg		<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate		Surrogate control limits listed at end of this report.			
Dibromofluoromethane	1868-53-7	0.1	%		85.2
Toluene-D8	2037-26-5	0.1	%		92.7



Sub-Matrix: SOIL		Client sample ID		AC-02_5.50-5.95m		AC-02_6.00-6.45m	
		Client sampling date / time		BBC		BBC	
		LOR		Unit		Unit	
Compound	CAS Number	LOR	Unit	HK0810756-001	HK0810756-002	HK0810756-001	HK0810756-002
EP-080S: TPH(Volatile)/BTX Surrogate - Continued							
4-Bromofluorobenzene	460-00-4	0.1	%	105	105	105	105
Dibromofluoromethane	1868-53-7	0.1	%	83.5	85.2	85.2	85.2
Toluene-D8	2037-26-5	0.1	%	91.7	92.7	92.7	92.7
4-Bromofluorobenzene	460-00-4	0.1	%	105	105	105	105
EP-075S: Acid Extractable Surrogates							
2-Fluorophenol	367-12-4	0.1	%	55.3	56.6	56.6	56.6
Phenol-d6	13127-88-3	0.1	%	54.6	59.2	59.2	59.2
2,4,6-Tribromophenol	118-79-6	0.1	%	54.3	56.7	56.7	56.7
EP-075T: Base/Neutral Extractable Surrogates							
Nitrobenzene -d5	4165-60-0	0.1	%	57.7	59.0	59.0	59.0
2-Fluorobiphenyl	321-60-8	0.1	%	64.1	62.6	62.6	62.6
4-Terphenyl-d14	1718-51-0	0.1	%	93.1	91.7	91.7	91.7

Surrogate control limits listed at end of this report.

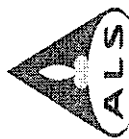
Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



Laboratory Duplicate (DUP) Report

Matrix: SOIL		Method: Compound		Laboratory Duplicate (DUP) Report		RPD (%)
Laboratory sample ID	Client sample ID	CAS Number	LOR	Unit	Original Result	Duplicate Result
EAJED: Physical and Aggregate Properties (QC Lot: 704155)						
HK0810697-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	0.1	%	22.5	22.5
HK0810810-004	Anonymous	EA055: Moisture Content (dried @ 103°C)	0.1	%	15.7	16.4
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)						
HK0810427-001	Anonymous	C15 - C28 Fraction	100	mg/kg	<100	<100
		C29 - C36 Fraction	100	mg/kg	<100	<100
		C10 - C14 Fraction	50	mg/kg	<50	<50
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699395)						
HK0810427-001	Anonymous	C6 - C9 Fraction	2	mg/kg	<2	<2
EP-080: BTEX (QC Lot: 699395)						
HK0810427-001	Anonymous	Benzene	71-43-2	mg/kg	<0.2	<0.2
		Toluene	108-88-3	mg/kg	<0.2	<0.2
		Ethylbenzene	100-41-4	mg/kg	<0.2	<0.2
		ortho-Xylene	95-47-6	mg/kg	<0.2	<0.2
		meta- & para-Xylene	108-38-3	mg/kg	<0.4	<0.4
			106-42-3			
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 703692)						
HK0810697-001	Anonymous	C6 - C8 Fraction	5	mg/kg	<5	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 703698)						
HK0810697-001	Anonymous	C9 - C16 Fraction	200	mg/kg	<200	<200
		C17 - C35 Fraction	500	mg/kg	<500	<500
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 703699)						
HK0810697-001	Anonymous	Naphthalene	91-20-3	mg/kg	<0.5	<0.5
		Acenaphthylene	208-96-8	mg/kg	<0.5	<0.5
		Acenaphthene	83-32-9	mg/kg	<0.5	<0.5
		Fluorene	86-73-7	mg/kg	<0.5	<0.5
		Phenanthrene	85-01-8	mg/kg	<0.5	<0.5
		Anthracene	120-12-7	mg/kg	<0.5	<0.5
		Fluoranthene	206-44-0	mg/kg	<0.5	<0.5
		Pyrene	129-00-0	mg/kg	<0.5	<0.5
		Benz(a)anthracene	56-55-3	mg/kg	<0.5	<0.5
		Chrysene	218-01-9	mg/kg	<0.5	<0.5
		Benzo(a)pyrene	50-32-8	mg/kg	<0.5	<0.5
		Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	<0.5	<0.5
		Dibenz(a,h)anthracene	53-70-3	mg/kg	<0.5	<0.5
		Benzo(g,h,i)perylene	191-24-2	mg/kg	<0.5	<0.5
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	mg/kg	<1	<1
			207-08-9			



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

Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report			
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	DCS
Matrix: SOIL							
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)							
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	69.7	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	65.3	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	61.6	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)							
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	86.2	---
EP-080: BTEX (QCLot: 699395)							
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---
ortho-Xylene	106-42-3						
	95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703692)							
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	91.2	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703698)							
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	62.2	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	78.3	---
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 703699)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	84.7	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	81.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	84.8	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	86.0	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	84.5	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.1	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	90.9	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	89.0	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	92.5	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	---	---	---
	207-06-9						
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.50 mg/kg	91.5	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	90.0	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	93.8	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	99.7	---

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

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



Page Number : 7 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0810756

Matrix: SOIL

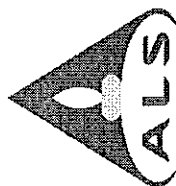
Laboratory sample ID	Client sample ID	Method: Compound		
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)				
HK0810427-002	Anonymous	C10 - C14 Fraction		
		C15 - C28 Fraction		
		C29 - C36 Fraction		
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)				
HK0810427-002	Anonymous	C6 - C9 Fraction		
EP-080: BTEX (QCLot: 699395)				
HK0810427-002	Anonymous	Benzene		
		Toluene		
		Ethylbenzene		
		meta- & para-Xylene		
ortho-Xylene				
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703692)				
HK0810697-002	Anonymous	C6 - C8 Fraction		
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703698)				
HK0810697-002	Anonymous	C9 - C16 Fraction		
		C17 - C35 Fraction		
Surrogate Control Limits				
Sub-Matrix: SOIL	Compound	CAS Number	Recovery Limits (%)	
			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
	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	13127-98-3	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

Surrogate Control Limits

Sub-Matrix: SOIL		CAS Number	Recovery Limits (%)	
Compound			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
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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

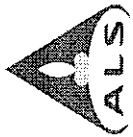
Client	: CIVIL ENGINEERING AND DEVELOPMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: DEPARTMENT	Contact	: Wong Wai Man, Alice	Work Order	: HK0810697
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Project	: ---	Quote number	: +852 2610 2021		
Order number	: KLN_2008_1			Date received	: 08-JUL-2008
C-O-C number	: ---			Date of issue	: 13-AUG-2008
Site	: H002295			No. of samples	: - Received : 2
	: KAI TAK				- Analysed : 2

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810697

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810697 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0810697 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

Sample(s) were received in an ambient condition.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL

Sub-Matrix: SOIL		Client sample ID		AC-02_1.00m BBC	AC-02_2.50-2.82m BBC
		Client sampling date / time		08-JUL-2008 09:30	08-JUL-2008 15:00
		CAS Number	LOR	Unit	HK0810697-001
Compound					HK0810697-002
EA/JED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)					
		—	0.1	%	17.0
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction		—	50	mg/kg	<50
C15 - C28 Fraction		—	100	mg/kg	<100
C29 - C36 Fraction		—	100	mg/kg	<100
C6 - C9 Fraction		—	2	mg/kg	<2
EP-080: BTEX					
Benzene		71-43-2	0.5	mg/kg	<0.5
Toluene		108-88-3	0.5	mg/kg	<0.5
Ethylbenzene		100-41-4	0.5	mg/kg	<0.5
meta- & para-Xylene		108-38-3 106-42-3	0.5	mg/kg	<0.5
ortho-Xylene		95-47-6	0.5	mg/kg	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction		—	200	mg/kg	<200
C17 - C35 Fraction		—	500	mg/kg	<500
C6 - C8 Fraction		—	5	mg/kg	<5
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene		91-20-3	0.5	mg/kg	<0.5
Acenaphthylene		208-96-8	0.5	mg/kg	<0.5
Acenaphthene		83-32-9	0.5	mg/kg	<0.5
Fluorene		86-73-7	0.5	mg/kg	<0.5
Phenanthrene		85-01-8	0.5	mg/kg	<0.5
Anthracene		120-12-7	0.5	mg/kg	<0.5
Fluoranthene		206-44-0	0.5	mg/kg	<0.5
Pyrene		129-00-0	0.5	mg/kg	<0.5
Benz(a)anthracene		56-55-3	0.5	mg/kg	<0.5
Chrysene		218-01-9	0.5	mg/kg	<0.5
Benzo(b) & Benzo(k)fluoranthene		205-99-2 207-08-9	1	mg/kg	<1
Benzo(a)pyrene		50-32-8	0.5	mg/kg	<0.5
Indeno(1,2,3-cd)pyrene		193-39-5	0.5	mg/kg	<0.5
Dibenz(a,h)anthracene		53-70-3	0.5	mg/kg	<0.5
Benzo(g,h,i)perylene		191-24-2	0.5	mg/kg	<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane		1868-53-7	0.1	%	86.8
Toluene-D8		2037-26-5	0.1	%	93.2
					Surrogate control limits listed at end of this report.

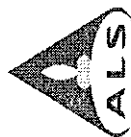


Sub-Matrix: SOIL		Client sample ID		AC-02_1.00m BBC	AC-02_2.50-2.82m BBC	
		Client sampling date / time		08-JUL-2008 09:30	08-JUL-2008 15:00	
		CAS Number		HK0810697-001	HK0810697-002	
Compound		LOR	Unit			
EP-080S: TPH(Volatile)/BTEx Surrogate - Continued						
4-Bromofluorobenzene	460-00-4	0.1	%	108	107	Surrogate control limits listed at end of this report.
Dibromofluoromethane	1868-53-7	0.1	%	94.4	86.8	
Toluene-D8	2037-26-5	0.1	%	92.2	93.2	
4-Bromofluorobenzene	460-00-4	0.1	%	108	107	Surrogate control limits listed at end of this report.
2-Fluorophenol	367-12-4	0.1	%	58.6	63.4	
Phenol-d6	13127-88-3	0.1	%	55.7	58.2	
2,4,6-Tribromophenol	118-79-6	0.1	%	50.7	44.1	Surrogate control limits listed at end of this report.
Nitrobenzene -d5	4165-60-0	0.1	%	62.6	65.8	
2-Fluorobiphenyl	321-60-8	0.1	%	63.1	64.5	
4-Terphenyl-d14	1718-51-0	0.1	%	98.7	85.9	



Laboratory Duplicate (DUP) Report

Matrix: SOIL		Method: Compound		Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EAJED: Physical and Aggregate Properties (QC Lot: 704155)							
HK0810697-001	AC-02_1.00m BBC	—	0.1	%	22.5	22.5	0.0
HK0810810-004	Anonymous	—	0.1	%	15.7	16.4	4.2
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)							
HK0810427-001	Anonymous	—	100	mg/kg	<100	<100	0.0
		—	100	mg/kg	<100	<100	0.0
		—	50	mg/kg	<50	<50	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699395)							
HK0810427-001	Anonymous	—	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 699395)							
HK0810427-001	Anonymous	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
		106-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 703692)							
HK0810697-001	AC-02_1.00m BBC	—	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 703698)							
HK0810697-001	AC-02_1.00m BBC	—	200	mg/kg	<200	<200	0.0
		—	500	mg/kg	<500	<500	0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 699391)							
HK0810427-001	Anonymous	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		86-73-7	0.5	mg/kg	<0.5	<0.5	0.0
		85-01-8	0.5	mg/kg	<0.5	<0.5	0.0
		120-12-7	0.5	mg/kg	<0.5	<0.5	0.0
		206-44-0	0.5	mg/kg	<0.5	<0.5	0.0
		129-00-0	0.5	mg/kg	<0.5	<0.5	0.0
		56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		218-01-9	0.5	mg/kg	<0.5	<0.5	0.0
		50-32-8	0.5	mg/kg	<0.5	<0.5	0.0
		193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		205-99-2	1	mg/kg	<1	<1	0.0
		207-08-9					

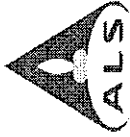


Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report									
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)												
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	69.7	---	---	47	132	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	65.3	---	---	46	126	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	61.6	---	---	37	122	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)												
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	86.2	---	---	58	126	---	---
EP-080: BTEX (QCLot: 699395)												
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	---	---	66	127	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	---	---	75	118	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---	---	87	115	---	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---	---	87	116	---	---
ortho-Xylene	106-42-3	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---	---	83	116	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703692)												
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	91.2	---	---	25	135	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703698)												
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	62.2	---	---	34	123	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	78.3	---	---	27	132	---	---
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 699391)												
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	70.0	---	---	57	98	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	72.0	---	---	63	99	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	76.0	---	---	62	102	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.9	---	---	62	109	---	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.3	---	---	66	100	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	---	---	61	101	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	78.9	---	---	73	105	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	79.3	---	---	73	105	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	---	---	45	113	---	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.1	---	---	65	112	---	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	---	0.50 mg/kg	82.1	---	---	71	107	---	---
	207-08-9			<1	---	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.0	---	---	51	109	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.6	---	---	46	119	---	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	85.1	---	---	62	113	---	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	88.2	---	---	58	117	---	---

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

Matrix: SOIL	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report
--------------	---



Matrix: SOIL

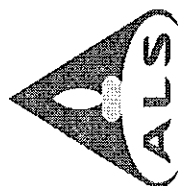
Matrix: SOIL												
Laboratory sample ID			Client sample ID		Method: Compound	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
			CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)		RPDs (%)		
								Low	High	Value	Control Limit	
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)												
HK0810427-002			Anonymous		C10 - C14 Fraction	—	16 mg/kg	50.8	—	50	130	—
					C15 - C28 Fraction	—	53 mg/kg	59.5	—	50	130	—
					C29 - C36 Fraction	—	45 mg/kg	58.6	—	50	130	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)												
HK0810427-002			Anonymous		C6 - C9 Fraction	—	4 mg/kg	72.3	—	50	130	—
EP-080: BTEX (QCLot: 699395)												
HK0810427-002			Anonymous		Benzene	71-43-2	0.2 mg/kg	72.5	—	50	130	—
					Toluene	108-88-3	0.2 mg/kg	75.2	—	50	130	—
					Ethylbenzene	100-41-4	0.2 mg/kg	83.8	—	50	130	—
					meta- & para-Xylene	108-38-3	0.4 mg/kg	86.9	—	50	130	—
					ortho-Xylene	106-42-3	0.2 mg/kg	82.4	—	50	130	—
						95-47-6			—			
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703692)												
HK0810697-002			AC-02_2.50-2.82m BBC		C6 - C8 Fraction	—	3 mg/kg	82.6	—	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 703698)												
HK0810697-002			AC-02_2.50-2.82m BBC		C9 - C16 Fraction	—	31 mg/kg	59.3	—	50	130	—
					C17 - C35 Fraction	—	75 mg/kg	59.5	—	50	130	—

Surrogate Control Limits

Sub-Matrix: SOIL		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	
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	4165-80-0	23	120	
2-Fluorobiphenyl	321-60-8	30	115	
4-Terphenyl-d14	1718-51-0	20	137	

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CERTIFICATE OF ANALYSIS

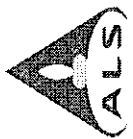
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Contact Address	: MR VINCENT AU-YEUNG 7/F, EMPIRE CENTRE 68 MODY ROAD, TSMI SHA TSUI KOWLOON HONG KONG	Contact Address	: Wong Wai Man, Alice 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Work Order	: HK0810542
E-mail	: vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 04-JUL-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002294			No. of samples	: Received : 1
Site	: KAI TAK				: Analysed : 1

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Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810542 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

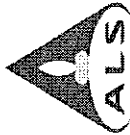
Specific comments for Work Order HK0810542 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in an ambient condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL

Client sample ID
AC-04_3.40-3.85m

Client sampling date / time
04-JUL-2008 09:20
BBC
HK0810542-001

Compound	CAS Number	LOR	Unit	
EA/ED: Physical and Aggregate Properties				
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	20.9
EP-071: Total Petroleum Hydrocarbons (TPH)				
C10 - C14 Fraction	—	50	mg/kg	<50
C15 - C28 Fraction	—	100	mg/kg	<100
C29 - C36 Fraction	—	100	mg/kg	<100
C6 - C9 Fraction	—	2	mg/kg	<2
EP-080: BTEX				
Benzene	71-43-2	0.5	mg/kg	<0.5
Toluene	108-88-3	0.5	mg/kg	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)				
C9 - C16 Fraction	—	200	mg/kg	<200
C17 - C35 Fraction	—	500	mg/kg	<500
C6 - C8 Fraction	—	5	mg/kg	<5
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)				
Naphthalene	91-20-3	0.5	mg/kg	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate				
Dibromofluoromethane	1868-53-7	0.1	%	81.5
Toluene-D8	2037-26-5	0.1	%	91.9

Surrogate control limits listed at end of this report.



Sub-Matrix: SOIL

Client sample ID : AC-04_3.40-3.85m

BBC

Client sampling date / time : 04-JUL-2008 09:20

CAS Number LOR Unit

HK0810542-001

Surrogate control limits listed at end of this report.

Compound

EP-080S: TPH(Volatile)/BTX Surrogate - Continued

4-Bromofluorobenzene 460-00-4 0.1 % 106

Dibromofluoromethane 1868-53-7 0.1 % 81.5

Toluene-D8 2037-26-5 0.1 % 91.9

4-Bromofluorobenzene 460-00-4 0.1 % 106

EP-075S: Acid Extractable Surrogates

2-Fluorophenol 367-12-4 0.1 % 56.2

Phenol-d6 13127-88-3 0.1 % 53.7

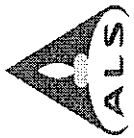
2,4,6-Tribromophenol 118-79-6 0.1 % 72.9

EP-075T: Base/Neutral Extractable Surrogates

Nitrobenzene -d5 4165-60-0 0.1 % 56.2

2-Fluorobiphenyl 321-60-8 0.1 % 66.8

4-Terphenyl-d14 1718-51-0 0.1 % 64.7



Laboratory Duplicate (DUP) Report

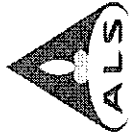
Matrix: SOIL		Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	Method: Compound	LOR	Unit	RPD (%)
EAJED: Physical and Aggregate Properties (QC Lot: 699239)					
HK0810427-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	%	20.6
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)					
HK0810427-001	Anonymous	C15 - C28 Fraction	100	mg/kg	<100
		C29 - C36 Fraction	100	mg/kg	<100
		C10 - C14 Fraction	50	mg/kg	<50
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699395)					
HK0810427-001	Anonymous	C6 - C9 Fraction	2	mg/kg	<2
EP-080: BTEX (QC Lot: 699395)					
HK0810427-001	Anonymous	Benzene	71-43-2	mg/kg	<0.2
		Toluene	108-88-3	mg/kg	<0.2
		Ethylbenzene	100-41-4	mg/kg	<0.2
		ortho-Xylene	95-47-6	mg/kg	<0.2
		meta- & para-Xylene	108-38-3	mg/kg	<0.2
			108-42-3	mg/kg	<0.4
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699424)					
HK0810338-001	Anonymous	C6 - C8 Fraction	5	mg/kg	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699425)					
HK0810338-001	Anonymous	C9 - C16 Fraction	200	mg/kg	<200
		C17 - C35 Fraction	500	mg/kg	<500
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 699391)					
HK0810427-001	Anonymous	Naphthalene	91-20-3	mg/kg	<0.5
		Acenaphthylene	208-96-8	mg/kg	<0.5
		Acenaphthene	83-32-9	mg/kg	<0.5
		Fluorene	86-73-7	mg/kg	<0.5
		Phenanthrene	85-01-8	mg/kg	<0.5
		Anthracene	120-12-7	mg/kg	<0.5
		Fluoranthene	206-44-0	mg/kg	<0.5
		Pyrene	129-00-0	mg/kg	<0.5
		Benz(a)anthracene	56-55-3	mg/kg	<0.5
		Chrysene	218-01-9	mg/kg	<0.5
		Benzo(a)pyrene	50-32-8	mg/kg	<0.5
		Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	<0.5
		Dibenz(a,h)anthracene	53-70-3	mg/kg	<0.5
		Benzo(g,h,i)perylene	191-24-2	mg/kg	<0.5
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	mg/kg	<0.5
			207-08-9	mg/kg	<1

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						
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)											
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	69.7	---	47	132	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	65.3	---	46	126	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	61.6	---	37	122	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)											
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	86.2	---	58	126	---	---
EP-080: BTEX (QCLot: 699395)											
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	---	66	127	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	---	75	118	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---	87	115	---	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---	87	116	---	---
ortho-Xylene	106-42-3	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---	83	116	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699424)											
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	77.2	---	25	135	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699425)											
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	87.1	---	34	123	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	75.5	---	27	132	---	---
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QCLot: 699391)											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	70.0	---	57	98	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	72.0	---	63	99	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	76.0	---	62	102	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.9	---	62	109	---	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.3	---	66	100	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	---	61	101	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	78.9	---	73	105	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	79.3	---	73	105	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	---	45	113	---	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.1	---	65	112	---	---
Benzo(b) & Benzo(k)fluoranthene	205-98-2	1.0	mg/kg	---	0.50 mg/kg	82.1	---	71	107	---	---
Benzo(a)pyrene	207-08-9	0.5	mg/kg	<1	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.0	---	51	109	---	---
Dibenz(a,h)anthracene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.6	---	46	119	---	---
Benzo(g,h,i)perylene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	85.1	---	62	113	---	---
	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	88.2	---	58	117	---	---

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

Matrix: SOIL									
Laboratory sample ID		Client sample ID		Method: Compound		Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report			
						Spike Concentration	Spike Recovery (%)		RPDs (%)
						CAS Number	Recovery Limits (%)		
							MS	MSD	High
									Low
									Value
									Control Limit
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Page Number : 7 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0810542

Matrix: SOIL

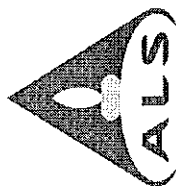
Laboratory sample ID		Client sample ID	Method: Compound	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report								
				CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Value	Control Limit	
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)		Anonymous	C10 - C14 Fraction	—	16 mg/kg	50.8	—	—	—	—	—	
HK0810427-002	C15 - C28 Fraction		—	53 mg/kg	59.5	—	—	50	130	—	—	
	C29 - C36 Fraction		—	45 mg/kg	58.6	—	—	50	130	—	—	
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)			C6 - C9 Fraction	—	4 mg/kg	72.3	—	—	50	130	—	—
EP-080: BTEX (QCLot: 699395)		Anonymous	Benzene	71-43-2	0.2 mg/kg	72.5	—	—	50	130	—	—
HK0810427-002	Toluene		108-88-3	0.2 mg/kg	75.2	—	—	50	130	—	—	
	Ethylbenzene		100-41-4	0.2 mg/kg	83.8	—	—	50	130	—	—	
	meta- & para-Xylene		108-38-3	0.4 mg/kg	86.9	—	—	50	130	—	—	
	ortho-Xylene		106-42-3	0.2 mg/kg	82.4	—	—	50	130	—	—	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699424)		Anonymous	C6 - C8 Fraction	—	3 mg/kg	61.8	—	—	50	130	—	—
HK0810462-001												
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699425)		Anonymous	C9 - C16 Fraction	—	31 mg/kg	83.9	—	—	50	130	—	—
HK0810462-001				C17 - C35 Fraction	—	75 mg/kg	72.7	—	—	50	130	—

Surrogate Control Limits

Sub-Matrix: SOIL		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
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	967-12-4	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

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CERTIFICATE OF ANALYSIS

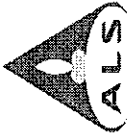
Client	: CIVIL ENGINEERING AND DEVELOPMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: DEPARTMENT	Contact	: Wong Wai Man, Alice	Work Order	: HK0810462
Address	: MR VINCENT AU-YEUNG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment No.	: 1
E-mail	: 68 MODY ROAD, TSIM SHA TSUI	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: KOWLOON HONG KONG	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: ---	Quote number	: ---		
Order number	: KLN_2008_1			Date received	: 03-JUL-2008
C-O-C number	: ---			Date of issue	: 13-AUG-2008
Site	: H002293			No. of samples	: Received : 1
	: KAI TAK				: Analysed : 1

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Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
Trading Name: **ALS Technichem (HK) Pty Ltd**
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A Campbell Brothers Limited Company



Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810462, Amendment 1

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810462_1.00 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0810462 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedited procedure EP-071.
Sample(s) were received in an ambient condition.

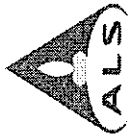
Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.
"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL

Client sample ID		Client sampling date / time		Unit	
AC-04_2.70-3.15m		BBC		HK0810462-001	
03-JUL-2008 15:45					
Compound	CAS Number	LOR	%	mg/kg	mg/kg
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103°					
C)					
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	---	50	mg/kg	<50	
C15 - C28 Fraction	---	100	mg/kg	<100	
C29 - C36 Fraction	---	100	mg/kg	<100	
C6 - C9 Fraction	---	2	mg/kg	<2	
EP-080: BTEX					
Benzene	71-43-2	0.5	mg/kg	<0.5	
Toluene	108-88-3	0.5	mg/kg	<0.5	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	---	200	mg/kg	<200	
C17 - C35 Fraction	---	500	mg/kg	<500	
C6 - C8 Fraction	---	5	mg/kg	<5	
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	0.5	mg/kg	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	80.2	
Toluene-D8	2037-26-5	0.1	%	90.8	
Surrogate control limits listed at end of this report.					

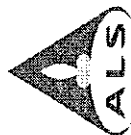


Sub-Matrix: SOIL		Client sample ID		AC-04_2.70-3.15m	
		Client sampling date / time		BBC	
		03-JUL-2008 15:45			
		HK0810462-001			
Compound	CAS Number	LOR	Unit	Surrogate control limits listed at end of this report.	
EP-080S: TPH(Volatile)/BTX Surrogate - Continued					
4-Bromofluorobenzene	460-00-4	0.1	%	107	
Dibromofluoromethane	1868-53-7	0.1	%	80.2	
Toluene-D8	2037-26-5	0.1	%	90.8	
4-Bromofluorobenzene	460-00-4	0.1	%	107	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	65.7	
Phenol-d6	13127-88-3	0.1	%	59.9	
2,4,6-Tribromophenol	118-79-6	0.1	%	68.5	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	65.0	
2-Fluorobiphenyl	321-60-8	0.1	%	71.3	
4-Terphenyl-d14	1718-51-0	0.1	%	50.9	
Surrogate control limits listed at end of this report.					



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 (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 698584)								
HK0810338-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	19.6	18.5	5.7
HK0810530-001	Anonymous	EA056: Moisture Content (dried @ 103°C)	—	0.1	%	9.7	8.7	10.4
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)								
HK0810427-001	Anonymous	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: 699395)								
HK0810427-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 699395)								
HK0810427-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
			106-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699424)								
HK0810338-001	Anonymous	C6 - C8 Fraction	—	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699425)								
HK0810338-001	Anonymous	C9 - C16 Fraction	—	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	—	500	mg/kg	<500	<500	0.0
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 699391)								
HK0810427-001	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					



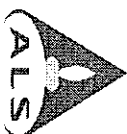
Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: SOIL		Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
		Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)													
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	69.7	—	—	—	47	132	—	—
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	65.3	—	—	—	46	126	—	—
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	61.6	—	—	—	37	122	—	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)													
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	86.2	—	—	—	58	126	—	—
EP-080: BTEX (QCLot: 699395)													
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	—	—	—	66	127	—	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	—	—	—	75	118	—	—
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	—	—	—	87	115	—	—
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	—	—	—	87	116	—	—
ortho-Xylene	106-42-3	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	—	—	—	83	116	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699424)													
C6 - C8 Fraction	—	5	mg/kg	<5	3 mg/kg	77.2	—	—	—	25	135	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699425)													
C9 - C16 Fraction	—	200	mg/kg	<200	31 mg/kg	87.1	—	—	—	34	123	—	—
C17 - C35 Fraction	—	500	mg/kg	<500	75 mg/kg	75.5	—	—	—	27	132	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 699391)													
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	70.0	—	—	—	57	98	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	72.0	—	—	—	63	99	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	76.0	—	—	—	62	102	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.9	—	—	—	62	109	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.3	—	—	—	66	100	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	—	—	—	61	101	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	78.9	—	—	—	73	105	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	79.3	—	—	—	73	105	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	—	—	—	45	113	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.1	—	—	—	65	112	—	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	—	0.50 mg/kg	82.1	—	—	—	71	107	—	—
	207-08-9			<1	—	—	—	—	—	—	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.0	—	—	—	51	109	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.6	—	—	—	46	119	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	85.1	—	—	—	62	113	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	88.2	—	—	—	58	117	—	—

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

Matrix: SOIL

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



Matrix: SOIL

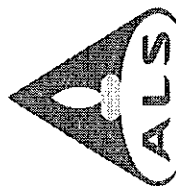
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	MS	MSD	Recovery Limits (%)	RPDs (%)	Control Limit
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)									
HK0810427-002		Anonymous							
		C10 - C14 Fraction	—	16 mg/kg	50.8	—	50	130	—
		C15 - C28 Fraction	—	53 mg/kg	59.5	—	50	130	—
		C29 - C36 Fraction	—	45 mg/kg	58.6	—	50	130	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)									
HK0810427-002		Anonymous							
		C6 - C9 Fraction	—	4 mg/kg	72.3	—	50	130	—
EP-080: BTEX (QCLot: 699395)									
HK0810427-002		Anonymous							
		Benzene	71-43-2	0.2 mg/kg	72.5	—	50	130	—
		Toluene	108-88-3	0.2 mg/kg	75.2	—	50	130	—
		Ethylbenzene	100-41-4	0.2 mg/kg	83.8	—	50	130	—
		meta- & para-Xylene	108-38-3	0.4 mg/kg	86.9	—	50	130	—
		ortho-Xylene	106-42-3	0.2 mg/kg	82.4	—	50	130	—
		95-47-6	—	0.2 mg/kg	82.4	—	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699424)									
HK0810462-001		AC-04_2-70-3:15m BBC	—	3 mg/kg	61.8	—	50	130	—
		C6 - C8 Fraction	—	—	—	—	—	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699425)									
HK0810462-001		AC-04_2-70-3:15m BBC	—	31 mg/kg	83.9	—	50	130	—
		C9 - C16 Fraction	—	75 mg/kg	72.7	—	50	130	—
		C17 - C35 Fraction	—	—	—	—	—	—	—

Surrogate Control Limits

Sub-Matrix: SOIL		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
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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

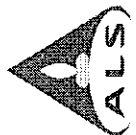
Client	: CIVIL ENGINEERING AND DEVELOPMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
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Project	: vincent.auyeung@maunsell.com.hk	Quote number	: ---		
Order number	: ---				
C-O-C number	: KLN_2008_1				
Site	: ---				
				Date received	: 02-JUL-2008
				Date of issue	: 13-AUG-2008
				No. of samples	: Received : 1
					: Analysed : 1

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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.

Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0810338

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810338 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

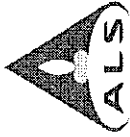
Specific comments for Work Order HK0810338 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedited procedure EP-071.

Sample(s) were received in an ambient condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

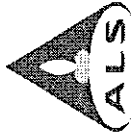
"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



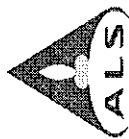
Analytical Results

Sub-Matrix: SOIL		Client sample ID	
		Client sampling date / time	
		AC-04_0.90m BBC	
		02-JUL-2008 15:45	
Compound	CAS Number	LOR	Unit
EA/ED: Physical and Aggregate Properties			
EA055: Moisture Content (dried @ 103° C)			
		0.1	%
19.6			
EP-071: Total Petroleum Hydrocarbons (TPH)			
C10 - C14 Fraction		50	mg/kg
C15 - C28 Fraction		100	mg/kg
C29 - C36 Fraction		100	mg/kg
C6 - C9 Fraction		2	mg/kg
<2			
EP-080: BTEX			
Benzene	71-43-2	0.5	mg/kg
Toluene	108-88-3	0.5	mg/kg
Ethylbenzene	100-41-4	0.5	mg/kg
meta- & para-Xylene	108-38-3	0.5	mg/kg
ortho-Xylene	95-47-6	0.5	mg/kg
<0.5			
<0.5			
<0.5			
<0.5			
<0.5			
EP-071HK: Total Petroleum Hydrocarbons (TPH)			
C9 - C16 Fraction		200	mg/kg
C17 - C35 Fraction		500	mg/kg
C6 - C8 Fraction		5	mg/kg
<5			
EP-075B: Polyaromatic Hydrocarbons (PAHs)			
Naphthalene	91-20-3	0.5	mg/kg
Acenaphthylene	208-96-8	0.5	mg/kg
Acenaphthene	83-32-9	0.5	mg/kg
Fluorene	86-73-7	0.5	mg/kg
Phenanthrene	85-01-8	0.5	mg/kg
Anthracene	120-12-7	0.5	mg/kg
Fluoranthene	206-44-0	0.5	mg/kg
Pyrene	129-00-0	0.5	mg/kg
Benz(a)anthracene	56-55-3	0.5	mg/kg
Chrysene	218-01-9	0.5	mg/kg
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg
Benzo(a)pyrene	50-32-8	0.5	mg/kg
Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg
<0.5			
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	0.1	%
Toluene-D8	2037-26-5	0.1	%
4-Bromofluorobenzene	460-00-4	0.1	%
80.3			
91.7			
110			
Surrogate control limits listed at end of this report.			

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Sub-Matrix: SOIL		Client sample ID		AC-04_0.90m BBC	
		Client sampling date / time		02-JUL-2008 15:45	
Compound	CAS Number	LOR	Unit	HK0810338-001	
EP-080S: TPH(Volatile)/BTX Surrogate - Continued					
Dibromofluoromethane	1868-53-7	0.1	%	80.3	Surrogate control limits listed at end of this report.
Toluene-D8	2037-26-5	0.1	%	91.7	
4-Bromofluorobenzene	460-00-4	0.1	%	110	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	75.0	Surrogate control limits listed at end of this report.
Phenol-d6	13127-88-3	0.1	%	65.1	
2,4,6-Tribromophenol	118-79-6	0.1	%	82.3	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	74.1	Surrogate control limits listed at end of this report.
2-Fluorobiphenyl	321-60-8	0.1	%	80.8	
4-Terphenyl-d14	1718-51-0	0.1	%	49.8	



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
EAJED: Physical and Aggregate Properties (QC Lot: 698584)							
HK0810338-001	AC-04_0.90m BBC	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	19.6	18.5
HK0810530-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	9.7	8.7
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699390)							
HK0810427-001	Anonymous	C15 - C28 Fraction	—	100	mg/kg	<100	<100
		C29 - C36 Fraction	—	100	mg/kg	<100	<100
		C10 - C14 Fraction	—	50	mg/kg	<50	<50
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699395)							
HK0810427-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2
EP-080: BTEX (QC Lot: 699395)							
HK0810427-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4
			106-42-3				
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699424)							
HK0810338-001	AC-04_0.90m BBC	C6 - C8 Fraction	—	5	mg/kg	<5	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 699425)							
HK0810338-001	AC-04_0.90m BBC	C9 - C16 Fraction	—	200	mg/kg	<200	<200
		C17 - C35 Fraction	—	500	mg/kg	<500	<500
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 699391)							
HK0810427-001	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5
		Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5
		Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5
		Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5
		Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5
		Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5
		Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5
		Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1
			207-08-9				



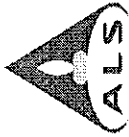
Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						LCS	DCS	Low	High		Value
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699390)											
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	69.7	---	---	47	132	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	65.3	---	---	46	126	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	61.6	---	---	37	122	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 699395)											
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	86.2	---	---	58	126	---
EP-080: BTEX (QCLot: 699395)											
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	85.9	---	---	66	127	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.4	---	---	75	118	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	101	---	---	87	115	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	104	---	---	87	116	---
ortho-Xylene	106-42-3	0.2	mg/kg	<0.2	0.2 mg/kg	96.6	---	---	83	116	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699424)											
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	77.2	---	---	25	135	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 699425)											
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	87.1	---	---	34	123	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	75.5	---	---	27	132	---
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QCLot: 699391)											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	70.0	---	---	57	98	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	72.0	---	---	63	99	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	76.0	---	---	62	102	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.9	---	---	62	109	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.3	---	---	66	100	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	77.0	---	---	61	101	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	78.9	---	---	73	105	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	79.3	---	---	73	105	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	---	---	45	113	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.1	---	---	65	112	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	---	0.50 mg/kg	82.1	---	---	71	107	---
	207-08-9			<1	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.0	---	---	51	109	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	93.6	---	---	46	119	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	85.1	---	---	62	113	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	88.2	---	---	58	117	---

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

Matrix: SCIL

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



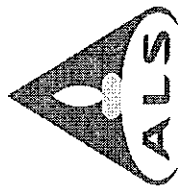
Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit
Matrix: SOIL														
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLOT: 699390)														
HK0810427-002	Anonymous		C10 - C14 Fraction		16 mg/kg	50.8	---	---	50	130		---		
			C15 - C28 Fraction		53 mg/kg	59.5	---	---	50	130		---		
			C29 - C36 Fraction		45 mg/kg	58.6	---	---	50	130		---		
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLOT: 699395)														
HK0810427-002	Anonymous		C6 - C9 Fraction		4 mg/kg	72.3	---	---	50	130		---		
EP-080: BTEX (QCLOT: 699395)														
HK0810427-002	Anonymous		Benzene	71-43-2	0.2 mg/kg	72.5	---	---	50	130		---		
			Toluene	108-88-3	0.2 mg/kg	75.2	---	---	50	130		---		
			Ethylbenzene	100-41-4	0.2 mg/kg	83.8	---	---	50	130		---		
			meta- & para-Xylene	108-38-3	0.4 mg/kg	86.9	---	---	50	130		---		
			ortho-Xylene	106-42-3	0.2 mg/kg	82.4	---	---	50	130		---		
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLOT: 699424)														
HK0810462-001	Anonymous		C6 - C8 Fraction		3 mg/kg	61.8	---	---	50	130		---		
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLOT: 699425)														
HK0810462-001	Anonymous		C9 - C16 Fraction		31 mg/kg	83.9	---	---	50	130		---		
			C17 - C35 Fraction		75 mg/kg	72.7	---	---	50	130		---		

Surrogate Control Limits

Sub-Matrix: SOIL		CAS Number	Recovery Limits (%)	
Compound			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
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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0810294
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Telephone	: ---	Telephone	: +852 2610 1044		
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Project	: KLN_2008_1	Quote number	: ---		
Order number	: ---	Date received	: 30-JUN-2008		
C-O-C number	: H002291	Date of issue	: 13-AUG-2008		
Site	: KAI TAK	No. of samples	: - Received : 1		
			: - Analysed : 1		

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Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics

ALS Laboratory Group
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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0810294

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0810294 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0810294 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.
Sample(s) were received in a chilled condition.

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

"m BGL" denoted that sample depth in the unit of "meter below ground level".



Analytical Results

Sub-Matrix: GROUNDWATER

AC-03 GW_0.22m BGL
30-JUN-2008 13:45

HK0810294-001

Compound	CAS Number	LOR	Unit	Client sample ID	Client sampling date / time
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	—	50	µg/L	<50	
C15 - C28 Fraction	—	100	µg/L	100	
C29 - C36 Fraction	—	50	µg/L	90	
C6 - C9 Fraction	—	20	µg/L	<20	
EP-080: BTEX					
Benzene	71-43-2	5	µg/L	<5	
Toluene	108-88-3	5	µg/L	<5	
Ethylbenzene	100-41-4	5	µg/L	<5	
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	
ortho-Xylene	95-47-6	5	µg/L	<5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	—	500	µg/L	<500	
C17 - C35 Fraction	—	500	µg/L	<500	
C6 - C8 Fraction	—	20	µg/L	<20	
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	2	µg/L	<2	
Acenaphthylene	208-96-8	2	µg/L	<2	
Acenaphthene	83-32-9	2	µg/L	<2	
Fluorene	86-73-7	2	µg/L	<2	
Phenanthrene	85-01-8	2	µg/L	<2	
Anthracene	120-12-7	2	µg/L	<2	
Fluoranthene	206-44-0	2	µg/L	<2	
Pyrene	129-00-0	2	µg/L	<2	
Chrysene	218-01-9	2	µg/L	<2	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	103	
Toluene-D8	2037-26-5	0.1	%	99.6	
4-Bromofluorobenzene	460-00-4	0.1	%	91.2	
Dibromofluoromethane	1868-53-7	0.1	%	103	
Toluene-D8	2037-26-5	0.1	%	99.6	
4-Bromofluorobenzene	460-00-4	0.1	%	91.2	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	31.2	
Phenol-d6	13127-88-3	0.1	%	25.7	
2,4,6-Tribromophenol	118-79-6	0.1	%	30.2	

Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



Sub-Matrix: GROUNDWATER		Client sample ID		AC-03 GW_0.22m BGL	
		Client sampling date / time		30-JUN-2008 13:45	
Compound	CAS Number	LOR	Unit	HK0810294-001	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	39.6	Surrogate control limits listed at end of this report.
2-Fluorobiphenyl	321-60-8	0.1	%	51.2	
4-Terphenyl-d14	1718-51-0	0.1	%	66.7	

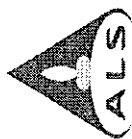


Laboratory Duplicate (DUP) Report

Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			
						Original Result	Duplicate Result		RPD (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692127)	HK0809932-001	Anonymous	—	100	µg/L	<100	<100		0.0
					µg/L	<50	<50		0.0
					µg/L	<50	<50		0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 695794)	HK0809932-001	Anonymous	—	20	µg/L	<20	<20		0.0
EP-080: BTEX (QC Lot: 695794)	HK0809932-001	Anonymous	108-38-3	10	µg/L	<10	<10		0.0
			106-42-3						
			71-43-2	5	µg/L	<5	<5		0.0
			108-88-3	5	µg/L	<5	<5		0.0
			100-41-4	5	µg/L	<5	<5		0.0
			95-47-6	5	µg/L	<5	<5		0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692129)	HK0809932-001	Anonymous	—	0.5	mg/L	<0.5	<0.5		0.0
			—	0.5	mg/L	<0.5	<0.5		0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 695795)	HK0809932-001	Anonymous	—	0.02	mg/L	<0.02	<0.02		0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 692128)	HK0809932-001	Anonymous	91-20-3	2	µg/L	<2	<2		0.0
			208-96-8	2	µg/L	<2	<2		0.0
			83-32-9	2	µg/L	<2	<2		0.0
			86-73-7	2	µg/L	<2	<2		0.0
			85-01-8	2	µg/L	<2	<2		0.0
			120-12-7	2	µg/L	<2	<2		0.0
			206-44-0		µg/L	<2	<2		0.0
			129-00-0	2	µg/L	<2	<2		0.0
			218-01-9	2	µg/L	<2	<2		0.0
			205-99-2	4	µg/L	<4	<4		0.0
			207-08-9						

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

Matrix: WATER		Method Blank (MB) Report									
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692127)											
C10 - C14 Fraction	—	50	µg/L	<50	150 µg/L	78.4	—	—	37	129	—
C15 - C28 Fraction	—	100	µg/L	<100	350 µg/L	65.8	—	—	39	128	—
C29 - C36 Fraction	—	50	µg/L	<50	300 µg/L	51.6	—	—	15	137	—



Method Blank (MS) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
Matrix: WATER									
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 695794)									
C6 - C9 Fraction	—	20	µg/L	<20	200 µg/L	91.2	—	78 126	—
EP-080: BTEX (QCLot: 695794)									
Benzene	71-43-2	2	µg/L	<2	10 µg/L	105	—	85 109	—
Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	—	76 116	—
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	109	—	79 116	—
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	97.3	—	85 112	—
ortho-Xylene	106-42-3	—	—	—	—	—	—	—	—
—	95-47-6	2	µg/L	<2	10 µg/L	91.7	—	79 115	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692129)									
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.25 mg/L	73.2	—	50 130	—
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	65.9	—	50 130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 695795)									
C6 - C8 Fraction	—	0.5	mg/L	—	0.15 mg/L	91.3	—	50 130	—
—	—	—	—	<0.02	—	—	—	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 692128)									
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	63.4	—	42 105	—
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	61.8	—	44 108	—
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	60.5	—	41 108	—
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	68.1	—	52 104	—
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	64.3	—	60 105	—
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	65.8	—	58 106	—
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	70.2	—	67 105	—
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	72.0	—	62 109	—
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	68.7	—	63 109	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	81.8	—	34 130	—
—	207-08-9	—	—	—	—	—	—	—	—

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

Surrogate Control Limits

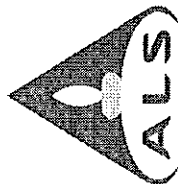
Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118



Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate - Continued			
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	21	100
Phenol-d6	13127-88-3	20	94
2,4,6-Tribromophenol	118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	35	114
2-Fluorobiphenyl	321-60-8	43	116
4-Terphenyl-d14	1718-51-0	33	141

ALS Technichem (HK) Pty Ltd

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ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

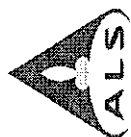
<i>Client</i>	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 9
<i>Contact Address</i>	: MR VINCENT AU-YEUNG : 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	<i>Contact Address</i>	: Wong Wai Man, Alice : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	<i>Work Order</i>	: HK0809932
<i>E-mail</i>	: vincent.auyeung@maunsell.com.hk	<i>E-mail</i>	: Alice.Wong@alsenviro.com		
<i>Telephone</i>	: ---	<i>Telephone</i>	: +852 2610 1044		
<i>Facsimile</i>	: ---	<i>Facsimile</i>	: +852 2610 2021		
<i>Project</i>	: KLN_2008_1	<i>Quote number</i>	: ---	<i>Date received</i>	: 23-JUN-2008
<i>Order number</i>	: ---			<i>Date of issue</i>	: 13-AUG-2008
<i>C-O-C number</i>	: H002289			<i>No. of samples</i>	: - Received : 4
<i>Site</i>	: KAI TAK				- Analysed : 4

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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.

<i>Signature</i>	<i>Position</i>	<i>Authorised results for:-</i>
Anh Ngoc Huynh	Senior Chemist	Organics

ALS Laboratory Group
Trading Name: **ALS Technichem (HK) Pty Ltd**
11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong
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A Campbell Brothers Limited Company



Page Number : 2 of 9
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809932

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809932 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

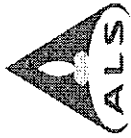
Specific comments for Work Order HK0809932 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBERG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.
Sample(s) were received in a chilled condition.

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

"m BGL" denoted that sample depth in the unit of "meter below ground level".

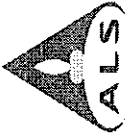


Analytical Results

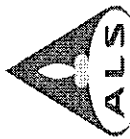
Sub-Matrix: GROUNDWATER		Client sample ID		AC-01 GW_2.45m BGL	
		Client sampling date / time		23-JUN-2008 10:15	
Compound	CAS Number	LOR	Unit	HK0809932-001	
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	---	50	µg/L	<50	
C15 - C28 Fraction	---	100	µg/L	<100	
C29 - C36 Fraction	---	50	µg/L	<50	
C6 - C9 Fraction	---	20	µg/L	<20	
EP-080: BTEX					
Benzene	71-43-2	5	µg/L	<5	
Toluene	108-88-3	5	µg/L	<5	
Ethylbenzene	100-41-4	5	µg/L	<5	
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	
ortho-Xylene	95-47-6	5	µg/L	<5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	---	500	µg/L	<500	
C17 - C35 Fraction	---	500	µg/L	<500	
C6 - C8 Fraction	---	20	µg/L	<20	
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	2	µg/L	<2	
Acenaphthylene	208-96-8	2	µg/L	<2	
Acenaphthene	83-32-9	2	µg/L	<2	
Fluorene	86-73-7	2	µg/L	<2	
Phenanthrene	85-01-8	2	µg/L	<2	
Anthracene	120-12-7	2	µg/L	<2	
Fluoranthene	206-44-0	2	µg/L	<2	
Pyrene	129-00-0	2	µg/L	<2	
Chrysene	218-01-9	2	µg/L	<2	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	101	
Toluene-D8	2037-26-5	0.1	%	98.6	
4-Bromofluorobenzene	460-00-4	0.1	%	95.4	
Dibromofluoromethane	1868-53-7	0.1	%	101	
Toluene-D8	2037-26-5	0.1	%	98.6	
4-Bromofluorobenzene	460-00-4	0.1	%	95.4	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	37.2	
Phenol-d6	13127-88-3	0.1	%	22.8	
2,4,5-Tribromophenol	118-79-6	0.1	%	53.4	
Surrogate control limits listed at end of this report.					

Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



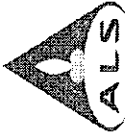
Sub-Matrix: GROUNDWATER		Client sample ID : AC-01 GW_2.45m BGL	
		Client sampling date / time : 23-JUN-2008 10:15	
Compound	CAS Number	LOR	Unit
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	0.1	%
2-Fluorobiphenyl	321-60-8	0.1	%
4-Terphenyl-d14	1718-51-0	0.1	%
			Surrogate control limits listed at end of this report.



Sub-Matrix: WATER		Client sample ID		Client sampling date / time		FIELD BLANK (3)		EQUIPMENT BLANK (3)		TRIP BLANK (3)	
Compound		CAS Number	LOR	Unit		23-JUN-2008 10:15	HK0809932-002	23-JUN-2008 10:30	HK0809932-003	23-JUN-2008 16:00	HK0809932-004
EP-071: Total Petroleum Hydrocarbons (TPH)											
C10 - C14 Fraction		---	50	µg/L		<50		<50		---	
C15 - C28 Fraction		---	100	µg/L		<100		<100		---	
C29 - C36 Fraction		---	50	µg/L		<50		<50		---	
C6 - C9 Fraction		---	20	µg/L		<20		<20		<20	
EP-080: BTEX											
Benzene		71-43-2	5	µg/L		<5		<5		<5	
Toluene		109-88-3	5	µg/L		<5		<5		<5	
Ethylbenzene		100-41-4	5	µg/L		<5		<5		<5	
meta- & para-Xylene		108-38-3 106-42-3	10	µg/L		<10		<10		<10	
ortho-Xylene		95-47-6	5	µg/L		<5		<5		<5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)											
C9 - C16 Fraction		---	500	µg/L		<500		<500		---	
C17 - C35 Fraction		---	500	µg/L		<500		<500		---	
C6 - C8 Fraction		---	20	µg/L		<20		<20		<20	
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs)											
Naphthalene		91-20-3	2	µg/L		<2		<2		---	
Acenaphthylene		208-96-8	2	µg/L		<2		<2		---	
Acenaphthene		83-32-9	2	µg/L		<2		<2		---	
Fluorene		86-73-7	2	µg/L		<2		<2		---	
Phenanthrene		85-01-8	2	µg/L		<2		<2		---	
Anthracene		120-12-7	2	µg/L		<2		<2		---	
Fluoranthene		206-44-0	2	µg/L		<2		<2		---	
Pyrene		129-00-0	2	µg/L		<2		<2		---	
Chrysene		218-01-9	2	µg/L		<2		<2		---	
Benzo(b) & Benzo(k)fluoranthene		205-99-2 207-08-9	4	µg/L		<4		<4		---	
EP-080S: TPH(Volatile)/BTEX Surrogate											
Dibromofluoromethane		1868-53-7	0.1	%		105		102		103	
Toluene-D8		2037-26-5	0.1	%		97.8		99.8		99.0	
4-Bromofluorobenzene		460-00-4	0.1	%		93.3		93.7		91.0	
Dibromofluoromethane		1868-53-7	0.1	%		105		102		103	
Toluene-D8		2037-26-5	0.1	%		97.8		99.8		99.0	
4-Bromofluorobenzene		460-00-4	0.1	%		93.3		93.7		91.0	
EP-075S: Acid Extractable Surrogates											
2-Fluorophenol		367-12-4	0.1	%		32.8		26.2		---	
Phenol-d6		13127-88-3	0.1	%		22.7		21.6		---	
2,4,6-Tribromophenol		118-79-6	0.1	%		34.6		53.7		---	

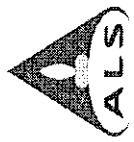
Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.



Page Number : 6 of 9
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809932

Sub-Matrix: WATER		Client sample ID		FIELD BLANK (3)	EQUIPMENT BLANK (3)	TRIP BLANK (3)
		Client sampling date / time		23-JUN-2008 10:15	23-JUN-2008 10:30	23-JUN-2008 16:00
Compound	CAS Number	LOR	Unit	HK0809932-002	HK0809932-003	HK0809932-004
EP-075T: Base/Neutral Extractable Surrogates						
Nitrobenzene -d5	4165-60-0	0.1	%	64.8	46.2	—
2-Fluorobiphenyl	321-60-8	0.1	%	48.6	43.8	—
4-Terphenyl-d14	1718-51-0	0.1	%	82.6	98.4	—
				Surrogate control limits listed at end of this report		

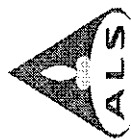


Laboratory Duplicate (DUP) Report

Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report		RPD (%)	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692127)									
HK0809932-001	AC-01 GW_2.45m BGL	C15 - C28 Fraction	—	100	µg/L	<100	<100	0.0	
		C10 - C14 Fraction	—	50	µg/L	<50	<50	0.0	
		C29 - C36 Fraction	—	50	µg/L	<50	<50	0.0	
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 695794)									
HK0809932-001	AC-01 GW_2.45m BGL	C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	
EP-080: BTEX (QC Lot: 695794)									
HK0809932-001	AC-01 GW_2.45m BGL	meta- & para-Xylene	108-38-3	10	µg/L	<10	<10	0.0	
			106-42-3						
		Benzene	71-43-2	5	µg/L	<5	<5	0.0	
		Toluene	108-88-3	5	µg/L	<5	<5	0.0	
		Ethylbenzene	100-41-4	5	µg/L	<5	<5	0.0	
		ortho-Xylene	95-47-6	5	µg/L	<5	<5	0.0	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692129)									
HK0809932-001	AC-01 GW_2.45m BGL	C9 - C16 Fraction	—	0.5	mg/L	<0.5	<0.5	0.0	
		C17 - C35 Fraction	—	0.5	mg/L	<0.5	<0.5	0.0	
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 695795)									
HK0809932-001	AC-01 GW_2.45m BGL	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02	0.0	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 692128)									
HK0809932-001	AC-01 GW_2.45m BGL	Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	
		Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	
		Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	
		Fluorene	86-73-7	2	µg/L	<2	<2	0.0	
		Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	
		Anthracene	120-12-7	2	µg/L	<2	<2	0.0	
		Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	
		Pyrene	129-00-0	2	µg/L	<2	<2	0.0	
		Chrysene	218-01-9	2	µg/L	<2	<2	0.0	
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	<4	0.0	
			207-08-9						

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

Matrix: WATER		Method Blank (MB) Report									
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	High	Value
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692127)											
C10 - C14 Fraction	—	50	µg/L	<50	150 µg/L	78.4	—	—	37	129	—
C15 - C28 Fraction	—	100	µg/L	<100	350 µg/L	65.8	—	—	39	128	—
C29 - C36 Fraction	—	50	µg/L	<50	300 µg/L	51.6	—	—	15	137	—



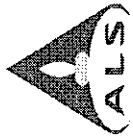
Matrix: WATER				Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Low	High	Value	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 695794)													
C6 - C9 Fraction	---	20	µg/L	<20	200 µg/L	91.2	---	---	78	126	---	---	---
EP-080: BTEX (QCLot: 695794)													
Benzene	71-43-2	2	µg/L	<2	10 µg/L	105	---	---	85	109	---	---	---
Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	---	---	76	116	---	---	---
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	109	---	---	79	116	---	---	---
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	97.3	---	---	85	112	---	---	---
	106-42-3												
ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	91.7	---	---	79	115	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692129)													
C9 - C16 Fraction	---	0.5	mg/L	<0.5	0.25 mg/L	73.2	---	---	50	130	---	---	---
C17 - C35 Fraction	---	0.5	mg/L	<0.5	0.5 mg/L	65.9	---	---	50	130	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 695795)													
C6 - C8 Fraction	---	0.5	mg/L	---	0.15 mg/L	91.3	---	---	50	130	---	---	---
				<0.02	---	---	---	---	---	---	---	---	---
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 692128)													
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	63.4	---	---	42	105	---	---	---
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	61.8	---	---	44	108	---	---	---
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	60.5	---	---	41	108	---	---	---
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	68.1	---	---	52	104	---	---	---
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	64.3	---	---	60	105	---	---	---
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	65.8	---	---	58	106	---	---	---
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	70.2	---	---	67	105	---	---	---
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	72.0	---	---	62	109	---	---	---
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	68.7	---	---	63	109	---	---	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	81.8	---	---	34	130	---	---	---
	207-08-9												

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

Surrogate Control Limits

Sub-Matrix: GROUNDWATER				Recovery Limits (%)	
Compound	CAS Number	Low	High	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	86	118		
Toluene-D8	2037-26-5	88	110		
4-Bromofluorobenzene	460-00-4	86	115		
Dibromofluoromethane	1868-53-7	86	118		

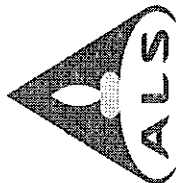


Page Number : 9 of 9
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809932

Sub-Matrix: GROUNDWATER		CAS Number		Recovery Limits (%)	
Compound				Low	High
EP-080S: TPH(Volatile)/BTX Surrogate - Continued					
Toluene-D8		2037-26-5		88	110
4-Bromofluorobenzene		460-00-4		86	115
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol		367-12-4		21	100
Phenol-d6		13127-88-3		20	94
2,4,6-Tribromophenol		118-79-6		20	123
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5		4165-60-0		35	114
2-Fluorobiphenyl		321-60-8		43	116
4-Terphenyl-d14		1718-51-0		33	141
Sub-Matrix: WATER		CAS Number		Recovery Limits (%)	
Compound				Low	High
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane		1868-53-7		86	118
Toluene-D8		2037-26-5		88	110
4-Bromofluorobenzene		460-00-4		86	115
Dibromofluoromethane		1868-53-7		86	118
Toluene-D8		2037-26-5		88	110
4-Bromofluorobenzene		460-00-4		86	115
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol		367-12-4		21	100
Phenol-d6		13127-88-3		20	94
2,4,6-Tribromophenol		118-79-6		20	123
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5		4165-60-0		35	114
2-Fluorobiphenyl		321-60-8		43	116
4-Terphenyl-d14		1718-51-0		33	141

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact Address	: MR VINCENT AU-YEUNG 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Contact Address	: Wong Wai Man, Alice 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Work Order	: HK0809873
E-mail	: vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---		
Order number	: ---			Date received	: 24-JUN-2008
C-O-C number	: H002290			Date of issue	: 13-AUG-2008
Site	: KAI TAK			No. of samples	: Received : 4
					: Analysed : 4

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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.

Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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A Campbell Brothers Limited Company



Page Number : 2 of 8
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809873

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809873 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0809873 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.

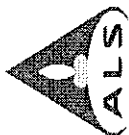
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in a chilled condition.

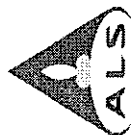
Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL		Client sample ID		AC-03_3.66-4.11m	AC-03_4.16-4.61m	AC-03_5.00-5.45m	AC-03_6.00-6.45m
		Client sampling date / time		BBC	BBC	BBC	BBC
		Unit		24-JUN-2008 09:15	24-JUN-2008 09:20	24-JUN-2008 10:20	24-JUN-2008 11:15
Compound	CAS Number	LOR	Unit	HK0809873-001	HK0809873-002	HK0809873-003	HK0809873-004
EAJED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	20.4	19.3	20.6	19.6
EP-071: Total Petroleum Hydrocarbons (TPH)							
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50
C15 - C28 Fraction	—	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction	—	100	mg/kg	<100	<100	<100	<100
C6 - C9 Fraction	—	2	mg/kg	<2	<2	<2	<2
EP-080: BTEX							
Benzene	71-43-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Toluene	108-98-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)							
C9 - C16 Fraction	—	200	mg/kg	<200	<200	<200	<200
C17 - C35 Fraction	—	500	mg/kg	<500	<500	<500	<500
C6 - C8 Fraction	—	5	mg/kg	<5	<5	<5	<5
EP-075B: Polyaromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	<1	<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate							
Dibromofluoromethane	1868-53-7	0.1	%	96.5	97.5	100	97.1
				Surrogate control limits listed at end of this report			



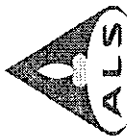
Page Number : 4 of 8
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809873

Sub-Matrix: SOIL		Client sample ID		AC-03_3.66-4.11m		AC-03_4.16-4.61m		AC-03_5.00-5.45m		AC-03_6.00-6.45m	
		Client sampling date / time		24-JUN-2008 08:15		24-JUN-2008 09:20		24-JUN-2008 10:20		24-JUN-2008 11:15	
		Unit		BBC		BBC		BBC		BBC	
		HK0809873-001		HK0809873-002		HK0809873-003		HK0809873-004			
Compound	CAS Number	LOR	Unit								
EP-080S: TPH(Volatile)/BTEX Surrogate - Continued											
Toluene-D8	2037-26-5	0.1	%	97.4	97.2	96.9	99.0	Surrogate control limits listed at end of this report.			
4-Bromofluorobenzene	460-00-4	0.1	%	93.5	90.5	92.4	89.6				
Dibromofluoromethane	1868-53-7	0.1	%	96.5	97.5	100	97.1				
Toluene-D8	2037-26-5	0.1	%	97.4	97.2	96.9	99.0				
4-Bromofluorobenzene	460-00-4	0.1	%	93.5	90.5	92.4	89.6				
EP-075S: Acid Extractable Surrogates											
2-Fluorophenol	367-12-4	0.1	%	67.4	66.7	72.9	69.9	Surrogate control limits listed at end of this report.			
Phenol-d6	13127-88-3	0.1	%	62.4	58.4	61.4	60.6				
2,4,6-Tribromophenol	118-79-6	0.1	%	71.6	65.7	75.9	77.0				
EP-075T: Base/Neutral Extractable Surrogates											
Nitrobenzene -d5	4165-60-0	0.1	%	72.2	67.3	72.8	71.0	Surrogate control limits listed at end of this report.			
2-Fluorobiphenyl	321-60-8	0.1	%	77.3	69.4	74.8	75.7				
4-Terphenyl-d14	1718-51-0	0.1	%	98.7	94.5	99.8	99.0				



Laboratory Duplicate (DUP) Report

Matrix: SOIL									
Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report		RPD (%)
							Original Result	Duplicate Result	
EAJED: Physical and Aggregate Properties (QC Lot: 692154)									
HK0809873-001	AC-03_3.66-4.11m BBC		EA055: Moisture Content (dried @ 103°C)	---	0.1	%	20.4	19.9	2.4
HK0809846-006	Anonymous		EA055: Moisture Content (dried @ 103°C)	---	0.1	%	33.8	34.0	0.6
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689599)									
HK0809818-005	Anonymous		C6 - C9 Fraction	---	2	mg/kg	<2	<2	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689610)									
HK0809818-005	Anonymous		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-080: BTEX (QC Lot: 689599)									
HK0809818-005	Anonymous		Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
			Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
			Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
			ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
			meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
		106-42-3							
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692120)									
HK0809873-001	AC-03_3.66-4.11m BBC		C6 - C8 Fraction	---	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 692124)									
HK0809873-001	AC-03_3.66-4.11m BBC		C9 - C16 Fraction	---	200	mg/kg	<200	<200	0.0
			C17 - C35 Fraction	---	500	mg/kg	<500	<500	0.0
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 689608)									
HK0809721-002	Anonymous		Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
			Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
			Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
			Fluorene	86-73-7	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
			Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
			Chrysene	218-01-9	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
			Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
			Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
			Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
			Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
				207-08-9					
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 692125)									



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Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809873

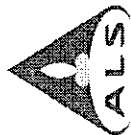
Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 692125) - continued								
HK0809873-001	AC-03_3.66-4.11m BBC	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					

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								
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	High	Value	RPDs (%)	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 689599)													
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	105	---	---	58	126	---	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 689610)													
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	101	---	---	47	132	---	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	90.8	---	---	46	126	---	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	56.9	---	---	37	122	---	---	---
EP-080: BTEX (QCLot: 689599)													
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	66.7	---	---	66	127	---	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	84.7	---	---	75	118	---	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	# 120	---	---	87	115	---	---	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	# 135	---	---	87	116	---	---	---
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	# 127	---	---	83	116	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692120)													
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	107	---	---	25	135	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692124)													
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	95.6	---	---	34	123	---	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	89.3	---	---	27	132	---	---	---
EP-075S: Polycyclic Aromatic Hydrocarbons (PAHs) (QCLot: 689608)													



Matrix: SOIL		Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	DCS	Recovery Limits (%)	Value	RPDs (%)	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 689608) - continued											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	70.8	----	57	98	—	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	70.5	----	63	99	—	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	79.1	----	62	102	—	
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	81.9	----	62	109	—	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	81.4	----	66	100	—	
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	78.7	----	61	101	—	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	83.2	----	73	105	—	
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	83.0	----	73	105	—	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	81.9	----	45	113	—	
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	78.1	----	65	112	—	
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	----	----	----	—	—	—	
	207-08-9			—	0.50 mg/kg	83.8	----	71	107	—	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	80.6	----	51	109	—	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	81.1	----	46	119	—	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	81.7	----	62	113	—	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	84.4	----	58	117	—	
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 692125)											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	78.6	----	57	98	—	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	78.2	----	63	99	—	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	84.6	----	62	102	—	
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	88.8	----	62	109	—	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	87.4	----	66	100	—	
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	86.5	----	61	101	—	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	89.6	----	73	105	—	
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	88.2	----	73	105	—	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	87.6	----	45	113	—	
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	85.5	----	65	112	—	
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	—	—	----	—	—	—	
	207-08-9			—	0.50 mg/kg	87.5	----	71	107	—	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.4	----	51	109	—	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	87.6	----	46	119	—	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	93.6	----	62	113	—	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	90.3	----	58	117	—	

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

Matrix: SOIL									
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method/Compound	Spike	CAS Number	MS	MSD	Recovery Limits (%)	RPDs (%)	
			Concentration				Low	High	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 689599)									



Page Number : 8 of 8
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809873

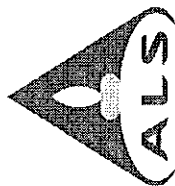
Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report		Recovery Limits (%)		RPDs (%)
						MS	Spike Recovery (%)	Low	High	Value
Matrix: SOIL										
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 689599) - continued										
HK0809818-006	Anonymous		C6 - C9 Fraction	---	12.5 mg/kg	88.7	---	50	130	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 689610)										
HK0809818-006	Anonymous		C10 - C14 Fraction	---	16 mg/kg	65.2	---	50	130	---
			C15 - C28 Fraction	---	53 mg/kg	79.9	---	50	130	---
			C29 - C36 Fraction	---	45 mg/kg	65.7	---	50	130	---
EP-080: BTEX (QCLot: 689599)										
HK0809818-006	Anonymous		Benzene	71-43-2	0.625 mg/kg	57.3	---	50	130	---
			Toluene	108-88-3	0.625 mg/kg	69.5	---	50	130	---
			Ethylbenzene	100-41-4	0.625 mg/kg	105	---	50	130	---
			meta- & para-Xylene	108-38-3	1.25 mg/kg	117	---	50	130	---
			ortho-Xylene	106-42-3	0.625 mg/kg	112	---	50	130	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692120)										
HK0809873-002	AC-03_4.16-4.61m BBC		C6 - C8 Fraction	---	3 mg/kg	107	---	50	130	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 692124)										
HK0809873-002	AC-03_4.16-4.61m BBC		C9 - C16 Fraction	---	31 mg/kg	85.9	---	50	130	---
			C17 - C35 Fraction	---	75 mg/kg	81.5	---	50	130	---

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
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	4165-50-0	23	120
2-Fluorobiphenyl	321-60-8	30	115
4-Terphenyl-d14	1718-51-0	20	137

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

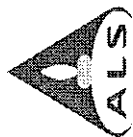
Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact Address	: MR VINCENT AU-YEUNG 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Contact Address	: Wong Wai Man, Alice 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Work Order	: HK0809708
E-mail	: vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---		
Order number	: ---	Date received	: 20-JUN-2008		
C-O-C number	: H002288	Date of issue	: 13-AUG-2008		
Site	: KAI TAK	No. of samples	: Received : 1		
			: Analysed : 1		

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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A Campbell Brothers Limited Company



Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809708

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809708 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0809708 :

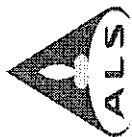
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedited procedure EP-071.

Sample(s) were received in an ambient condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".

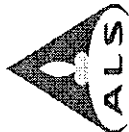


Analytical Results

Sub-Matrix: SOIL		Client sample ID		AC-03_1.00m BBC	
		Client sampling date / time		20-JUN-2008 15:00	
Compound	CAS Number	LOR	Unit	HK0809708-001	
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)					
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	---	50	mg/kg	<50	
C15 - C28 Fraction	---	100	mg/kg	<100	
C29 - C36 Fraction	---	100	mg/kg	<100	
C6 - C9 Fraction	---	2	mg/kg	<2	
EP-080: BTEX					
Benzene	71-43-2	0.5	mg/kg	<0.5	
Toluene	108-88-3	0.5	mg/kg	<0.5	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	
meta- & para-Xylene	106-38-3	0.5	mg/kg	<0.5	
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	---	200	mg/kg	<200	
C17 - C35 Fraction	---	500	mg/kg	<500	
C6 - C8 Fraction	---	5	mg/kg	<5	
EP-075B: Polyaromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	0.5	mg/kg	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	
Benzo(b) & 205-99-2	207-08-9	1	mg/kg	<1	
Benzo(k)fluoranthene	50-32-8	0.5	mg/kg	<0.5	
Benzo(a)pyrene	193-39-5	0.5	mg/kg	<0.5	
Indeno(1,2,3-cd)pyrene	53-70-3	0.5	mg/kg	<0.5	
Dibenz(a,h)anthracene	191-24-2	0.5	mg/kg	<0.5	
Benzo(g,h,i)perylene					
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	111	
Toluene-D8	2037-26-5	0.1	%	98.4	
4-Bromofluorobenzene	480-00-4	0.1	%	114	
				Surrogate control limits listed at end of this report.	

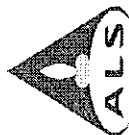


Sub-Matrix: SOIL		Client sample ID		AC-03_1.00m BBC		20-JUN-2008 15:00		HK0809708-001	
Compound		CAS Number		LOR		Unit		Surrogate control limits listed at end of this report.	
EP-080S: TPH(Volatile)/BTX Surrogate - Continued									
Dibromofluoromethane		1868-53-7		0.1		%		111	
Toluene-D8		2037-26-5		0.1		%		98.4	
4-Bromofluorobenzene		460-00-4		0.1		%		114	
EP-075S: Acid Extractable Surrogates									
2-Fluorophenol		367-12-4		0.1		%		68.6	
Phenol-d6		13127-88-3		0.1		%		62.5	
2,4,6-Tribromophenol		118-79-6		0.1		%		60.7	
EP-075T: Base/Neutral Extractable Surrogates									
Nitrobenzene -d5		4165-60-0		0.1		%		65.7	
2-Fluorobiphenyl		321-60-8		0.1		%		69.7	
4-Terphenyl-d14		1718-51-0		0.1		%		89.6	
Surrogate control limits listed at end of this report.									



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 (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 690388)								
HK0809703-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	15.6	15.9	1.5
HK0809721-006	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	11.0	11.4	3.6
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682326)								
HK0809193-001	Anonymous	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: 682336)								
HK0809193-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 682336)								
HK0809193-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
			106-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689598)								
HK0809703-001	Anonymous	C6 - C8 Fraction	—	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689607)								
HK0809703-001	Anonymous	C8 - C16 Fraction	—	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	—	500	mg/kg	<500	<500	0.0
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 682325)								
HK0809193-003	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	181-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					

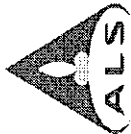


Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report			
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)
Matrix: SOIL							
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682326)							
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	75.5	—
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	67.7	—
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	61.2	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682336)							
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	97.4	—
EP-080: BTEX (QCLot: 682336)							
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	75.4	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.6	—
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	99.9	—
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	108	—
ortho-Xylene	106-42-3	—	—	—	—	—	—
95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	108	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689598)							
C6 - C8 Fraction	—	5	mg/kg	<5	3 mg/kg	107	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689607)							
C9 - C16 Fraction	—	200	mg/kg	<200	31 mg/kg	87.6	—
C17 - C35 Fraction	—	500	mg/kg	<500	75 mg/kg	87.3	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 682325)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	60.5	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 61.2	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	69.7	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	72.4	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 63.2	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	63.9	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 68.4	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 71.5	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	66.0	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	68.0	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	—	0.50 mg/kg	88.0	—
207-08-9	—	—	—	<1	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	67.4	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	64.1	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.9	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	74.3	—

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

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



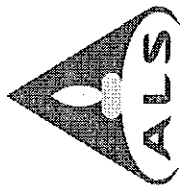
Page Number : 7 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809708

Matrix: SOIL

Matrix: SOIL									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report				
					MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Value
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682326)									
HK0809451-001	Anonymous	C10 - C14 Fraction	—	16 mg/kg	76.3	—	50	130	—
		C15 - C28 Fraction	—	53 mg/kg	81.5	—	50	130	—
		C29 - C36 Fraction	—	45 mg/kg	60.2	—	50	130	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682336)									
HK0809451-001	Anonymous	C6 - C9 Fraction	—	4 mg/kg	62.4	—	50	130	—
EP-080: BTEX (QCLot: 682336)									
HK0809451-001	Anonymous	Benzene	71-43-2	0.2 mg/kg	52.9	—	50	130	—
		Toluene	108-88-3	0.2 mg/kg	57.9	—	50	130	—
		Ethylbenzene	100-41-4	0.2 mg/kg	59.6	—	50	130	—
		meta- & para-Xylene	108-38-3	0.4 mg/kg	67.8	—	50	130	—
		ortho-Xylene	106-42-3	0.2 mg/kg	67.9	—	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689598)									
HK0809703-002	Anonymous	C6 - C8 Fraction	—	3 mg/kg	98.0	—	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689607)									
HK0809703-002	Anonymous	C9 - C16 Fraction	—	31 mg/kg	77.9	—	50	130	—
		C17 - C35 Fraction	—	75 mg/kg	77.8	—	50	130	—

Surrogate Control Limits

Sub-Matrix: SOIL			
Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
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



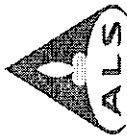
CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact Address	: MR VINCENT AU-YEUNG : 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Contact Address	: Wong Wai Man, Alice : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Work Order	: HK0809703
E-mail	: vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 19-JUN-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002287			No. of samples	: - Received : 4
Site	: KAI TAK				- Analysed : 4

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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.

Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics



Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809703

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809703 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0809703 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in a chilled condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL		Client sample ID		AC-01_3.56-4.01m BBC	AC-01_4.06-4.51m BBC	AC-01_5.00-5.45m BBC	AC-01_6.00-6.45m BBC
		Client sampling date / time		19-JUN-2008 11:30	19-JUN-2008 11:40	19-JUN-2008 14:20	19-JUN-2008 15:30
Compound	CAS Number	LOR	Unit	HK0809703-001	HK0809703-002	HK0809703-003	HK0809703-004
EATED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	15.6	16.3	16.9	18.4
EP-071: Total Petroleum Hydrocarbons (TPH)							
C10 - C14 Fraction	—	50	mg/kg	<50	<50	<50	<50
C15 - C28 Fraction	---	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction	---	100	mg/kg	<100	<100	<100	<100
C6 - C9 Fraction	---	2	mg/kg	<2	<2	<2	<2
EP-080: BTEX							
Benzene	71-43-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)							
C9 - C16 Fraction	---	200	mg/kg	<200	<200	<200	<200
C17 - C35 Fraction	---	500	mg/kg	<500	<500	<500	<500
C6 - C8 Fraction	---	5	mg/kg	<5	<5	<5	<5
EP-075B: Polyaromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	<1	<1
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate							
Dibromofluoromethane	1868-53-7	0.1	%	112	107	110	107
				Surrogate control limits listed at end of this report.			

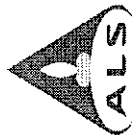


Sub-Matrix: SOIL		Client sample ID		AC-01_3.56-4.01m		AC-01_4.06-4.51m		AC-01_5.00-5.45m		AC-01_6.00-6.45m	
		Client sampling date / time		19-JUN-2008 11:30		19-JUN-2008 11:40		19-JUN-2008 14:20		19-JUN-2008 15:30	
		CAS Number		LOR		Unit		HK0809703-001		HK0809703-002	
Compound		CAS Number		LOR		Unit		HK0809703-001		HK0809703-002	
EP-080S: TPH(Volatile)/BTX Surrogate - Continued											
Toluene-D8	2037-26-5	0.1	%	102	99.0	100	97.6	119	119	97.6	119
4-Bromofluorobenzene	460-00-4	0.1	%	118	120	119	119	110	107	97.6	119
Dibromofluoromethane	1868-53-7	0.1	%	112	107	100	119	119	107	97.6	119
Toluene-D8	2037-26-5	0.1	%	102	99.0	100	97.6	119	119	97.6	119
4-Bromofluorobenzene	460-00-4	0.1	%	118	120	119	119	119	119	97.6	119
EP-075S: Acid Extractable Surrogates											
2-Fluorophenol	367-12-4	0.1	%	63.2	71.6	73.5	71.2	68.0	73.8	71.2	68.0
Phenol-d6	13127-88-3	0.1	%	58.7	65.6	68.5	65.1	66.8	68.0	65.1	66.8
2,4,6-Tribromophenol	118-79-6	0.1	%	58.0	65.8	76.2	66.8	68.0	68.0	66.8	68.0
EP-075T: Base/Neutral Extractable Surrogates											
Nitrobenzene -d5	4165-60-0	0.1	%	63.0	69.5	71.0	68.0	73.8	73.8	68.0	73.8
2-Fluorobiphenyl	321-60-8	0.1	%	66.2	74.3	77.3	73.8	73.8	73.8	73.8	73.8
4-Terphenyl-d14	1718-51-0	0.1	%	78.9	90.8	91.9	89.9	89.9	89.9	89.9	89.9



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 (%)
EAJED: Physical and Aggregate Properties (QC Lot: 690388)								
HK0809703-001	AC-01_3.56-4.01m BBC	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	15.6	15.9	1.5
HK0809721-006	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	11.0	11.4	3.6
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682326)								
HK0809193-001	Anonymous	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: 682336)								
HK0809193-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 682336)								
HK0809193-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	<0.4	0.0
			106-42-3					
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689598)								
HK0809703-001	AC-01_3.56-4.01m BBC	C6 - C8 Fraction	—	5	mg/kg	<5	<5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 689607)								
HK0809703-001	AC-01_3.56-4.01m BBC	C9 - C16 Fraction	—	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	—	500	mg/kg	<500	<500	0.0
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 682325)								
HK0809193-003	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					



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						
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)		Recovery Limits (%)		Value	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682326)												
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	75.5	---	---	47	132	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	67.7	---	---	46	126	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	61.2	---	---	37	122	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682336)												
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	97.4	---	---	58	126	---	---
EP-080: BTEX (QCLot: 682336)												
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	75.4	---	---	66	127	---	---
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.6	---	---	75	118	---	---
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	99.9	---	---	87	115	---	---
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	108	---	---	87	116	---	---
ortho-Xylene	106-42-3	0.2	mg/kg	<0.2	0.2 mg/kg	108	---	---	83	116	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689598)												
C6 - C8 Fraction	5		mg/kg	<5	3 mg/kg	107	---	---	25	135	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689607)												
C9 - C16 Fraction	---	200	mg/kg	<200	31 mg/kg	87.6	---	---	34	123	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	87.3	---	---	27	132	---	---
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 682325)												
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	60.5	---	---	57	98	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 61.2	---	---	63	99	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	69.7	---	---	62	102	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	72.4	---	---	62	109	---	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 63.2	---	---	66	100	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	63.9	---	---	61	101	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 68.4	---	---	73	105	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 71.5	---	---	73	105	---	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	68.0	---	---	45	113	---	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	68.0	---	---	65	112	---	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	---	0.50 mg/kg	88.0	---	---	71	107	---	---
	207-08-9			<1	---	---	---	---	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	67.4	---	---	51	109	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	64.1	---	---	46	119	---	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.9	---	---	62	113	---	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	74.3	---	---	58	117	---	---

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

Matrix: SOIL

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



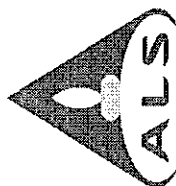
Matrix: SOIL		Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682326)											
HK0809451-001	Anonymous	C10 - C14 Fraction	---	16 mg/kg	76.3	---	---	50	50	130	---
		C15 - C28 Fraction	---	53 mg/kg	81.6	---	---	50	50	130	---
		C29 - C36 Fraction	---	45 mg/kg	60.2	---	---	50	50	130	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682336)											
HK0809451-001	Anonymous	C6 - C9 Fraction	---	4 mg/kg	62.4	---	---	50	50	130	---
EP-080: BTEX (QCLot: 682336)											
HK0809451-001	Anonymous	Benzene	71-43-2	0.2 mg/kg	52.9	---	---	50	50	130	---
		Toluene	108-88-3	0.2 mg/kg	57.9	---	---	50	50	130	---
		Ethylbenzene	100-41-4	0.2 mg/kg	59.6	---	---	50	50	130	---
		meta- & para-Xylene	108-38-3	0.4 mg/kg	67.8	---	---	50	50	130	---
		ortho-Xylene	106-42-3	0.2 mg/kg	67.9	---	---	50	50	130	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689598)											
HK0809703-002	AC-01_4.06-4.51m BBC	C6 - C8 Fraction	---	3 mg/kg	98.0	---	---	50	50	130	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 689607)											
HK0809703-002	AC-01_4.06-4.51m BBC	C9 - C16 Fraction	---	31 mg/kg	77.9	---	---	50	50	130	---
		C17 - C35 Fraction	---	75 mg/kg	77.8	---	---	50	50	130	---

Surrogate Control Limits

Sub-Matrix: SOIL		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
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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

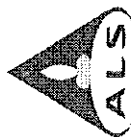
Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 12
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0809333
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Project	: KLN_2008_1	Quote number	: ---	Date received	: 13-JUN-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002286			No. of samples	: Received : 3
Site	: KAI TAK				: Analysed : 3

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Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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A Campbell Brothers Limited Company



Page Number : 2 of 12
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809333, Amendment 1

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809333_1.00 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number; LOR = Limit of reporting.

Specific comments for Work Order HK0809333 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in a chilled condition.

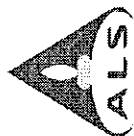
Water sample(s) analysed and reported on an as received basis.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

Water sample(s) were filtered prior to dissolved metal analysis.

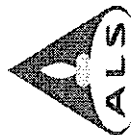
Sample(s) as received, digested by in-house method E-ASTM D3974-81 based on ASTM D3974-81, prior to the determination of metals.

"m BGL" denoted that sample depth in the unit of "meter below ground level" and "m BBC" denoted that sample depth in the unit of "meter below base of concrete".

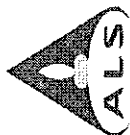


Analytical Results

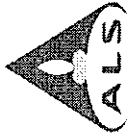
Sub-Matrix: GROUNDWATER		Client sample ID		AC-07 GW_1.69m BGL		AC-08 GW_0.40m BGL	
		Client sampling date / time		13-JUN-2008 11:10		13-JUN-2008 11:40	
Compound	CAS Number	LOR	Unit	HK0809333-001	HK0809333-002	HK0809333-002	HK0809333-002
EG: Metals and Major Cations - Filtered							
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05
EP-071: Total Petroleum Hydrocarbons (TPH)							
C10 - C14 Fraction	—	50	µg/L	<50	140	140	140
C15 - C28 Fraction	—	100	µg/L	200	1800	1800	1800
C29 - C36 Fraction	—	50	µg/L	140	160	160	160
C6 - C9 Fraction	—	20	µg/L	<20	<20	<20	<20
EP-080: BTEX							
Benzene	71-43-2	5	µg/L	—	<5	<5	<5
Toluene	108-88-3	5	µg/L	—	<5	<5	<5
Ethylbenzene	100-41-4	5	µg/L	—	<5	<5	<5
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	—	<10	<10	<10
ortho-Xylene	95-47-6	5	µg/L	—	<5	<5	<5
EP-071HK: Total Petroleum Hydrocarbons (TPH)							
C9 - C16 Fraction	—	500	µg/L	<500	<500	<500	<500
C17 - C35 Fraction	—	500	µg/L	<500	1700	1700	1700
C6 - C8 Fraction	—	20	µg/L	<20	<20	<20	<20
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH)							
Benzene	71-43-2	5	µg/L	<5	—	—	—
Toluene	108-88-3	5	µg/L	<5	—	—	—
Ethylbenzene	100-41-4	5	µg/L	<5	—	—	—
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	—	—	—
Styrene	100-42-5	5	µg/L	<5	—	—	—
ortho-Xylene	95-47-6	5	µg/L	<5	—	—	—
EP-074B: Oxygenated Compounds							
2-Butanone (MEK)	78-93-3	50	µg/L	<50	—	—	—
EP-074E: Halogenated Aliphatics							
Trichloroethene	79-01-6	5	µg/L	<5	—	—	—
Tetrachloroethene	127-18-4	5	µg/L	<5	—	—	—
EP-074G: Trihalomethanes (THM)							
Chloroform	67-66-3	5	µg/L	<5	—	—	—
Bromodichloromethane	75-27-4	5	µg/L	<5	—	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	2	µg/L	<2	<2	<2	<2
Acenaphthylene	208-96-8	2	µg/L	<2	<2	<2	<2
Acenaphthene	83-32-9	2	µg/L	<2	<2	<2	<2
Fluorene	86-73-7	2	µg/L	<2	<2	<2	<2
Phenanthrene	85-01-8	2	µg/L	<2	<2	<2	<2



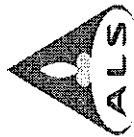
Sub-Matrix: GROUNDWATER			Client sample ID		AC-07 GW_1.69m BGL		AC-08 GW_0.40m BGL	
			Client sampling date / time		13-JUN-2008 11:10		13-JUN-2008 11:40	
Compound	CAS Number	LOR	Unit		HK0809333-001		HK0809333-002	
EP-075B: Polyaromatic Hydrocarbons (PAHs) - Continued								
Anthracene	120-12-7	2	µg/L		<2		<2	
Fluoranthene	206-44-0	2	µg/L		<2		<2	
Pyrene	129-00-0	2	µg/L		<2		<2	
Chrysene	218-01-9	2	µg/L		<2		<2	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L		<4		<4	
EP-075G: Chlorinated Hydrocarbons								
Hexachlorobenzene (HCB)	118-74-1	4	µg/L		<4		---	
EP-080S: TPH(Volatile)/BTEX Surrogate								
Dibromofluoromethane	1868-53-7	0.1	%		110		111	
Toluene-D8	2037-26-5	0.1	%		102		101	
4-Bromofluorobenzene	460-00-4	0.1	%		100		103	
Dibromofluoromethane	1868-53-7	0.1	%		110		111	
Toluene-D8	2037-26-5	0.1	%		102		101	
4-Bromofluorobenzene	460-00-4	0.1	%		100		103	
EP-074S: VOC Surrogates								
Dibromofluoromethane	1868-53-7	0.1	%		110		---	
Toluene-D8	2037-26-5	0.1	%		102		---	
4-Bromofluorobenzene	460-00-4	0.1	%		100		---	
EP-075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.1	%		44.7		36.7	
Phenol-d6	13127-88-3	0.1	%		35.3		22.9	
2,4,6-Tribromophenol	118-79-6	0.1	%		86.8		62.5	
EP-075T: Base/Neutral Extractable Surrogates								
Nitrobenzene -d5	4165-60-0	0.1	%		62.6		38.0	
2-Fluorobiphenyl	321-60-8	0.1	%		48.9		52.8	
4-Terphenyl-d14	1718-51-0	0.1	%		96.2		79.9	
Surrogate control limits listed at end of this report.								



Sub-Matrix: SOIL		Client sample ID		AC-01_1.00m BBC	
		Client sampling date / time		13-JUN-2008 14:15	
Compound	CAS Number	LOR	Unit	HK0809333-003	
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	12.5	
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	—	50	mg/kg	<50	
C15 - C28 Fraction	—	100	mg/kg	<100	
C29 - C36 Fraction	—	100	mg/kg	<100	
C6 - C9 Fraction	—	2	mg/kg	<2	
EP-080: BTEX					
Benzene	71-43-2	0.5	mg/kg	<0.5	
Toluene	108-88-3	0.5	mg/kg	<0.5	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	—	200	mg/kg	<200	
C17 - C35 Fraction	—	500	mg/kg	<500	
C6 - C8 Fraction	—	5	mg/kg	<5	
EP-075B: Polyaromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	0.5	mg/kg	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	100	
Toluene-D8	2037-26-5	0.1	%	99.6	
4-Bromofluorobenzene	460-00-4	0.1	%	113	
				Surrogate control limits listed at end of this report.	

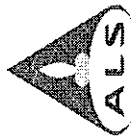


Sub-Matrix: SOIL			Client sample ID		AC-01_1.00m BBC	
			Client sampling date / time		13-JUN-2008 14:15	
Compound	CAS Number	LOR	Unit	HK0809333-003		
EP-080S: TPH(Volatile)/BTX Surrogate - Continued						Surrogate control limits listed at end of this report.
Dibromofluoromethane	1868-53-7	0.1	%	100		
Toluene-D8	2037-26-5	0.1	%	99.6		
4-Bromofluorobenzene	460-00-4	0.1	%	113		
EP-075S: Acid Extractable Surrogates						Surrogate control limits listed at end of this report.
2-Fluorophenol	367-12-4	0.1	%	76.2		
Phenol-d6	13127-88-3	0.1	%	73.7		
2,4,6-Tribromophenol	118-79-6	0.1	%	63.5		
EP-075T: Base/Neutral Extractable Surrogates						Surrogate control limits listed at end of this report.
Nitrobenzene -d5	4165-60-0	0.1	%	76.6		
2-Fluorobiphenyl	321-60-8	0.1	%	74.0		
4-Terphenyl-d14	1718-51-0	0.1	%	97.2		



Laboratory Duplicate (DUP) Report

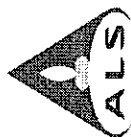
Matrix: SOIL				Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result
EAJED: Physical and Aggregate Properties (QC Lot: 682450)							
HK0809193-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	20.7	20.6
HK0809332-005	Anonymous	EA055: Moisture Content (dried @ 103°C)	—	0.1	%	15.8	16.4
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682326)							
HK0809193-001	Anonymous	C15 - C28 Fraction	—	100	mg/kg	<100	<100
		C29 - C36 Fraction	—	100	mg/kg	<100	<100
		C10 - C14 Fraction	—	50	mg/kg	<50	<50
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682336)							
HK0809193-001	Anonymous	C6 - C9 Fraction	—	2	mg/kg	<2	<2
EP-080: BTEX (QC Lot: 682336)							
HK0809193-001	Anonymous	Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2
		Toluene	108-88-3	0.2	mg/kg	<0.2	<0.2
		Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	<0.2
		ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	<0.2
		meta- & para-Xylene	106-38-3	0.4	mg/kg	<0.4	<0.4
			106-42-3				
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682324)							
HK0809193-001	Anonymous	C9 - C16 Fraction	—	200	mg/kg	<200	<200
		C17 - C35 Fraction	—	500	mg/kg	<500	<500
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682335)							
HK0809193-001	Anonymous	C6 - C8 Fraction	—	5	mg/kg	<5	<5
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 682325)							
HK0809193-003	Anonymous	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5
		Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5
		Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5
		Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5
		Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5
		Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5
		Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5
		Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5
		Indeno(1,2,3-cd)pyrene	193-36-5	0.5	mg/kg	<0.5	<0.5
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1
			207-08-9				



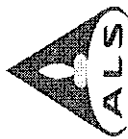
Matrix: WATER		Method: Compound									
Laboratory sample ID	Client sample ID	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Laboratory Duplicate (DUP) Report			
EG: Metals and Major Cations - Filtered (QC Lot: 684134)											
HK0809193-010	Anonymous	7439-97-6	0.05	µg/L	<0.05	<0.05	0.0				
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 681932)											
HK0809333-001	AC-07 GW_1.69m BGL	—	20	µg/L	<20	<20	0.0				
EP-080: BTEX (QC Lot: 681932)											
HK0809333-001	AC-07 GW_1.69m BGL	71-43-2	2	µg/L	<2	<2	0.0				
		108-98-3	2	µg/L	<2	<2	0.0				
		100-41-4	2	µg/L	<2	<2	0.0				
		95-47-6	2	µg/L	<2	<2	0.0				
		108-38-3	4	µg/L	<5	<5	0.0				
		108-42-3									
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678842)											
HK0809072-001	Anonymous	—	0.02	mg/L	<0.02	<0.02	0.0				
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 681933)											
HK0809333-001	AC-07 GW_1.69m BGL	108-38-3	10	µg/L	<10	<10	0.0				
		106-42-3									
		71-43-2	5	µg/L	<5	<5	0.0				
		108-98-3	5	µg/L	<5	<5	0.0				
		100-41-4	5	µg/L	<5	<5	0.0				
		100-42-5	5	µg/L	<5	<5	0.0				
		95-47-6	5	µg/L	<5	<5	0.0				
EP-074B: Oxygenated Compounds (QC Lot: 681933)											
HK0809333-001	AC-07 GW_1.69m BGL	78-93-3	50	µg/L	<50	<50	0.0				
EP-074E: Halogenated Aliphatics (QC Lot: 681933)											
HK0809333-001	AC-07 GW_1.69m BGL	79-01-6	5	µg/L	<5	<5	0.0				
		127-18-4	5	µg/L	<5	<5	0.0				
EP-074G: Trihalomethanes (THM) (QC Lot: 681933)											
HK0809333-001	AC-07 GW_1.69m BGL	67-86-3	5	µg/L	<5	<5	0.0				
		75-27-4	5	µg/L	<5	<5	0.0				

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

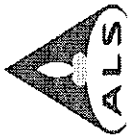
Matrix: SOIL										Method Blank (MB) Report									
Method: Compound		CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
										Low	High								
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682326)																			
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	75.5	—	47	132	—	—	—							
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	67.7	—	46	126	—	—	—							
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	61.2	—	37	122	—	—	—							
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682336)																			
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	97.4	—	58	126	—	—	—							



Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
Method Blank (MB) Report				Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
Matrix: SOIL									
EP-080: BTEX (QCLot: 682336)									
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	75.4	—	66 127	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	89.6	—	75 118	—
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	99.9	—	87 115	—
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	108	—	87 116	—
ortho-Xylene	106-42-3	—	—	—	—	—	—	—	—
95-47-6	0.2	mg/kg	<0.2	—	0.2 mg/kg	108	—	83 116	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682324)									
C9 - C16 Fraction	—	200	mg/kg	<200	32 mg/kg	89.3	—	34 123	—
C17 - C35 Fraction	—	500	mg/kg	<500	75 mg/kg	78.6	—	27 132	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682335)									
C6 - C8 Fraction	—	5	mg/kg	<5	3 mg/kg	102	—	25 135	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 682325)									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	60.5	—	57 98	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 61.2	—	63 99	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	69.7	—	62 102	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	72.4	—	62 109	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	# 63.2	—	66 100	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	63.9	—	61 101	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 68.4	—	73 105	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	# 71.5	—	73 105	—
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	68.0	—	45 113	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	68.0	—	65 112	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	—	0.50 mg/kg	88.0	—	71 107	—
Benzo(a)pyrene	207-08-9	—	—	<1	—	—	—	—	—
Indeno(1,2,3-cd)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	67.4	—	51 109	—
Dibenz(a,h)anthracene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	64.1	—	46 119	—
Benzo(g,h,i)perylene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.9	—	62 113	—
Benzo(a)anthracene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	74.3	—	58 117	—
Matrix: WATER									
Method Blank (MB) Report									
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
EG: Metals and Major Cations - Filtered (QCLot: 684134)									
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	0.2 µg/L	106	—	85 115	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 678809)									
C10 - C14 Fraction	—	50	µg/L	<50	150 µg/L	66.4	—	37 129	—
C15 - C28 Fraction	—	100	µg/L	<100	350 µg/L	51.3	—	39 128	—
C29 - C36 Fraction	—	50	µg/L	<50	300 µg/L	52.8	—	15 137	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 681932)									
C6 - C9 Fraction	—	20	µg/L	<20	200 µg/L	89.4	—	78 126	—



Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)
Matrix: WATER											
EP-080: BTEX (QCLot: 681932)											
Benzene	71-43-2	2	µg/L	<2	10 µg/L	87.5	—	—	75	125	—
Toluene	108-88-3	2	µg/L	<2	10 µg/L	94.4	—	—	76	122	—
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	99.3	—	—	78	119	—
meta- & para-Xylene	108-38-3	4	µg/L	<5	20 µg/L	98.0	—	—	84	116	—
	106-42-3										
ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	85.6	—	—	78	117	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 678810)											
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.3 mg/L	56.8	—	—	50	130	—
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	51.1	—	—	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 678842)											
C6 - C8 Fraction	—	0.5	mg/L	—	0.15 mg/L	80.6	—	—	50	130	—
				<0.02	—	—	—	—	—	—	—
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QCLot: 681933)											
Benzene	71-43-2	5	µg/L	<5	10 µg/L	99.4	—	—	54	132	—
Toluene	108-88-3	5	µg/L	<5	10 µg/L	103	—	—	59	128	—
Ethylbenzene	100-41-4	5	µg/L	<5	10 µg/L	97.2	—	—	68	125	—
meta- & para-Xylene	108-38-3	10	µg/L	<10	20 µg/L	92.3	—	—	75	122	—
	106-42-3										
Styrene	100-42-5	5	µg/L	<5	10 µg/L	99.4	—	—	73	119	—
ortho-Xylene	95-47-6	5	µg/L	<5	10 µg/L	94.6	—	—	72	125	—
EP-074B: Oxygenated Compounds (QCLot: 681933)											
2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	119	—	—	63	126	—
EP-074E: Halogenated Aliphatics (QCLot: 681933)											
Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	97.9	—	—	67	125	—
Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	90.6	—	—	59	126	—
EP-074G: Trihalomethanes (THM) (QCLot: 681933)											
Chloroform	67-66-3	5	µg/L	<5	10 µg/L	98.7	—	—	68	123	—
Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	94.0	—	—	77	120	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 677243)											
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	60.0	—	—	42	105	—
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	67.1	—	—	44	108	—
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	73.1	—	—	41	108	—
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	79.0	—	—	52	104	—
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	77.4	—	—	60	105	—
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	78.5	—	—	58	106	—
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	85.0	—	—	67	105	—
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	88.3	—	—	62	109	—
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	85.9	—	—	63	109	—



Page Number : 11 of 12
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809333, Amendment 1

Matrix: WATER				Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Low	High	Value	RPDs (%)
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 677243) - continued													
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	89.9	---	---	34	130	---	---	---
207-08-9													
EP-075G: Chlorinated Hydrocarbons (QCLot: 677243)													
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	5 µg/L	86.5	---	---	47	112	---	---	---

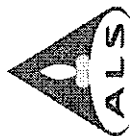
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: SOIL

Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682326)													
HK0809451-001	Anonymous	C10 - C14 Fraction	---	16 mg/kg	76.3	---	---	50	130	---	---	---	---
		C15 - C28 Fraction	---	53 mg/kg	81.6	---	---	50	130	---	---	---	---
		C29 - C36 Fraction	---	45 mg/kg	60.2	---	---	50	130	---	---	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 682336)													
HK0809451-001	Anonymous	C6 - C9 Fraction	---	4 mg/kg	62.4	---	---	50	130	---	---	---	---
EP-080: BTEX (QCLot: 682336)													
HK0809451-001	Anonymous	Benzene	71-43-2	0.2 mg/kg	52.9	---	---	50	130	---	---	---	---
		Toluene	108-88-3	0.2 mg/kg	57.9	---	---	50	130	---	---	---	---
		Ethylbenzene	100-41-4	0.2 mg/kg	59.6	---	---	50	130	---	---	---	---
		meta- & para-Xylene	108-38-3	0.4 mg/kg	67.8	---	---	50	130	---	---	---	---
		ortho-Xylene	106-42-3	0.2 mg/kg	67.9	---	---	50	130	---	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682324)													
HK0809193-003	Anonymous	C9 - C16 Fraction	---	32 mg/kg	79.3	---	---	50	130	---	---	---	---
		C17 - C35 Fraction	---	75 mg/kg	79.0	---	---	50	130	---	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682335)													
HK0809193-003	Anonymous	C6 - C8 Fraction	---	9.375 mg/kg	97.2	---	---	50	130	---	---	---	---
Matrix: WATER													
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit
EG: Metals and Major Cations - Filtered (QCLot: 684134)													
HK0809193-009	Anonymous	EG036: Mercury	7439-97-6	0.2 µg/L	104	---	---	75	125	---	---	---	---

Surrogate Control Limits

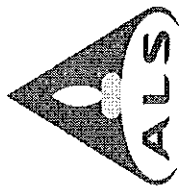
Sub-Matrix: GROUNDWATER	CAS Number	Low	High
Compound			



Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	21	100
Phenol-d6	13127-88-3	20	94
2,4,6-Tribromophenol	118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	35	114
2-Fluorobiphenyl	321-60-8	43	116
4-Terphenyl-d14	1718-51-0	33	141
Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121
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

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ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

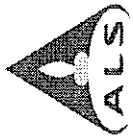
Client	: CIVIL ENGINEERING AND DEVELOPMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 17
Contact	: DEPARTMENT	Contact	: Wong Wai Man, Alice	Work Order	: HK0809193
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Project	: vincent.auyeung@maunsell.com.hk	Quote number	: ---	Date received	: 11-JUN-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: KLN_2008_1			No. of samples	: - Received : 9
Site	: ---				: - Analysed : 9

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Signature	Position	Authorised results for:-
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Page Number : 2 of 17
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809193

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809193 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0809193 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

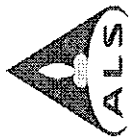
Sample(s) were received in a chilled condition.

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

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.

Water sample(s) were filtered prior to dissolved metal analysis.

Sample(s) as received, digested by In-house method E-ASTM D3974-81 based on ASTM D3974-81, prior to the determination of metals.
"m BBC" denoted that sample depth in the unit of "meter below base of concrete".

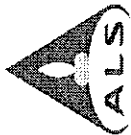


Analytical Results

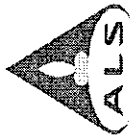
Sub-Matrix: SOIL		Client sample ID		Client sampling date / time		LOR		Unit		AC-07_1.00m BBC	AC-08_1.00m BBC	AC-07_2.00-2.45m BBC	AC-08_2.40-2.85m BBC	AC-07_3.40-3.85m BBC
Compound	CAS Number	LOR	Unit	Client sampling date / time	Unit	AC-07_1.00m BBC	AC-08_1.00m BBC	AC-07_2.00-2.45m BBC	AC-08_2.40-2.85m BBC	AC-07_3.40-3.85m BBC				
EA/ED: Physical and Aggregate Properties														
EA055: Moisture Content (dried @ 103° C)														
EG: Metals and Major Cations														
EG020: Antimony	7440-36-0	1	mg/kg	<1		<1	<1	<1	<1	<1				
EG020: Arsenic	7440-38-2	1	mg/kg	1		1	2	2	2	3				
EG020: Barium	7440-39-3	1	mg/kg	18		18	43	8	151	6				
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2				
EG020: Cobalt	7440-48-4	1	mg/kg	2		2	3	1	3	1				
EG020: Copper	7440-50-8	1	mg/kg	<1		<1	<1	<1	3	3				
EG020: Lead	7439-92-1	1	mg/kg	47		47	40	60	23	28				
EG020: Manganese	7439-96-5	1	mg/kg	168		168	484	126	1350	59				
EG020: Mercury	7439-97-6	0.2	mg/kg	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2				
EG020: Molybdenum	7439-98-7	1	mg/kg	<1		<1	<1	1	<1	<1				
EG020: Nickel	7440-02-0	1	mg/kg	<1		<1	<1	1	<1	<1				
EG020: Tin	7440-31-5	1.0	mg/kg	<1.0		<1.0	2.5	2.9	2.3	4.7				
EG020: Zinc	7440-66-6	1	mg/kg	14		14	19	96	89	47				
EG049: Trivalent Chromium	16065-83-1	1	mg/kg	<1		<1	<1	<1	<1	<1				
EG3060: Hexavalent Chromium	18540-29-9	1	mg/kg	<1		<1	<1	<1	<1	<1				
EP-071: Total Petroleum Hydrocarbons (TPH)														
C10 - C14 Fraction	—	50	mg/kg	<50		<50	<50	<50	<50	<50				
C15 - C28 Fraction	—	100	mg/kg	<100		<100	<100	<100	<100	<100				
C29 - C36 Fraction	—	100	mg/kg	<100		<100	<100	<100	<100	<100				
C6 - C9 Fraction	—	2	mg/kg	<2		<2	<2	<2	<2	<2				
EP-071HK: Total Petroleum Hydrocarbons (TPH)														
C9 - C16 Fraction	—	200	mg/kg	<200		<200	<200	<200	<200	<200				
C17 - C35 Fraction	—	500	mg/kg	<500		<500	<500	<500	<500	<500				
C6 - C8 Fraction	—	5	mg/kg	<5		<5	<5	<5	<5	<5				
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH)														
Benzene	71-43-2	0.50	mg/kg	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50				
Toluene	108-88-3	0.50	mg/kg	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50				
Ethylbenzene	100-41-4	0.50	mg/kg	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50				
meta- & para-Xylene	106-38-3	0.50	mg/kg	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50				
Styrene	100-42-5	0.50	mg/kg	<0.50		<0.50	—	<0.50	—	<0.50				
ortho-Xylene	95-47-6	0.50	mg/kg	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50				
EP-074B: Oxygenated Compounds														
2-Butanone (MEK)	78-93-3	5.0	mg/kg	<5.0		<5.0	—	<5.0	—	<5.0				



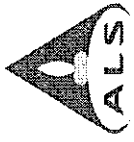
Sub-Matrix: SOIL		Client sample ID				AC-07_1.00m BBC		AC-08_1.00m BBC		AC-07_2.00-2.45m BBC		AC-08_2.40-2.85m BBC		AC-07_3.40-3.85m BBC	
Compound	CAS Number	LOR	Unit	Client sampling date / time		HK0809193-001		HK0809193-003		HK0809193-005		HK0809193-006		HK0809193-007	
EP-074E: Halogenated Aliphatics															
Trichloroethene	79-01-6	0.50	mg/kg			<0.50		—		<0.50		—		<0.50	
Tetrachloroethene	127-18-4	0.04	mg/kg			<0.04		—		<0.04		—		<0.04	
EP-074G: Trihalomethanes (THM)															
Chloroform	67-66-3	0.04	mg/kg			<0.04		—		<0.04		—		<0.04	
Bromodichloromethane	75-27-4	0.10	mg/kg			<0.10		—		<0.10		—		<0.10	
EP-075A: Phenols															
Phenol	108-95-2	0.5	mg/kg			<0.5		—		<0.5		—		<0.5	
EP-075B: Polyaromatic Hydrocarbons (PAHs)															
Naphthalene	91-20-3	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Acenaphthene	83-32-9	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Fluorene	86-73-7	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	
Benz(a)anthracene	56-55-3	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Chrysene	218-01-9	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg			<1.0		<1.0		<1.0		<1.0		<1.0	
Benzo(a)pyrene	50-32-8	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg			<0.5		<0.5		<0.5		<0.5		<0.5	
EP-075C: Phthalate Esters															
Bis(2-ethylhexyl)phthalate	117-81-7	5.0	mg/kg			<5.0		—		<5.0		—		<5.0	
EP-075G: Chlorinated Hydrocarbons															
Hexachlorobenzene (HCB)	118-74-1	0.2	mg/kg			<0.2		—		<0.2		—		<0.2	
EP-080S: TPH(Volatile)/BTX Surrogate															
Dibromofluoromethane	1868-53-7	0.1	%			101		97.7		102		101		101	
Toluene-D8	2037-26-5	0.1	%			104		102		101		101		102	
4-Bromofluorobenzene	460-00-4	0.1	%			110		112		111		111		112	
Dibromofluoromethane	1868-53-7	0.1	%			101		97.7		102		101		101	
Toluene-D8	2037-26-5	0.1	%			104		102		101		101		102	
4-Bromofluorobenzene	460-00-4	0.1	%			110		112		111		111		112	
EP-074S: VOC Surrogates															
Surrogate control limits listed at end of this report.															



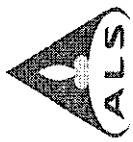
Sub-Matrix: SOIL		Client sample ID		AC-07_1.00m BBC		AC-08_1.00m BBC		AC-07_2.00-2.45m BBC		AC-08_2.40-2.85m BBC		AC-07_3.40-3.85m BBC		
		Client sampling date / time		11-JUN-2008 10:30		11-JUN-2008 11:00		11-JUN-2008 14:15		11-JUN-2008 14:30		11-JUN-2008 15:00		
		CAS Number	LOR	Unit	HK0809193-001		HK0809193-003		HK0809193-005		HK0809193-006		HK0809193-007	
Compound														
EP-074S: VOC Surrogates - Continued														
Dibromofluoromethane				1868-53-7	0.1	%	101	97.7	102	101	101	101	101	
Toluene-D8				2037-26-5	0.1	%	104	102	101	101	101	102	102	
4-Bromofluorobenzene				460-00-4	0.1	%	110	112	111	111	111	112	112	
EP-075S: Acid Extractable Surrogates														
2-Fluorophenol				367-12-4	0.1	%	75.8	64.7	69.2	64.5	64.5	72.0	72.0	
Phenol-d6				13127-88-3	0.1	%	76.8	63.4	67.4	64.3	64.3	75.1	75.1	
2,4,6-Tribromophenol				118-79-6	0.1	%	90.3	41.7	71.6	57.8	57.8	64.4	64.4	
EP-075T: Base/Neutral Extractable Surrogates														
Nitrobenzene -d5				4165-60-0	0.1	%	74.1	73.5	68.7	66.1	66.1	75.3	75.3	
2-Fluorobiphenyl				321-60-8	0.1	%	79.6	69.2	69.9	63.4	63.4	80.6	80.6	
4-Terphenyl-d14				1718-51-0	0.1	%	93.2	88.7	98.0	86.0	86.0	94.8	94.8	



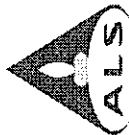
Sub-Matrix: SOIL		Client sample ID		AC-08_3.40-3.85m	
		Client sampling date / time		BBC	
		Client sampling date / time		11-JUN-2008 15:30	
		CAS Number		LOR	
		Unit		HK0809193-008	
Compound					
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)					
		—	0.1	%	12.2
EG: Metals and Major Cations					
EG020: Antimony	7440-36-0	1		mg/kg	<1
EG020: Arsenic	7440-38-2	1		mg/kg	2
EG020: Barium	7440-39-3	1		mg/kg	34
EG020: Cadmium	7440-43-9	0.2		mg/kg	<0.2
EG020: Cobalt	7440-48-4	1		mg/kg	2
EG020: Copper	7440-50-8	1		mg/kg	11
EG020: Lead	7439-92-1	1		mg/kg	72
EG020: Manganese	7439-96-5	1		mg/kg	720
EG020: Mercury	7439-97-6	0.2		mg/kg	<0.2
EG020: Molybdenum	7439-98-7	1		mg/kg	1
EG020: Nickel	7440-02-0	1		mg/kg	3
EG020: Tin	7440-31-5	1.0		mg/kg	2.4
EG020: Zinc	7440-66-6	1		mg/kg	293
EG049: Trivalent Chromium	16065-83-1	1		mg/kg	<1
EG3060: Hexavalent Chromium	18540-29-9	1		mg/kg	<1
EP-071: Total Petroleum Hydrocarbons (TPH)					
C10 - C14 Fraction	—	50		mg/kg	<50
C15 - C28 Fraction	—	100		mg/kg	<100
C29 - C36 Fraction	—	100		mg/kg	<100
C6 - C9 Fraction	—	2		mg/kg	<2
EP-071HK: Total Petroleum Hydrocarbons (TPH)					
C9 - C16 Fraction	—	200		mg/kg	<200
C17 - C35 Fraction	—	500		mg/kg	<500
C6 - C8 Fraction	—	5		mg/kg	<5
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH)					
Benzene	71-43-2	0.50		mg/kg	<0.50
Toluene	108-88-3	0.50		mg/kg	<0.50
Ethylbenzene	100-41-4	0.50		mg/kg	<0.50
meta- & para-Xylene	108-38-3	0.50		mg/kg	<0.50
ortho-Xylene	95-47-6	0.50		mg/kg	<0.50
EP-075B: Polyaromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	0.5		mg/kg	<0.5
Acenaphthylene	208-96-8	0.5		mg/kg	<0.5



Sub-Matrix: SOIL			Client sample ID		AC-08_3.40-3.85m
			Client sampling date / time		BBC
			11-JUN-2008 15:30		
Compound	CAS Number	LOR	Unit	HK0809193-008	
EP-075B: Polyaromatic Hydrocarbons (PAHs) - Continued					
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	99.2	
Toluene-D8	2037-26-5	0.1	%	102	
4-Bromofluorobenzene	460-00-4	0.1	%	114	
Dibromofluoromethane	1868-53-7	0.1	%	99.2	
Toluene-D8	2037-26-5	0.1	%	102	
4-Bromofluorobenzene	460-00-4	0.1	%	114	
EP-074S: VOC Surrogates					
Dibromofluoromethane	1868-53-7	0.1	%	99.2	
Toluene-D8	2037-26-5	0.1	%	102	
4-Bromofluorobenzene	460-00-4	0.1	%	114	
EP-075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	70.4	
Phenol-d6	13127-88-3	0.1	%	68.3	
2,4,6-Tribromophenol	118-79-6	0.1	%	67.1	
EP-075T: Base/Neutral Extractable Surrogates					
Nitrobenzene -d5	4165-60-0	0.1	%	70.3	
2-Fluorobiphenyl	321-60-8	0.1	%	65.7	
4-Terphenyl-d14	1718-51-0	0.1	%	89.2	



Sub-Matrix: WATER		Client sample ID		FIELD BLANK (2)		EQUIPMENT BLANK (2)		TRIP BLANK (2)	
		Client sampling date / time		11-JUN-2008 15:00		11-JUN-2008 16:00		11-JUN-2008 16:30	
Compound	CAS Number	LOR	Unit	HK0809193-009		HK0809193-010		HK0809193-011	
EG: Metals and Major Cations - Filtered									
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05		<0.05		—	
EP-071: Total Petroleum Hydrocarbons (TPH)									
C10 - C14 Fraction	—	50	µg/L	<50		<50		—	
C15 - C28 Fraction	—	100	µg/L	<100		<100		—	
C29 - C36 Fraction	—	50	µg/L	<50		<50		—	
C6 - C9 Fraction	—	20	µg/L	<20		<20		<20	
EP-071HK: Total Petroleum Hydrocarbons (TPH)									
C9 - C16 Fraction	—	500	µg/L	<500		<500		—	
C17 - C35 Fraction	—	500	µg/L	<500		<500		—	
C6 - C8 Fraction	—	20	µg/L	<20		<20		<20	
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH)									
Benzene	71-43-2	5	µg/L	<5		<5		<5	
Toluene	108-88-3	5	µg/L	<5		<5		<5	
Ethylbenzene	100-41-4	5	µg/L	<5		<5		<5	
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10		<10		<10	
Styrene	100-42-5	5	µg/L	<5		<5		—	
ortho-Xylene	95-47-6	5	µg/L	<5		<5		<5	
EP-074B: Oxygenated Compounds									
2-Butanone (MEK)	78-93-3	50	µg/L	<50		<50		—	
EP-074E: Halogenated Aliphatics									
Trichloroethene	79-01-6	5	µg/L	<5		<5		—	
Tetrachloroethene	127-18-4	5	µg/L	<5		<5		—	
EP-074G: Trihalomethanes (THM)									
Chloroform	67-66-3	5	µg/L	5		6		—	
Bromodichloromethane	75-27-4	5	µg/L	<5		<5		—	
EP-075B: Polyaromatic Hydrocarbons (PAHs)									
Naphthalene	91-20-3	2	µg/L	<2		<2		—	
Acenaphthylene	208-96-8	2	µg/L	<2		<2		—	
Acenaphthene	83-32-9	2	µg/L	<2		<2		—	
Fluorene	86-73-7	2	µg/L	<2		<2		—	
Phenanthrene	85-01-8	2	µg/L	<2		<2		—	
Anthracene	120-12-7	2	µg/L	<2		<2		—	
Fluoranthene	206-44-0	2	µg/L	<2		<2		—	
Pyrene	129-00-0	2	µg/L	<2		<2		—	
Chrysene	218-01-9	2	µg/L	<2		<2		—	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4		<4		—	



Sub-Matrix: WATER		Client sample ID		FIELD BLANK (2)	EQUIPMENT BLANK (2)	TRIP BLANK (2)
		Client sampling date / time		11-JUN-2008 15:00	11-JUN-2008 16:00	11-JUN-2008 16:30
Compound	CAS Number	LOR	Unit	HK0809193-009	HK0809193-010	HK0809193-011
EP-075G: Chlorinated Hydrocarbons						
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	---
EP-080S: TPH(Volatile)/BTX Surrogate						
Dibromofluoromethane	1868-53-7	0.1	%	108	112	110
Toluene-D8	2037-26-5	0.1	%	102	101	101
4-Bromofluorobenzene	480-00-4	0.1	%	100	101	102
Dibromofluoromethane	1868-53-7	0.1	%	108	112	110
Toluene-D8	2037-26-5	0.1	%	102	101	101
4-Bromofluorobenzene	480-00-4	0.1	%	100	101	102
EP-074S: VOC Surrogates						
Dibromofluoromethane	1868-53-7	0.1	%	108	112	110
Toluene-D8	2037-26-5	0.1	%	102	101	101
4-Bromofluorobenzene	480-00-4	0.1	%	100	101	102
EP-075S: Acid Extractable Surrogates						
2-Fluorophenol	367-12-4	0.1	%	34.4	35.4	---
Phenol-d6	13127-88-3	0.1	%	31.3	27.7	---
2,4,6-Tribromophenol	118-79-6	0.1	%	59.5	65.1	---
EP-075T: Base/Neutral Extractable Surrogates						
Nitrobenzene -d5	4165-60-0	0.1	%	66.8	70.2	---
2-Fluorobiphenyl	321-60-8	0.1	%	56.3	55.3	---
4-Terphenyl-d14	1718-51-0	0.1	%	97.6	95.2	---

Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.

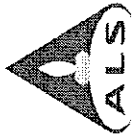
Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.

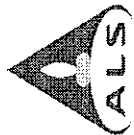


Laboratory Duplicate (DUP) Report

Matrix: SOIL		Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 682450)								
HK0809193-001	AC-07_1.00m BBC	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	20.7	20.6	0.0
HK0809332-005	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	15.8	16.4	3.5
EG: Metals and Major Cations (QC Lot: 683273)								
HK0809193-003	AC-08_1.00m BBC	EG3060: Hexavalent Chromium	18540-29-9	1	mg/kg	<1	<1	0.0
EG: Metals and Major Cations (QC Lot: 685222)								
HK0809193-003	AC-08_1.00m BBC	EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-8	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	2	1	0.0
		EG020: Barium	7440-39-3	1	mg/kg	43	48	10.4
		EG020: Cobalt	7440-48-4	1	mg/kg	3	3	0.0
		EG020: Copper	7440-50-8	1	mg/kg	<1	<1	0.0
		EG020: Lead	7439-92-1	1	mg/kg	40	38	5.3
		EG020: Manganese	7439-96-5	1	mg/kg	484	571	16.4
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	<1	<1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	19	23	20.0
		EG020: Tin	7440-31-5	1.0	mg/kg	2.5	2.4	5.8
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677692)								
HK0808821-001	Anonymous	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: 677695)								
HK0808821-001	Anonymous	C6 - C9 Fraction	---	2	mg/kg	<2	<2	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682324)								
HK0809193-001	AC-07_1.00m BBC	C9 - C16 Fraction	---	200	mg/kg	<200	<200	0.0
		C17 - C35 Fraction	---	500	mg/kg	<500	<500	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682335)								
HK0809193-001	AC-07_1.00m BBC	C6 - C8 Fraction	---	5	mg/kg	<5	<5	0.0
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 682334)								
HK0809193-001	AC-07_1.00m BBC	Benzene	71-43-2	0.50	mg/kg	<0.50	<0.50	0.0
		Toluene	108-88-3	0.50	mg/kg	<0.50	<0.50	0.0
		Ethylbenzene	100-41-4	0.50	mg/kg	<0.50	<0.50	0.0
		meta- & para-Xylene	108-38-3	0.50	mg/kg	<0.50	<0.50	0.0
		Styrene	106-42-3	0.50	mg/kg	<0.50	<0.50	0.0
		ortho-Xylene	100-42-5	0.50	mg/kg	<0.50	<0.50	0.0
			95-47-6	0.50	mg/kg	<0.50	<0.50	0.0
EP-074B: Oxygenated Compounds (QC Lot: 682334)								



Matrix: SOIL				Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result
EP-074B: Oxygenated Compounds (QC Lot: 682334) - continued							
HK0809193-001	AC-07_1.00m BBC	2-Butanone (MEK)	78-93-3	5.0	mg/kg	<5.0	<5.0
EP-074E: Halogenated Aliphatics (QC Lot: 682334)							
HK0809193-001	AC-07_1.00m BBC	Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	<0.04
		Trichloroethene	79-01-6	0.50	mg/kg	<0.50	<0.50
EP-074G: Trihalomethanes (THM) (QC Lot: 682334)							
HK0809193-001	AC-07_1.00m BBC	Chloroform	67-66-3	0.04	mg/kg	<0.04	<0.04
		Bromodichloromethane	75-27-4	0.10	mg/kg	<0.10	<0.10
EP-075A: Phenols (QC Lot: 682323)							
HK0809193-001	AC-07_1.00m BBC	Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 682323)							
HK0809193-001	AC-07_1.00m BBC	Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
		Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5
		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5
		Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5
		Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5
		Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5
		Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5
		Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5
		Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5
		Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	<1.0	<1.0
			207-08-9				
EP-075C: Phthalate Esters (QC Lot: 682323)							
HK0809193-001	AC-07_1.00m BBC	Bis(2-ethylhexyl)phthalate	117-81-7	5.0	mg/kg	<5.0	<5.0
EP-075G: Chlorinated Hydrocarbons (QC Lot: 682323)							
HK0809193-001	AC-07_1.00m BBC	Hexachlorobenzene (HCB)	118-74-1	0.2	mg/kg	<0.2	<0.2
Matrix: WATER							
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result
EG: Metals and Major Cations - Filtered (QC Lot: 684134)							
HK0809193-010	EQUIPMENT BLANK (2)	EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	<0.05
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 681932)							
HK0809333-001	Anonymous	C6 - C9 Fraction	—	20	µg/L	<20	<20
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678842)							
HK0809072-001	Anonymous	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682301)							
HK0809072-001	Anonymous	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02



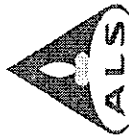
Matrix: WATER

Matrix: WATER								
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 682301) - continued								
HK0809193-011	TRIP BLANK (2)	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02	0.0
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QC Lot: 681933)								
HK0809333-001	Anonymous	meta- & para-Xylene	108-38-3	10	µg/L	<10	<10	0.0
		Benzene	106-42-3	5	µg/L	<5	<5	0.0
		Toluene	71-43-2	5	µg/L	<5	<5	0.0
		Ethylbenzene	108-98-3	5	µg/L	<5	<5	0.0
		Styrene	100-41-4	5	µg/L	<5	<5	0.0
		ortho-Xylene	100-42-5	5	µg/L	<5	<5	0.0
EP-074B: Oxygenated Compounds (QC Lot: 681933)								
HK0809333-001	Anonymous	2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0
EP-074E: Halogenated Aliphatics (QC Lot: 681933)								
HK0809333-001	Anonymous	Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0
		Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0
EP-074G: Trihalomethanes (THM) (QC Lot: 681933)								
HK0809333-001	Anonymous	Chloroform	67-66-3	5	µg/L	<5	<5	0.0
		Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0

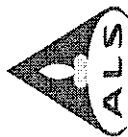
Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: SOIL

Method Blank (MB) Report					Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report				
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Recovery Limits (%)	Value	Control Limit
EG: Metals and Major Cations (QCLot: 683273)									
EG3060: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	110	85 115	—	—
EG: Metals and Major Cations (QCLot: 685222)									
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	88.2	85 115	—	—
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	99.5	85 115	—	—
EG020: Barium	7440-39-3	1	mg/kg	<1	5 mg/kg	104	85 115	—	—
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	102	85 115	—	—
EG020: Cobalt	7440-48-4	1	mg/kg	—	5 mg/kg	101	85 115	—	—
EG020: Copper	7440-50-8	1	mg/kg	<1.0	—	—	—	—	—
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	97.2	85 115	—	—
EG020: Manganese	7439-96-5	1	mg/kg	<1	5 mg/kg	89.9	85 115	—	—
EG020: Mercury	7439-97-8	0.05	mg/kg	<0.05	0.1 mg/kg	102	85 115	—	—
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	99.8	85 115	—	—
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	103	85 115	—	—
EG020: Tin	7440-31-5	1.0	mg/kg	<1.0	—	—	—	—	—
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	96.4	85 115	—	—



Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report								
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)	Control Limit
EP-074I: Total Petroleum Hydrocarbons (TPH) (QCLot: 677692)												
C10 - C14 Fraction	---	50	mg/kg	<50	16 mg/kg	118	---	---	47	132	---	---
C15 - C28 Fraction	---	100	mg/kg	<100	53 mg/kg	106	---	---	46	126	---	---
C29 - C36 Fraction	---	100	mg/kg	<100	45 mg/kg	57.8	---	---	37	122	---	---
EP-074J: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695)												
C6 - C9 Fraction	---	2	mg/kg	<2	4 mg/kg	99.7	---	---	58	126	---	---
EP-074HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682324)												
C9 - C16 Fraction	---	200	mg/kg	<200	32 mg/kg	89.3	---	---	34	123	---	---
C17 - C35 Fraction	---	500	mg/kg	<500	75 mg/kg	78.6	---	---	27	132	---	---
EP-074HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682335)												
C6 - C8 Fraction	---	5	mg/kg	<5	3 mg/kg	102	---	---	25	135	---	---
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QCLot: 682334)												
Benzene	71-43-2	0.04	mg/kg	<0.04	0.16 mg/kg	68.8	---	---	63	110	---	---
Toluene	108-88-3	0.04	mg/kg	<0.04	0.16 mg/kg	85.5	---	---	62	100	---	---
Ethylbenzene	100-41-4	0.04	mg/kg	<0.04	0.16 mg/kg	93.9	---	---	31	133	---	---
meta- & para-Xylene	108-38-3	0.08	mg/kg	<0.08	0.32 mg/kg	# 100	---	---	75	97	---	---
Styrene	106-42-3	0.04	mg/kg	<0.04	0.16 mg/kg	# 110	---	---	69	104	---	---
ortho-Xylene	100-42-5	0.04	mg/kg	<0.04	0.16 mg/kg	# 103	---	---	72	96	---	---
EP-074B: Oxygenated Compounds (QCLot: 682334)												
2-Butanone (MEK)	78-93-3	0.4	mg/kg	<0.4	1.6 mg/kg	89.5	---	---	46	101	---	---
EP-074E: Halogenated Aliphatics (QCLot: 682334)												
Trichloroethene	79-01-6	0.04	mg/kg	<0.04	0.16 mg/kg	94.4	---	---	58	107	---	---
Tetrachloroethene	127-18-4	0.04	mg/kg	<0.04	0.16 mg/kg	# 105	---	---	57	104	---	---
EP-074G: Trihalomethanes (THM) (QCLot: 682334)												
Chloroform	67-66-3	0.04	mg/kg	<0.04	0.16 mg/kg	89.7	---	---	60	91	---	---
Bromodichloromethane	75-27-4	0.04	mg/kg	<0.04	0.16 mg/kg	92.8	---	---	60	93	---	---
EP-075A: Phenols (QCLot: 682323)												
Phenol	108-95-2	0.1	mg/kg	<0.1	0.25 mg/kg	79.0	---	---	46	108	---	---
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 682323)												
Naphthalene	91-20-3	0.1	mg/kg	<0.1	0.25 mg/kg	86.4	---	---	53	106	---	---
Acenaphthylene	208-96-8	0.1	mg/kg	<0.1	0.25 mg/kg	80.6	---	---	64	105	---	---
Acenaphthene	83-32-9	0.1	mg/kg	<0.1	0.25 mg/kg	86.2	---	---	60	106	---	---
Fluorene	86-73-7	0.1	mg/kg	<0.1	0.25 mg/kg	88.5	---	---	59	113	---	---
Phenanthrene	85-01-8	0.1	mg/kg	<0.1	0.25 mg/kg	83.9	---	---	61	109	---	---
Anthracene	120-12-7	0.1	mg/kg	<0.1	0.25 mg/kg	82.5	---	---	61	107	---	---
Fluoranthene	206-44-0	0.1	mg/kg	<0.1	0.25 mg/kg	87.2	---	---	70	110	---	---
Pyrene	129-00-0	0.1	mg/kg	<0.1	0.25 mg/kg	87.3	---	---	66	114	---	---
Benz(e)anthracene	56-55-3	0.1	mg/kg	<0.1	0.25 mg/kg	85.8	---	---	53	118	---	---
Chrysene	218-01-9	0.1	mg/kg	<0.1	0.25 mg/kg	89.2	---	---	65	111	---	---



Matrix: SOIL

Method Blank (MB) Report

Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

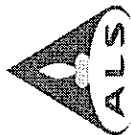
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 682323) - continued									
Benzo(b) & Benzo(k)fluoranthene	205-99-2	0.2	mg/kg	<0.2	0.50 mg/kg	87.4	---	70 107	---
	207-08-9								
Benzo(a)pyrene	50-32-8	0.1	mg/kg	<0.1	0.25 mg/kg	82.5	---	50 113	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	mg/kg	<0.1	0.25 mg/kg	95.7	---	57 116	---
Dibenz(a,h)anthracene	53-70-3	0.1	mg/kg	<0.1	0.25 mg/kg	97.4	---	61 112	---
Benzo(g,h,i)perylene	191-24-2	0.1	mg/kg	<0.1	0.25 mg/kg	95.0	---	68 106	---
EP-075G: Chlorinated Hydrocarbons (QCLot: 682323)									
Hexachlorobenzene (HCB)	118-74-1	0.2	mg/kg	<0.2	0.25 mg/kg	91.6	---	68 112	---

Matrix: WATER

Method Blank (MB) Report

Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

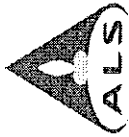
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	Recovery Limits (%)	RPDs (%)
EG: Metals and Major Cations - Filtered (QCLot: 684134)									
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	0.2 µg/L	106	---	85 115	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 678809)									
C10 - C14 Fraction	---	50	µg/L	<50	150 µg/L	66.4	---	37 129	---
C15 - C28 Fraction	---	100	µg/L	<100	350 µg/L	51.3	---	39 128	---
C29 - C36 Fraction	---	50	µg/L	<50	300 µg/L	52.8	---	15 137	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 681932)									
C6 - C9 Fraction	---	20	µg/L	<20	200 µg/L	89.4	---	78 126	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 678810)									
C9 - C16 Fraction	---	0.5	mg/L	<0.5	0.3 mg/L	56.6	---	50 130	---
C17 - C35 Fraction	---	0.5	mg/L	<0.5	0.5 mg/L	51.1	---	50 130	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 678842)									
C6 - C8 Fraction	---	0.5	mg/L	---	0.15 mg/L	80.6	---	50 130	---
				<0.02	---	---	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682301)									
C6 - C8 Fraction	---	0.02	mg/L	<0.02	0.15 mg/L	89.4	---	50 130	---
EP-074A: Monocyclic Aromatic Hydrocarbons (MAH) (QCLot: 681933)									
Benzene	71-43-2	5	µg/L	<5	10 µg/L	99.4	---	54 132	---
Toluene	108-88-3	5	µg/L	<5	10 µg/L	103	---	59 128	---
Ethylbenzene	100-41-4	5	µg/L	<5	10 µg/L	97.2	---	68 125	---
meta- & para-Xylene	106-38-3	10	µg/L	<10	20 µg/L	92.3	---	75 122	---
	106-42-3								
Styrene	100-42-5	5	µg/L	<5	10 µg/L	99.4	---	73 119	---
ortho-Xylene	95-47-6	5	µg/L	<5	10 µg/L	94.6	---	72 125	---
EP-074B: Oxygenated Compounds (QCLot: 681933)									
2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	119	---	63 126	---



Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Matrix: WATER	Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	RPDs (%)
EP-074E: Halogenated Aliphatics (QCLot: 681933)											
	Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	97.9	—	—	67 125	—
	Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	90.6	—	—	59 126	—
EP-074G: Trihalomethanes (THM) (QCLot: 681933)											
	Chloroform	67-66-3	5	µg/L	<5	10 µg/L	98.7	—	—	68 123	—
	Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	94.0	—	—	77 120	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 677243)											
	Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	60.0	—	—	42 105	—
	Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	67.1	—	—	44 108	—
	Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	73.1	—	—	41 108	—
	Fluorene	86-73-7	2	µg/L	<2	5 µg/L	79.0	—	—	52 104	—
	Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	77.4	—	—	60 105	—
	Anthracene	120-12-7	2	µg/L	<2	5 µg/L	78.5	—	—	58 106	—
	Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	85.0	—	—	67 105	—
	Pyrene	129-00-0	2	µg/L	<2	5 µg/L	88.3	—	—	62 109	—
	Chrysene	218-01-9	2	µg/L	<2	5 µg/L	85.9	—	—	63 109	—
	Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	89.9	—	—	34 130	—
	207-08-9										
EP-075G: Chlorinated Hydrocarbons (QCLot: 677243)											
	Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	5 µg/L	86.5	—	—	47 112	—

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

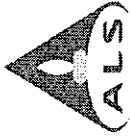
Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	RPDs (%)	Value	Control Limit
EG: Metals and Major Cations (QCLot: 683273)											
HK0809193-001	AC-07_1.00m BBC	EG0360: Hexavalent Chromium	18540-29-9	2.5 mg/kg	107	—	—	75 125	—	—	—
EG: Metals and Major Cations (QCLot: 685222)											
HK0809193-001	AC-07_1.00m BBC	EG020: Antimony	7440-36-0	5 mg/kg	94.8	—	—	75 125	—	—	—
		EG020: Arsenic	7440-38-2	5 mg/kg	92.0	—	—	75 125	—	—	—
		EG020: Barium	7440-39-3	5 mg/kg	75.9	—	—	75 125	—	—	—
		EG020: Cadmium	7440-43-9	5 mg/kg	103	—	—	75 125	—	—	—
		EG020: Cobalt	7440-48-4	5 mg/kg	96.9	—	—	75 125	—	—	—
		EG020: Copper	7440-50-8	5 mg/kg	90.3	—	—	75 125	—	—	—
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	—	—	75 125	—	—	—
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	—	—	75 125	—	—	—
		EG020: Mercury	7439-97-6	0.1 mg/kg	# Not Determined	—	—	75 125	—	—	—
		EG020: Molybdenum	7439-98-7	5 mg/kg	101	—	—	75 125	—	—	—
		EG020: Nickel	7440-02-0	5 mg/kg	91.6	—	—	75 125	—	—	—



Matrix: SOIL			Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	Control Limit
EG: Metals and Major Cations (QCLot: 685222) - continued												
HK0809193-001	AC-07_1.00m BBC	EG020: Tin	7440-31-5	5 mg/kg	92.2	---	---	75 125	75	125	---	---
		EG020: Zinc	7440-66-6	5 mg/kg	83.9	---	---	75 125	75	125	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677692)												
HK0808821-002	Anonymous	C10 - C14 Fraction	---	16 mg/kg	104	---	---	50 130	50	130	---	---
		C15 - C28 Fraction	---	53 mg/kg	123	---	---	50 130	50	130	---	---
		C29 - C36 Fraction	---	45 mg/kg	114	---	---	50 130	50	130	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695)												
HK0808821-002	Anonymous	C6 - C9 Fraction	---	4 mg/kg	86.1	---	---	50 130	50	130	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682324)												
HK0809193-003	AC-08_1.00m BBC	C9 - C16 Fraction	---	32 mg/kg	79.3	---	---	50 130	50	130	---	---
		C17 - C35 Fraction	---	75 mg/kg	79.0	---	---	50 130	50	130	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 682335)												
HK0809193-003	AC-08_1.00m BBC	C6 - C8 Fraction	---	9.375 mg/kg	97.2	---	---	50 130	50	130	---	---
Matrix: WATER												
Matrix: WATER			Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QCLot: 684134)												
HK0809193-009	FIELD BLANK (2)	EG036: Mercury	7439-97-6	0.2 µg/L	104	---	---	75 125	75	125	---	---

Surrogate Control Limits

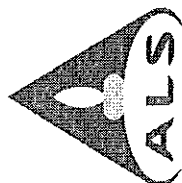
Sub-Matrix: SOIL			Recovery Limits (%)			
Compound	CAS Number	Low	High	Low	High	High
EP-080S: TPH(Volatile)/BTX Surrogate						
Dibromofluoromethane	1868-53-7	80	120			
Toluene-D8	2037-26-5	81	117			
4-Bromofluorobenzene	460-00-4	74	121			
Dibromofluoromethane	1868-53-7	80	120			
Toluene-D8	2037-26-5	81	117			
4-Bromofluorobenzene	460-00-4	74	121			
EP-074S: VOC Surrogates						
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			



Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
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
Sub-Matrix: WATER			
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	21	100
Phenol-d6	13127-86-3	20	94
2,4,6-Tribromophenol	118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	35	114
2-Fluorobiphenyl	321-60-8	43	116
4-Terphenyl-d14	1718-51-0	33	141

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

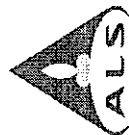
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Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0809079
Address	: 7/F, EMPIRE CENTRE 68 MODY ROAD, TSIM SHA TSUI KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment No.	: 1
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Facsimile	: ---	Facsimile	: +852 2610 2021		
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Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002283			No. of samples	: Received : 5
Site	: KAI TAK				: Analysed : 5

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Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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Page Number : 2 of 7
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809079, Amendment 1

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0809079_1.00 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0809079 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.

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

Water sample(s) were filtered prior to dissolved metal analysis.

"m BGL" denoted that sample depth in the unit of "meter below ground level".



Analytical Results

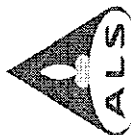
Sub-Matrix: GROUNDWATER		Client sample ID		AC-10 GW_1.72m BGL		AC-09 GW_1.04m BGL		EQUIPMENT BLANK (1)		FIELD BLANK (1)		TRIP BLANK (1)	
		Client sampling date / time		10-JUN-2008 09:30		10-JUN-2008 10:00		10-JUN-2008 15:40		10-JUN-2008 15:50		10-JUN-2008 16:30	
Compound	CAS Number	LOR	Unit	HK0809079-001	HK0809079-002	HK0809079-003	HK0809079-004	HK0809079-005					
EG: Metals and Major Cations - Filtered													
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05					
EP-071: Total Petroleum Hydrocarbons (TPH)													
C10 - C14 Fraction	---	50	µg/L	<50	<50	<50	<50	<50					
C15 - C28 Fraction	---	100	µg/L	300	700	<100	<100	<100					
C29 - C36 Fraction	---	50	µg/L	270	410	<50	<50	<50					
C6 - C9 Fraction	---	20	µg/L	<20	<20	<20	<20	<20					
EP-080: BTEX													
Benzene	71-43-2	5	µg/L	<5	<5	<5	<5	<5					
Toluene	108-88-3	5	µg/L	<5	<5	<5	<5	<5					
Ethylbenzene	100-41-4	5	µg/L	<5	<5	<5	<5	<5					
meta- & para-Xylene	108-38-3 106-42-3	10	µg/L	<10	<10	<10	<10	<10					
ortho-Xylene	95-47-6	5	µg/L	<5	<5	<5	<5	<5					
EP-071HK: Total Petroleum Hydrocarbons (TPH)													
C9 - C16 Fraction	---	500	µg/L	<500	<500	<500	<500	<500					
C17 - C35 Fraction	---	500	µg/L	500	1000	<500	<500	<500					
C6 - C8 Fraction	---	20	µg/L	<20	<20	<20	<20	<20					
EP-075B: Polyaromatic Hydrocarbons (PAHs)													
Naphthalene	91-20-3	2	µg/L	<2	<2	<2	<2	<2					
Acenaphthylene	208-96-8	2	µg/L	<2	<2	<2	<2	<2					
Acenaphthene	83-32-9	2	µg/L	<2	<2	<2	<2	<2					
Fluorene	86-73-7	2	µg/L	<2	<2	<2	<2	<2					
Phenanthrene	85-01-8	2	µg/L	<2	<2	<2	<2	<2					
Anthracene	120-12-7	2	µg/L	<2	<2	<2	<2	<2					
Fluoranthene	206-44-0	2	µg/L	<2	<2	<2	<2	<2					
Pyrene	129-00-0	2	µg/L	<2	<2	<2	<2	<2					
Chrysene	218-01-9	2	µg/L	<2	<2	<2	<2	<2					
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	<4	<4	<4					
EP-080S: TPH(Volatile)/BTX Surrogate													
Dibromofluoromethane	1868-53-7	0.1	%	110	110	110	113	110	Surrogate control limits listed at end of this report.				
Toluene-D8	2037-26-5	0.1	%	102	101	103	100	100					
4-Bromofluorobenzene	460-00-4	0.1	%	98.4	97.9	99.0	96.9	98.6					
Dibromofluoromethane	1868-53-7	0.1	%	110	110	110	113	110					
Toluene-D8	2037-26-5	0.1	%	102	101	103	100	100					
4-Bromofluorobenzene	460-00-4	0.1	%	98.4	97.9	99.0	96.9	98.6					
EP-075S: Acid Extractable Surrogates													
2-Fluorophenol	367-12-4	0.1	%	29.0	45.0	31.1	33.8	33.8	Surrogate control limits listed at end of this report.				



Sub-Matrix: GROUNDWATER		Client sample ID		AC-10 GW_1.72m BGL	AC-09 GW_1.04m BGL	EQUIPMENT BLANK (1)	FIELD BLANK (1)	TRIP BLANK (1)
		Client sampling date / time		10-JUN-2008 09:30	10-JUN-2008 10:00	10-JUN-2008 15:40	10-JUN-2008 15:50	10-JUN-2008 16:30
Compound	CAS Number	LOR	Unit	HK0809079-001	HK0809079-002	HK0809079-003	HK0809079-004	HK0809079-005
EP-075S: Acid Extractable Surrogates - Continued								
Phenol-d6	13127-88-3	0.1	%	22.1	51.4	31.0	30.2	—
2,4,6-Tribromophenol	118-79-6	0.1	%	81.6	86.7	62.6	72.8	—
EP-075T: Base/Neutral Extractable Surrogates								
Nitrobenzene -d5	4165-60-0	0.1	%	41.9	60.5	71.7	67.1	—
2-Fluorobiphenyl	321-60-8	0.1	%	66.6	52.9	60.4	55.7	—
4-Terphenyl-d14	1718-51-0	0.1	%	91.0	101	92.5	90.8	—

Surrogate control limits listed at end of this report.

Surrogate control limits listed at end of this report.

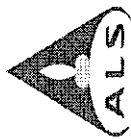


Laboratory Duplicate (DUP) Report

Matrix: WATER								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report		
						Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Filtered (QC Lot: 679267)								
HK0809079-002	AC-09 GW_1.04m BGL	EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	<0.05	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 676080)								
HK0808753-001	Anonymous	C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0
EP-080: BTEX (QC Lot: 676080)								
HK0808753-001	Anonymous	Benzene	71-43-2	2	µg/L	<2	<2	0.0
		Toluene	108-88-3	2	µg/L	<2	<2	0.0
		Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0
		ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0
		meta- & para-Xylene	108-38-3	4	µg/L	<4	<4	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678842)								
HK0809072-001	Anonymous	C6 - C8 Fraction	—	0.02	mg/L	<0.02	<0.02	0.0

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

Matrix: WATER				Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	DCS	Recovery Limits (%)	Low	High	Value
EG: Metals and Major Cations - Filtered (QC Lot: 679267)											
EG036: Mercury	7439-97-6	0.05	µg/L	<0.05	0.2 µg/L	104	—	85	85	115	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 676080)											
C6 - C9 Fraction	—	20	µg/L	<20	200 µg/L	107	—	78	78	126	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678809)											
C10 - C14 Fraction	—	50	µg/L	<50	150 µg/L	66.4	—	37	37	129	—
C15 - C28 Fraction	—	100	µg/L	<100	350 µg/L	51.3	—	39	39	128	—
C29 - C36 Fraction	—	50	µg/L	<50	300 µg/L	52.8	—	15	15	137	—
EP-080: BTEX (QC Lot: 676080)											
Benzene	71-43-2	2	µg/L	<2	10 µg/L	92.9	—	75	75	125	—
Toluene	108-88-3	2	µg/L	<2	10 µg/L	93.6	—	76	76	122	—
Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	107	—	78	78	119	—
meta- & para-Xylene	108-38-3	4	µg/L	<4	20 µg/L	106	—	84	84	116	—
ortho-Xylene	106-42-3	2	µg/L	<2	10 µg/L	106	—	78	78	117	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678810)											
C9 - C16 Fraction	—	0.5	mg/L	<0.5	0.3 mg/L	56.8	—	50	50	130	—
C17 - C35 Fraction	—	0.5	mg/L	<0.5	0.5 mg/L	51.1	—	50	50	130	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 678842)											
C6 - C9 Fraction	—	0.5	mg/L	—	0.15 mg/L	80.6	—	50	50	130	—



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Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0809079, Amendment 1

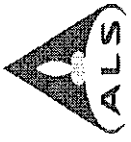
Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicates (DCS) Report							
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 678842) - continued											
C6 - C8 Fraction	—	0.02	mg/L	<0.02	—	—	—	—	—	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 677243)											
Naphthalene	91-20-3	2	µg/L	<2	5 µg/L	60.0	—	—	42	105	—
Acenaphthylene	208-96-8	2	µg/L	<2	5 µg/L	67.1	—	—	44	108	—
Acenaphthene	83-32-9	2	µg/L	<2	5 µg/L	73.1	—	—	41	108	—
Fluorene	86-73-7	2	µg/L	<2	5 µg/L	79.0	—	—	52	104	—
Phenanthrene	85-01-8	2	µg/L	<2	5 µg/L	77.4	—	—	60	105	—
Anthracene	120-12-7	2	µg/L	<2	5 µg/L	78.5	—	—	58	106	—
Fluoranthene	206-44-0	2	µg/L	<2	5 µg/L	85.0	—	—	67	105	—
Pyrene	129-00-0	2	µg/L	<2	5 µg/L	88.3	—	—	62	109	—
Chrysene	218-01-9	2	µg/L	<2	5 µg/L	85.9	—	—	63	109	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	10 µg/L	89.9	—	—	34	130	—
	207-08-9										

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

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery %		Recovery Limits (%)		RPDs (%)	
						MSD	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Filtered (QCLot: 679267)											
HK0809079-001	AC-10 GW_1.72m BGL	EG036: Mercury	7439-97-6	0.2 µg/L	110	---		75	125	---	---

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	480-00-4	86	115
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	480-00-4	86	115
EP-075S: Acid Extractable Surrogates			
2-Fluorophenol	967-12-4	21	100
Phenol-d6	13127-88-3	20	94
2,4,6-Tribromophenol	118-79-6	20	123
EP-075T: Base/Neutral Extractable Surrogates			
Nitrobenzene -d5	4165-60-0	35	114
2-Fluorobiphenyl	321-60-8	43	116

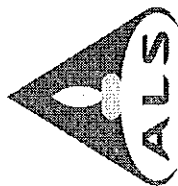


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Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order HK0809079, Amendment 1

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-075T: Base/Neutral Extractable Surrogates - Continued			
4-Terphenyl-d14	1718-51-0	33	141

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

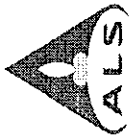
Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0808841
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E-mail	: vincent.auyeung@maunsell.com.hk	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: ---	Telephone	: +852 2610 1044		
Facsimile	: ---	Facsimile	: +852 2610 2021		
Project	: KLN_2008_1	Quote number	: ---	Date received	: 05-JUN-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002282			No. of samples	: Received : 4
Site	: KAI TAK DEVELOPMENT				: Analysed : 4

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Signature	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

ALS Laboratory Group
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A Campbell Brothers Limited Company



Page Number : 2 of 9
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0808841, Amendment 1

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0808841_1.00 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

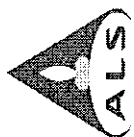
Specific comments for Work Order HK0808841 :

Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.
Sample(s) were received in a chilled condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight 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.
"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

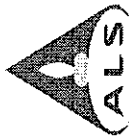
Sub-Matrix: SOIL

Compound		CAS Number	LOR	Client sampling date / time		Client sample ID	AC-09_2.10-2.55m BBC	AC-10_1.85-2.30m BBC	AC-09_3.40-3.85m BBC	AC-10_3.35-3.8m BBC
				Unit			05-JUN-2008 10:40 HK0808841-001	05-JUN-2008 10:20 HK0808841-002	05-JUN-2008 11:15 HK0808841-003	05-JUN-2008 11:50 HK0808841-004
EA/ED: Physical and Aggregate Properties										
EA055: Moisture Content (dried @ 103° C)							20.7	18.8	21.7	20.6
							%			
EG: Metals and Major Cations										
EG020: Antimony	7440-36-0	1		mg/kg			<1	<1	<1	<1
EG020: Arsenic	7440-38-2	1		mg/kg			2	2	2	3
EG020: Barium	7440-39-3	1		mg/kg			40	16	48	3
EG020: Cadmium	7440-43-9	0.2		mg/kg			<0.2	<0.2	<0.2	<0.2
EG020: Cobalt	7440-48-4	1		mg/kg			2	1	<1	<1
EG020: Copper	7440-50-8	1		mg/kg			<1	6	<1	<1
EG020: Lead	7439-92-1	1		mg/kg			126	29	89	20
EG020: Manganese	7439-96-5	1		mg/kg			920	260	553	88
EG020: Mercury	7439-97-6	0.2		mg/kg			<0.2	<0.2	<0.2	<0.2
EG020: Molybdenum	7439-98-7	1		mg/kg			1	1	<1	2
EG020: Nickel	7440-02-0	1		mg/kg			<1	1	<1	<1
EG020: Tin	7440-31-5	1		mg/kg			3	3	2	2
EG020: Zinc	7440-66-6	1		mg/kg			48	22	23	14
EG049: Trivalent Chromium	16065-83-1	1		mg/kg			<1	2	<1	<1
EG3060: Hexavalent Chromium	18540-29-9	1		mg/kg			<1	<1	<1	<1
EP-071: Total Petroleum Hydrocarbons (TPH)										
C10 - C14 Fraction	—	50		mg/kg			<50	<50	<50	<50
C15 - C28 Fraction	—	100		mg/kg			<100	<100	<100	<100
C29 - C36 Fraction	—	100		mg/kg			<100	<100	<100	<100
C6 - C8 Fraction	—	2		mg/kg			<2	<2	<2	<2
EP-080: BTEX										
Benzene	71-43-2	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
Toluene	108-88-3	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
EP-071HK: Total Petroleum Hydrocarbons (TPH)										
C9 - C16 Fraction	—	200		mg/kg			<200	<200	<200	<200
C17 - C35 Fraction	—	500		mg/kg			<500	<500	<500	<500
C6 - C8 Fraction	—	5		mg/kg			<5	<5	<5	<5
EP-075B: Polyaromatic Hydrocarbons (PAHs)										
Naphthalene	91-20-3	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-3	0.5		mg/kg			<0.5	<0.5	<0.5	<0.5



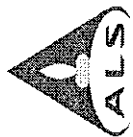
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Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0808841, Amendment 1

Sub-Matrix: SOIL		Client sample ID		AC-09_2.10-2.55m	AC-10_1.85-2.30m	AC-09_3.40-3.85m	AC-10_3.35-3.8m BBC
		Client sampling date / time		BBC	BBC	BBC	
		CAS Number	LOR	Unit	05-JUN-2008 10:40	05-JUN-2008 10:20	05-JUN-2008 11:15
Compound					HK0808841-001	HK0808841-002	HK0808841-004
EP-075B: Polyaromatic Hydrocarbons (PAHs) - Continued							
Acenaphthene	83-32-9	0.5		mg/kg	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5		mg/kg	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5		mg/kg	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5		mg/kg	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5		mg/kg	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5		mg/kg	<0.5	<0.5	<0.5
Benzo(a)anthracene	56-55-3	0.5		mg/kg	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5		mg/kg	<0.5	<0.5	<0.5
Benzo(b) &	205-99-2 207-08-9	1		mg/kg	<1	<1	<1
Benzo(k)fluoranthene							
Benzo(a)pyrene	50-32-8	0.5		mg/kg	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5		mg/kg	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5		mg/kg	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5		mg/kg	<0.5	<0.5	<0.5
EP-080S: TPH(Volatile)/BTEX Surrogate							
Dibromofluoromethane	1868-53-7	0.1		%	97.2	97.7	97.8
Toluene-D8	2037-26-5	0.1		%	96.8	99.2	97.8
4-Bromofluorobenzene	460-00-4	0.1		%	101	100	101
Dibromofluoromethane	1868-53-7	0.1		%	97.2	97.7	97.8
Toluene-D8	2037-26-5	0.1		%	96.8	99.2	97.8
4-Bromofluorobenzene	460-00-4	0.1		%	101	100	101
EP-075S: Acid Extractable Surrogates							
2-Fluorophenol	367-12-4	0.1		%	78.7	77.5	68.3
Phenol-d6	13127-88-3	0.1		%	74.2	74.7	67.2
2,4,6-Tribromophenol	118-79-6	0.1		%	63.7	60.5	54.1
EP-075T: Base/Neutral Extractable Surrogates							
Nitrobenzene -d5	4165-60-0	0.1		%	76.6	77.2	66.1
2-Fluorobiphenyl	321-60-8	0.1		%	73.1	75.4	65.1
4-Terphenyl-d14	1718-51-0	0.1		%	91.0	79.9	85.9
					Surrogate control limits listed at end of this report.		
					Surrogate control limits listed at end of this report.		



Laboratory Duplicate (DUP) Report

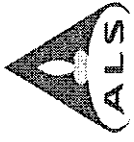
Matrix: SOIL		Method: Compound		Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EAJED: Physical and Aggregate Properties (QC Lot: 677758)							
HK0808821-001	Anonymous	—	0.1	%	14.8	14.3	3.0
EA055: Moisture Content (dried @ 103°C)							
EG: Metals and Major Cations (QC Lot: 678230)							
HK0808821-002	Anonymous	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		7439-97-6	0.2	mg/kg	1.0	0.9	0.0
		7440-36-0	1	mg/kg	<1	<1	0.0
		7440-38-2	1	mg/kg	4	3	0.0
		7440-39-3	1	mg/kg	44	53	17.4
		7440-48-4	1	mg/kg	1	2	0.0
		7440-50-8	1	mg/kg	27	30	11.4
		7439-92-1	1	mg/kg	90	84	6.8
		7439-96-5	1	mg/kg	267	284	6.1
		7439-98-7	1	mg/kg	1	1	0.0
		7440-02-0	1	mg/kg	3	3	0.0
		7440-31-5	1	mg/kg	7	7	0.0
		7440-66-6	1	mg/kg	66	64	2.6
EG: Metals and Major Cations (QC Lot: 678233)							
HK0808821-002	Anonymous	18540-29-9	1	mg/kg	<1	<1	0.0
EG3060: Hexavalent Chromium							
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677692)							
HK0808821-001	Anonymous	—	100	mg/kg	<100	<100	0.0
		—	100	mg/kg	<100	<100	0.0
		—	50	mg/kg	<50	<50	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677695)							
HK0808821-001	Anonymous	—	2	mg/kg	<2	<2	0.0
C6 - C9 Fraction							
EP-080: BTEX (QC Lot: 677695)							
HK0808821-001	Anonymous	71-43-2	0.5	mg/kg	<0.5	<0.5	0.0
		108-88-3	0.5	mg/kg	<0.5	<0.5	0.0
		100-41-4	0.5	mg/kg	<0.5	<0.5	0.0
		108-38-3	0.5	mg/kg	<0.5	<0.5	0.0
		105-42-3	0.5	mg/kg	<0.5	<0.5	0.0
		95-47-6	0.5	mg/kg	<0.5	<0.5	0.0
ortho-Xylene							
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677693)							
HK0808821-001	Anonymous	—	200	mg/kg	<200	<200	0.0
		—	500	mg/kg	<500	<500	0.0
C9 - C16 Fraction							
C17 - C35 Fraction							
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677696)							
HK0808821-001	Anonymous	—	5	mg/kg	<5	<5	0.0
C6 - C8 Fraction							
EP-075S: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 676039)							
HK0808783-001	Anonymous	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0
		208-96-8	0.5	mg/kg	<0.5	<0.5	0.0
				mg/kg			
				mg/kg			



Matrix: SOIL								
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-075B: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 676039) - continued HK0808783-001 Anonymous		Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	<1	0.0
			207-08-9					

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

Matrix: SOIL									
Method Blank (MB) Report									
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)
Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report									
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)
EG: Metals and Major Cations (QC Lot: 678230)									
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	86.9	85	115	85 115
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	106	85	115	85 115
EG020: Barium	7440-39-3	1	mg/kg	<1	5 mg/kg	108	85	115	85 115
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	93.4	85	115	85 115
EG020: Cobalt	7440-48-4	1	mg/kg	<1	5 mg/kg	96.8	85	115	85 115
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	95.4	85	115	85 115
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	97.5	85	115	85 115
EG020: Manganese	7439-96-5	1	mg/kg	<1	5 mg/kg	99.8	85	115	85 115
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	107	85	115	85 115
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	98.0	85	115	85 115
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	92.6	85	115	85 115
EG020: Tin	7440-31-5	1	mg/kg	<1	5 mg/kg	90.0	85	115	85 115
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	96.3	85	115	85 115
EG: Metals and Major Cations (QC Lot: 678233)									
EG030: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	110	85	115	85 115
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677692)									
C10 - C14 Fraction	—	50	mg/kg	<50	16 mg/kg	118	47	132	47 132
C15 - C28 Fraction	—	100	mg/kg	<100	53 mg/kg	106	46	126	46 126
C29 - C36 Fraction	—	100	mg/kg	<100	45 mg/kg	57.8	37	122	37 122
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677695)									

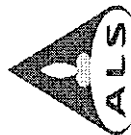


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Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report										
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Low	High	Value	RPDs (%)	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695) - continued														
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	99.7	—	—	58	126	—	—	—	—
EP-080: BTEX (QCLot: 677695)														
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	83.4	—	—	80	133	—	—	—	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	91.3	—	—	79	122	—	—	—	—
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	102	—	—	84	121	—	—	—	—
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	105	—	—	84	120	—	—	—	—
ortho-Xylene	106-42-3	—	—	—	—	—	—	—	—	—	—	—	—	—
ortho-Xylene	95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	101	—	—	70	126	—	—	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677693)														
C9 - C16 Fraction	—	200	mg/kg	<200	32 mg/kg	95.6	—	—	35	126	—	—	—	—
C17 - C35 Fraction	—	500	mg/kg	<500	75 mg/kg	72.7	—	—	32	133	—	—	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677696)														
C6 - C8 Fraction	—	5	mg/kg	<5	3 mg/kg	96.6	—	—	25	135	—	—	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 676039)														
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.5	—	—	60	106	—	—	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.1	—	—	63	110	—	—	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	85.5	—	—	63	108	—	—	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	87.4	—	—	65	111	—	—	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	82.0	—	—	66	105	—	—	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	79.2	—	—	68	105	—	—	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	86.3	—	—	68	111	—	—	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	88.4	—	—	68	111	—	—	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	84.4	—	—	57	107	—	—	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	86.4	—	—	64	112	—	—	—	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	—	0.50 mg/kg	91.6	—	—	67	108	—	—	—	—
Benzo(a)pyrene	207-08-9	—	—	<1	—	—	—	—	—	—	—	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.6	—	—	58	109	—	—	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	90.7	—	—	57	115	—	—	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	96.7	—	—	62	111	—	—	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	94.4	—	—	55	118	—	—	—	—

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

Matrix: SOIL													
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report													
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)		Value	RPDs (%)	Control Limit	
								Low	High				
EG: Metals and Major Cations (QCLot: 678230)													
HK0808821-001	Anonymous	EG020: Antimony	7440-36-0	5 mg/kg	85.0	—	—	75	125	—	—	—	
		EG020: Arsenic	7440-38-2	5 mg/kg	101	—	—	75	125	—	—	—	



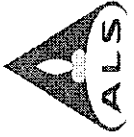
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Matrix: SOIL

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report												
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)		Recovery Limits (%)		Value	RPDs (%)	
						MSD	Low	High	Control Limit			
EG: Metals and Major Cations (QCLot: 678230) - continued												
HK0808821-001	Anonymous	EG020: Barium	7440-39-3	5 mg/kg	# Not Determined	---	---	75	125	---	---	---
		EG020: Cadmium	7440-43-9	5 mg/kg	91.3	---	---	75	125	---	---	---
		EG020: Cobalt	7440-48-4	5 mg/kg	95.9	---	---	75	125	---	---	---
		EG020: Copper	7440-50-8	5 mg/kg	93.8	---	---	75	125	---	---	---
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	---	---	75	125	---	---	---
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined	---	---	75	125	---	---	---
		EG020: Mercury	7439-97-6	0.1 mg/kg	108	---	---	75	125	---	---	---
		EG020: Molybdenum	7439-98-7	5 mg/kg	101	---	---	75	125	---	---	---
		EG020: Nickel	7440-02-0	5 mg/kg	95.0	---	---	75	125	---	---	---
		EG020: Tin	7440-31-5	5 mg/kg	89.2	---	---	75	125	---	---	---
EG020: Zinc	7440-66-6	5 mg/kg	82.1	---	---	75	125	---	---	---		
EG: Metals and Major Cations (QCLot: 678233)												
HK0808841-001	AC-09_2 10-2.55m BBC	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	110	---	---	75	125	---	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677692)												
HK0808821-002	Anonymous	C10 - C14 Fraction	---	16 mg/kg	104	---	---	50	130	---	---	---
		C15 - C28 Fraction	---	53 mg/kg	123	---	---	50	130	---	---	---
		C29 - C36 Fraction	---	45 mg/kg	114	---	---	50	130	---	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695)												
HK0808821-002	Anonymous	C6 - C9 Fraction	---	4 mg/kg	86.1	---	---	50	130	---	---	---
EP-080: BTEX (QCLot: 677695)												
HK0808821-002	Anonymous	Benzene	71-43-2	0.2 mg/kg	76.2	---	---	50	130	---	---	---
		Toluene	108-88-3	0.2 mg/kg	75.6	---	---	50	130	---	---	---
		Ethylbenzene	100-41-4	0.2 mg/kg	83.3	---	---	50	130	---	---	---
		meta- & para-Xylene	108-38-3	0.4 mg/kg	87.0	---	---	50	130	---	---	---
		ortho-Xylene	106-42-3	0.2 mg/kg	84.2	---	---	50	130	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677693)												
HK0808821-002	Anonymous	C9 - C16 Fraction	---	32 mg/kg	88.2	---	---	50	130	---	---	---
		C17 - C35 Fraction	---	75 mg/kg	91.0	---	---	50	130	---	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677696)												
HK0808821-002	Anonymous	C6 - C8 Fraction	---	3 mg/kg	82.3	---	---	50	130	---	---	---

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)		
Compound	CAS Number	Low	High	
EP-080S: TPH(Volatile)/BTX Surrogate				
Dibromofluoromethane	1868-53-7	80	120	
Toluene-D8	2037-26-5	81	117	

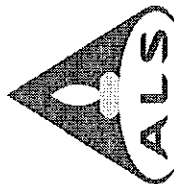


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Sub-Matrix: SOIL	Compound	CAS Number	Recovery Limits (%)	
			Low	High
EP-080S: TPH(Volatile)/BTX Surrogate - Continued				
	4-Bromofluorobenzene	460-00-4	74	121
	Dibromofluoromethane	1868-53-7	80	120
	Toluene-D8	2037-26-5	81	117
	4-Bromofluorobenzene	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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9
Contact	: MR VINCENT AU-YEUNG	Contact	: Wong Wai Man, Alice	Work Order	: HK0808821
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Project	: KLN_2008_1	Quote number	: ---	Date received	: 04-JUN-2008
Order number	: ---			Date of issue	: 13-AUG-2008
C-O-C number	: H002281			No. of samples	: Received : 2
Site	: KAI TAK DEVELOPMENT				: Analysed : 2

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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.

Signatory	Position	Authorised results for:-
Anh Ngoc Huynh	Senior Chemist	Organics
Fung Lim Chee, Richard	General Manager	Inorganics

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Work Order : HK0808821, Amendment 1

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0808821_1.00 supersedes any previous reports with this reference. The completion date of analysis is . Results apply to 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 process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0808821 :
Project Name: Kai Tak Development Engineering Study cum design and construction of Advance Works - Investigation, Design and Construction. KLN/2008/1. Laboratory Study for Samples from Hong Kong Aviation Club and adjacent Carpark.
Method Reference: SVOC / PAH Analysis - USEPA 8270; VOC / BTEX Analysis - USEPA 8260; TPH Analysis - USEPA 8015; Metal Analysis: USEPA 6020.

The RBRG TPH fractions formulated under test procedure EP-071HK was quantified by integrating the curve at different carbon ranges on the chromatogram generated under the HOKLAS accredited procedure EP-071.

Sample(s) were received in a chilled condition.

Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight 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.
"m BBC" denoted that sample depth in the unit of "meter below base of concrete".



Analytical Results

Sub-Matrix: SOIL		Client sample ID		AC-09_1.00m BBC		AC-10_1.00m BBC	
		Client sampling date / time		04-JUN-2008 15:50		04-JUN-2008 15:40	
Compound	CAS Number	LOR	Unit	HK0808821-001	HK0808821-002		
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	—	0.1	%	14.8	15.8		
EG: Metals and Major Cations							
EG020: Antimony	7440-36-0	1	mg/kg	<1	<1		
EG020: Arsenic	7440-38-2	1	mg/kg	3	4		
EG020: Barium	7440-39-3	1	mg/kg	28	44		
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2		
EG020: Cobalt	7440-48-4	1	mg/kg	2	1		
EG020: Copper	7440-50-8	1	mg/kg	<1	27		
EG020: Lead	7439-92-1	1	mg/kg	111	90		
EG020: Manganese	7439-96-5	1	mg/kg	514	267		
EG020: Mercury	7439-97-6	0.2	mg/kg	<0.2	1.0		
EG020: Molybdenum	7439-98-7	1	mg/kg	1	1		
EG020: Nickel	7440-02-0	1	mg/kg	1	3		
EG020: Tin	7440-31-5	1	mg/kg	4	7		
EG020: Zinc	7440-66-6	1	mg/kg	12	66		
EG049: Trivalent Chromium	16065-83-1	1	mg/kg	<1	5		
EG3060: Hexavalent Chromium	18540-29-9	1	mg/kg	<1	<1		
EP-071: Total Petroleum Hydrocarbons (TPH)							
C10 - C14 Fraction	—	50	mg/kg	<50	<50		
C15 - C28 Fraction	—	100	mg/kg	<100	<100		
C29 - C36 Fraction	—	100	mg/kg	<100	<100		
C6 - C9 Fraction	—	2	mg/kg	<2	<2		
EP-080: BTEX							
Benzene	71-43-2	0.5	mg/kg	<0.5	<0.5		
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5		
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5		
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5		
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5		
EP-071HK: Total Petroleum Hydrocarbons (TPH)							
C9 - C16 Fraction	—	200	mg/kg	<200	<200		
C17 - C35 Fraction	—	500	mg/kg	<500	<500		
C6 - C8 Fraction	—	5	mg/kg	<5	<5		
EP-075B: Polyaromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5		
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5		
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5		



Sub-Matrix: SOIL		Client sample ID		AC-09_1.00m BBC		AC-10_1.00m BBC	
		Client sampling date / time		04-JUN-2008 15:50		04-JUN-2008 15:40	
Compound	CAS Number	LOR	Unit	HK0808821-001	HK0808821-002		
EP-075B: Polyaromatic Hydrocarbons (PAHs) - Continued							
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5		
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5		
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5		
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5		
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5		
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5		
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5		
Benzo(b) & 205-99-2	207-08-9	1	mg/kg	<1	<1		
Benzo(k)fluoranthene							
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5		
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5		
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5		
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5		
EP-080S: TPH(Volatile)/BTEX Surrogate							
Dibromofluoromethane	1868-53-7	0.1	%	94.7	96.0		
Toluene-D8	2037-26-5	0.1	%	97.6	98.6		
4-Bromofluorobenzene	460-00-4	0.1	%	105	102		
Dibromofluoromethane	1868-53-7	0.1	%	94.7	96.0		
Toluene-D8	2037-26-5	0.1	%	97.6	98.6		
4-Bromofluorobenzene	460-00-4	0.1	%	105	102		
EP-075S: Acid Extractable Surrogates							
2-Fluorophenol	367-12-4	0.1	%	96.5	80.5		
Phenol-d6	13127-88-3	0.1	%	92.7	77.1		
2,4,6-Tribromophenol	118-79-6	0.1	%	84.2	65.7		
EP-075T: Base/Neutral Extractable Surrogates							
Nitrobenzene -d5	4165-60-0	0.1	%	94.0	78.5		
2-Fluorobiphenyl	321-60-8	0.1	%	91.4	74.6		
4-Terphenyl-d14	1718-51-0	0.1	%	95.2	87.3		
Surrogate control limits listed at end of this report.							

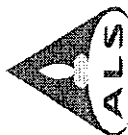


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Work Order : HK0808821, Amendment 1

Laboratory Duplicate (DUP) Report

Matrix: SOIL									
Laboratory sample ID		Client sample ID		Method: Compound		Laboratory Duplicate (DUP) Report			
				CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 67758)									
HK0808821-001	AC-09_1.00m BBC	EA055: Moisture Content (dried @ 103°C)		---	0.1	%	14.8	14.3	3.0
EG: Metals and Major Cations (QC Lot: 678230)									
HK0808821-002	AC-10_1.00m BBC	EG020: Cadmium	7440-43-9	0.2		mg/kg	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-6	0.2		mg/kg	1.0	0.9	0.0
		EG020: Antimony	7440-36-0	1		mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1		mg/kg	4	3	0.0
		EG020: Barium	7440-39-3	1		mg/kg	44	53	17.4
		EG020: Cobalt	7440-48-4	1		mg/kg	1	2	0.0
		EG020: Copper	7440-50-8	1		mg/kg	27	30	11.4
		EG020: Lead	7439-92-1	1		mg/kg	90	84	6.8
		EG020: Manganese	7439-96-5	1		mg/kg	267	284	6.1
		EG020: Molybdenum	7439-98-7	1		mg/kg	1	1	0.0
		EG020: Nickel	7440-02-0	1		mg/kg	3	3	0.0
		EG020: Tin	7440-31-5	1		mg/kg	7	7	0.0
		EG020: Zinc	7440-66-6	1		mg/kg	66	64	2.6
EG: Metals and Major Cations (QC Lot: 678233)									
HK0808821-002	AC-10_1.00m BBC	EG3060: Hexavalent Chromium	18540-29-9	1		mg/kg	<1	<1	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677692)									
HK0808821-001	AC-09_1.00m BBC	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: 677695)									
HK0808821-001	AC-09_1.00m BBC	C6 - C9 Fraction	---	2		mg/kg	<2	<2	0.0
EP-080: BTEX (QC Lot: 677695)									
HK0808821-001	AC-09_1.00m BBC	Benzene	71-43-2	0.5		mg/kg	<0.5	<0.5	0.0
		Toluene	108-88-3	0.5		mg/kg	<0.5	<0.5	0.0
		Ethylbenzene	100-41-4	0.5		mg/kg	<0.5	<0.5	0.0
		meta- & para-Xylene	108-38-3	0.5		mg/kg	<0.5	<0.5	0.0
		ortho-Xylene	106-42-3	0.5		mg/kg	<0.5	<0.5	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677693)									
HK0808821-001	AC-09_1.00m BBC	C9 - C16 Fraction	---	200		mg/kg	<200	<200	0.0
		C17 - C35 Fraction	---	500		mg/kg	<500	<500	0.0
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QC Lot: 677696)									
HK0808821-001	AC-09_1.00m BBC	C6 - C8 Fraction	---	5		mg/kg	<5	<5	0.0
EP-075S: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 676039)									
HK0808783-001	Anonymous	Naphthalene	91-20-3	0.5		mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	208-96-8	0.5		mg/kg	<0.5	<0.5	0.0

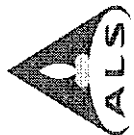
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Matrix: SOIL											
Laboratory sample ID	Client sample ID	Method: Compound		Laboratory Duplicate (DUP) Report							
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QC Lot: 676039) - continued				CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)		
HK0808783-001	Anonymous										
		Acenaphthene	83-32-9	0.5		mg/kg	<0.5	<0.5			0.0
		Fluorene	86-73-7	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
		Benz(a)anthracene	56-55-3	0.5		mg/kg	<0.5	<0.5			0.0
		Chrysene	218-01-9	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
		Indeno(1,2,3-cd)pyrene	193-39-5	0.5		mg/kg	<0.5	<0.5			0.0
		Dibenz(a,h)anthracene	53-70-3	0.5		mg/kg	<0.5	<0.5			0.0
		Benzo(g,h,i)perylene	191-24-2	0.5		mg/kg	<0.5	<0.5			0.0
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	1		mg/kg	<1	<1			0.0
			207-08-9								

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

Matrix: SOIL											
Method Blank (MB) Report											
Method: Compound		CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	RPDs (%)
Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report											
EG: Metals and Major Cations (QCLot: 678230)											
EG020: Antimony		7440-36-0	1	mg/kg	<1	5 mg/kg	86.9	—	—	85	115
EG020: Arsenic		7440-38-2	1	mg/kg	<1	5 mg/kg	106	—	—	85	115
EG020: Barium		7440-39-3	1	mg/kg	<1	5 mg/kg	108	—	—	85	115
EG020: Cadmium		7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	93.4	—	—	85	115
EG020: Cobalt		7440-48-4	1	mg/kg	<1	5 mg/kg	96.8	—	—	85	115
EG020: Copper		7440-50-8	1	mg/kg	<1	5 mg/kg	95.4	—	—	85	115
EG020: Lead		7439-92-1	1	mg/kg	<1	5 mg/kg	97.5	—	—	85	115
EG020: Manganese		7439-96-5	1	mg/kg	<1	5 mg/kg	99.3	—	—	85	115
EG020: Mercury		7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	107	—	—	85	115
EG020: Molybdenum		7439-98-7	1	mg/kg	<1	5 mg/kg	98.0	—	—	85	115
EG020: Nickel		7440-02-0	1	mg/kg	<1	5 mg/kg	92.6	—	—	85	115
EG020: Tin		7440-31-5	1	mg/kg	<1	5 mg/kg	90.0	—	—	85	115
EG020: Zinc		7440-66-6	1	mg/kg	<1	5 mg/kg	96.3	—	—	85	115
EG: Metals and Major Cations (QCLot: 678233)											
EG3060: Hexavalent Chromium		18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	110	—	—	85	115
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677692)											
C10 - C14 Fraction		—	50	mg/kg	<50	16 mg/kg	118	—	—	47	132
C15 - C28 Fraction		—	100	mg/kg	<100	53 mg/kg	106	—	—	46	126
C29 - C36 Fraction		—	100	mg/kg	<100	45 mg/kg	57.8	—	—	37	122
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695)											

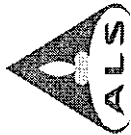


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Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	LCS	Spike Recovery (%)	DCS	Recovery Limits (%)	Value	RPDs (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695) - continued											
C6 - C9 Fraction	—	2	mg/kg	<2	4 mg/kg	99.7	—	—	58 126	—	—
EP-080: BTEX (QCLot: 677695)											
Benzene	71-43-2	0.2	mg/kg	<0.2	0.2 mg/kg	83.4	—	—	80 133	—	—
Toluene	108-88-3	0.2	mg/kg	<0.2	0.2 mg/kg	91.3	—	—	79 122	—	—
Ethylbenzene	100-41-4	0.2	mg/kg	<0.2	0.2 mg/kg	102	—	—	84 121	—	—
meta- & para-Xylene	108-38-3	0.4	mg/kg	<0.4	0.4 mg/kg	105	—	—	84 120	—	—
ortho-Xylene	106-42-3	—	—	—	—	—	—	—	—	—	—
95-47-6	0.2	mg/kg	<0.2	0.2 mg/kg	101	—	—	—	70 126	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677693)											
C9 - C16 Fraction	—	200	mg/kg	<200	32 mg/kg	95.6	—	—	35 126	—	—
C17 - C35 Fraction	—	500	mg/kg	<500	75 mg/kg	72.7	—	—	32 133	—	—
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677696)											
C6 - C9 Fraction	—	5	mg/kg	<5	3 mg/kg	96.6	—	—	25 135	—	—
EP-075B: Polyaromatic Hydrocarbons (PAHs) (QCLot: 676039)											
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.25 mg/kg	75.5	—	—	60 106	—	—
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	0.25 mg/kg	77.1	—	—	63 110	—	—
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.25 mg/kg	85.5	—	—	63 108	—	—
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.25 mg/kg	87.4	—	—	65 111	—	—
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.25 mg/kg	82.0	—	—	66 105	—	—
Anthracene	120-12-7	0.5	mg/kg	<0.5	0.25 mg/kg	79.2	—	—	68 105	—	—
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.25 mg/kg	86.3	—	—	68 111	—	—
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.25 mg/kg	88.4	—	—	68 111	—	—
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	0.25 mg/kg	84.4	—	—	57 107	—	—
Chrysene	218-01-9	0.5	mg/kg	<0.5	0.25 mg/kg	86.4	—	—	64 112	—	—
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1.0	mg/kg	—	0.50 mg/kg	91.6	—	—	67 108	—	—
207-08-9	—	—	—	<1	—	—	—	—	—	—	—
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.25 mg/kg	85.6	—	—	58 109	—	—
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	0.25 mg/kg	90.7	—	—	57 115	—	—
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.25 mg/kg	96.7	—	—	62 111	—	—
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	0.25 mg/kg	94.4	—	—	55 118	—	—

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

Matrix: SOIL											
				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)		MSD	Recovery Limits (%)		RPDs (%)
						Value	High		Low	Value	
EG: Metals and Major Cations (QCLot: 678230)											
HK0808821-001	AC-09_1.00m BBC	EG020: Antimony	7440-36-0	5 mg/kg	85.0	—		—	75	125	—
		EG020: Arsenic	7440-38-2	5 mg/kg	101	—		—	75	125	—



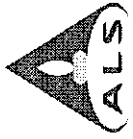
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Matrix: SOIL

Matrix: SOIL											
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report											
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	MS	Spike Recovery (%)	MSD	Recovery Limits (%)		Value	RPDs (%)
								Low	High		Control Limit
EG: Metals and Major Cations (QCLot: 678230) - continued											
HK0808821-001	AC-09_1.00m BBC	EG020: Barium	7440-39-3	5 mg/kg	# Not Determined			75	125	---	---
		EG020: Cadmium	7440-43-9	5 mg/kg	91.3			75	125	---	---
		EG020: Cobalt	7440-48-4	5 mg/kg				75	125	---	---
		EG020: Copper	7440-50-8	5 mg/kg	93.8			75	125	---	---
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined			75	125	---	---
		EG020: Manganese	7439-96-5	5 mg/kg	# Not Determined			75	125	---	---
		EG020: Mercury	7439-97-6	0.1 mg/kg	108			75	125	---	---
		EG020: Molybdenum	7439-98-7	5 mg/kg	101			75	125	---	---
		EG020: Nickel	7440-02-0	5 mg/kg	95.0			75	125	---	---
		EG020: Tin	7440-31-5	5 mg/kg	89.2			75	125	---	---
		EG020: Zinc	7440-66-6	5 mg/kg	82.1			75	125	---	---
EG: Metals and Major Cations (QCLot: 678233)											
HK0808841-001	Anonymous	EG3060: Hexavalent Chromium	18540-29-9	2.5 mg/kg	110			75	125	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677692)											
HK0808821-002	AC-10_1.00m BBC	C10 - C14 Fraction	---	16 mg/kg	104			50	130	---	---
		C15 - C28 Fraction	---	53 mg/kg	123			50	130	---	---
		C29 - C36 Fraction	---	45 mg/kg	114			50	130	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QCLot: 677695)											
HK0808821-002	AC-10_1.00m BBC	C6 - C9 Fraction	---	4 mg/kg	86.1			50	130	---	---
EP-080: BTEX (QCLot: 677696)											
HK0808821-002	AC-10_1.00m BBC	Benzene	71-43-2	0.2 mg/kg	76.2			50	130	---	---
		Toluene	108-88-3	0.2 mg/kg	75.6			50	130	---	---
		Ethylbenzene	100-41-4	0.2 mg/kg	83.3			50	130	---	---
		meta- & para-Xylene	108-38-3	0.4 mg/kg	87.0			50	130	---	---
		ortho-Xylene	106-42-3								
			95-47-6	0.2 mg/kg	84.2			50	130	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677693)											
HK0808821-002	AC-10_1.00m BBC	C9 - C16 Fraction	---	32 mg/kg	86.2			50	130	---	---
		C17 - C35 Fraction	---	75 mg/kg	91.0			50	130	---	---
EP-071HK: Total Petroleum Hydrocarbons (TPH) (QCLot: 677696)											
HK0808821-002	AC-10_1.00m BBC	C6 - C8 Fraction	---	3 mg/kg	82.3			50	130	---	---

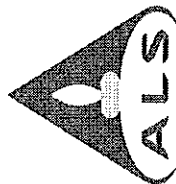
Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)		
Compound	CAS Number	Low	High	
EP-080S: TPH(Volatile)/BTEX Surrogate				
Dibromofluoromethane	1868-53-7	80	120	
Toluene-D3	2037-26-5	81	117	



Page Number : 9 of 9
Client : CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
Work Order : HK0808821, Amendment 1

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTX Surrogate - Continued			
4-Bromofluorobenzene	460-00-4	74	121
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



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0808122	Page	: 1 of 5
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Brisbane
Contact	: MR IVAN LEUNG	Contact	: Tim Kilmister
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: ivan.leung@alsenviro.com	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +852 001585226101044	Telephone	: +61-7-3243 7222
Facsimile	: +852 26102021	Facsimile	: +61-7-3243 7218
Project	: ---	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ---	Date Samples Received	: 19-JUN-2008
C-O-C number	: ---	Issue Date	: 01-JUL-2008
Sampler	: ---	No. of samples received	: 1
Site	: ---	No. of samples analysed	: 1
Quote number	: ---		

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.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



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ACCREDITATION
Accredited for compliance with
ISO/IEC 17025.

Signatories

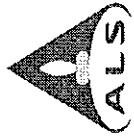
This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories
Minh Wills

Position
Senior Analyst

Accreditation Category
Organics

Environmental Division Brisbane
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Page : 3 of 5
Work Order : EB0808122
Client : ALS TECHNICHEM (HK)
Project : ---

General Comments

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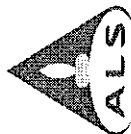
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Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

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.

Key : CAS Number = Chemistry Abstract Services number
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting



Analytical Results

Sub-Matrix: WATER				Client sample ID				Client sampling date / time				AC-07 GW_1.69m BGL				13-JUN-2008 11:10				EB0808122-001			
Compound	CAS Number	LOR	Unit																				
EP074B: Oxygenated Compounds																							
2-Propanone (Acetone)	67-64-1	50	µg/L									<50											
EP074E: Halogenated Aliphatic Compounds																							
Methylene chloride	75-09-2	5	µg/L									<5											
EP103: Methyl tert-Butyl Ether																							
Methyl tert-Butyl Ether (MTBE)	1634-04-4	5	µg/L									<5											
EP074S: VOC Surrogates																							
1,2-Dichloroethane-D4	17060-07-0	0.1	%									88.4											
1,2-Dichloroethane-D4	17060-07-0	0.1	%									113											
Toluene-D8	2037-26-5	0.1	%									100											
Toluene-D8	2037-26-5	0.1	%									107											
4-Bromofluorobenzene	460-00-4	0.1	%									107											
4-Bromofluorobenzene	460-00-4	0.1	%									112											

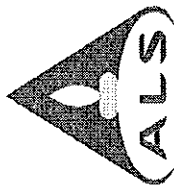


Page : 5 of 5
Work Order : EB0808122
Client : ALS TECHNICHEM (HK)
Project : —

Surrogate Control Limits

Sub-Matrix: WATER

Compound	Recovery Limits (%)	
	Low	High
EP074S-VOC Surrogates		
1,2-Dichloroethane-D4	80	120
Toluene-D8	88	110
4-Bromofluorobenzene	86	115



Environmental Division

QUALITY CONTROL REPORT

Work Order

: **EB0808120**

Page

: 1 of 5

Client

: **ALS TECHNICHEM (HK)**

Contact

: **MR IVAN LEUNG**

Address

: **11/F CHUNG SHUN KNOTTING CNTR
1-3 WING YIP STREET
KWAI CHUNG, N.T HONG KONG HONG KONG**

Laboratory

: **Environmental Division Brisbane**

Contact

: **Tim Kilmister**

Address

: **32 Shand Street Stafford QLD Australia 4053**

E-mail

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Facsimile

: **+61-7-3243 7218**

Project

: **SY/241/07 2007 Blanket Quote - discount by a further 20%**

Site

: **---**

C-O-C number

: **---**

Sampler

: **---**

Order number

: **---**

QC Level

: **NEPM 1999 Schedule B(3) and ALS QCS3 requirement**

Date Samples Received

: **19-JUN-2008**

Issue Date

: **02-JUL-2008**

No. of samples received

: **5**

No. of samples analysed

: **5**

Quote number

: **SY/241/07**

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.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



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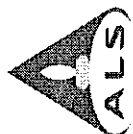
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Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Carsten Enrich	Senior Organic Chemist	Organics
Kim McCabe	Senior Inorganic Chemist	Inorganics
Matthew Goodwin	Senior Organic Chemist	Inorganics
Matthew Goodwin	Senior Organic Chemist	Organics
Minh Wills	Senior Analyst	Organics



Page : 2 of 5
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = Chemistry Abstract Services number
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

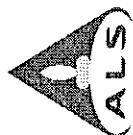


Page : 3 of 5
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting. Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 888463)									
EB0808120-001	HK0809193-1 AC-07, 1.00m BBC	EA055-103: Moisture Content (dried @ 103°C)	—	1.0	%	21.0	21.0	0.0	0% - 20%
EB0808200-005	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	—	1.0	%	20.7	20.4	1.6	0% - 20%
EP074E: Oxygenated Compounds (QC Lot: 888932)									
EB0808120-001	HK0809193-1 AC-07, 1.00m BBC	EP074: 2-Propanone (Acetone)	67-64-1	5	mg/kg	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 888932)									
EB0808182-001	HK0809193-1 AC-07, 1.00m BBC	EP074: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Oxygenated Compounds (QC Lot: 889229)									
EB0808049-003	Anonymous	EP074: 2-Propanone (Acetone)	67-64-1	50	µg/L	<50	<50	0.0	No Limit
EB0808182-018	Anonymous	EP074: 2-Propanone (Acetone)	67-64-1	50	µg/L	<50	<50	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 889229)									
EB0808049-003	Anonymous	EP074: Methylene chloride	75-09-2	5	µg/L	<5	<5	0.0	No Limit
EB0808182-018	Anonymous	EP074: Methylene chloride	75-09-2	5	µg/L	<5	<5	0.0	No Limit
EP103: Methyl tert-Butyl Ether (QC Lot: 889231)									
EB0808120-005	HK0809193-10 EQUIPMENT BLANK (2)	EP103: Methyl tert-Butyl Ether (MTBE)	1634-04-4	5	µg/L	<5	<5	0.0	No Limit



Page : 4 of 5
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL

Sub-Matrix: SOIL								
Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Spike Concentration	Laboratory Control Spike (LCS) Report		
						Spike Recovery (%)	LCS	Recovery Limits (%) Low High
EP074B: Oxygenated Compounds (QCLot: 68832)								
EP074: 2-Propanone (Acetone)	67-64-1	5	mg/kg	<5	10 mg/kg	84.3	61	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 68832)								
EP074: Methylene chloride	75-09-2	0.5	mg/kg	<0.5	1 mg/kg	71.9	49.1	130
EP103: Methyl tert-Butyl Ether (QCLot: 69258)								
EP103: Methyl tert-Butyl Ether (MTBE)	1634-04-4	0.5	mg/kg	<0.5	2 mg/kg	105	70	130

Sub-Matrix: WATER

Sub-Matrix: WATER	Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report							
						Spike Concentration	Spike Recovery (%)		Recovery Limits (%)				
							LCS	Low	High				
EP074B: Oxygenated Compounds (QCLot: 689228)													
EP074: 2-Propanone (Acetone)						67-64-1	50	µg/L	<50	100 µg/L	107	60	148
EP074E: Halogenated Aliphatic Compounds (QCLot: 689228)													
EP074: Methylene chloride						75-09-2	5	µg/L	<5	10 µg/L	92.6	49.9	130
EP103: Methyl tert-Butyl Ether (QCLot: 689231)													
EP103: Methyl tert-Butyl Ether (MTBE)						1634-04-4	5	µg/L	<5	50 µg/L	96.6	70	130



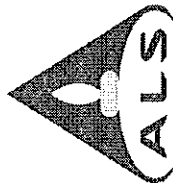
Page : 5 of 5
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: WATER

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	High
EP103-Methyl tert-Butyl Ether (QC Lot: 638234)							
EB0808120-004	HK0809193-9 FIELD BLANK (2)	EP103: Methyl tert-Butyl Ether (MTBE)	1634-04-4	50 µg/L	92.2	70	130



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0808120	Page	: 1 of 6
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Brisbane
Contact	: MR IVAN LEUNG	Contact	: Tim Kilmister
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: ivan.leung@alsenviro.com	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +852 001585226101044	Telephone	: +61-7-3243 7222
Facsimile	: +852 26102021	Facsimile	: +61-7-3243 7218
Project	: SY/241/07 2007 Blanket Quote - discount by a further 20%	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: —	Date Samples Received	: 19-JUN-2008
C-O-C number	: —	Issue Date	: 02-JUL-2008
Sampler	: —	No. of samples received	: 5
Site	: —	No. of samples analysed	: 5
Quote number	: SY/241/07		

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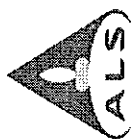
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	Senior Analyst	Organics

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Page : 3 of 6
Work Order : EB0808120
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Project : SY241/07 2007 Blanket Quote - discount by a further 20%

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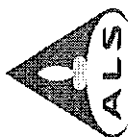
Key : CAS Number = Chemistry Abstract Services number
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting



Page : 4 of 6
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

Analytical Results

Sub-Matrix: SOIL		Client sample ID		Client sampling date / time	
Compound	CAS Number	LOR	Unit	HK0809193-1 AC-07_1.00m BBC 11-JUN-2008 10:30	HK0809193-5 AC-07_2.00-2.45m BBC 11-JUN-2008 14:15
EA036: Moisture Content		—	1.0	%	21.0
^ Moisture Content (dried @ 103°C)		—	1.0	%	24.4
EP074B: Oxygenated Compounds		—	—	—	14.3
2-Propanone (Acetone)		67-84-1	5	mg/kg	<5
EP074E: Halogenated Aliphatic Compounds		—	—	—	<5
EPI03: Methyl tert-Butyl Ether		1634-04-4	0.5	mg/kg	<0.5
Methyl tert-Butyl Ether (MTBE)		1634-04-4	0.5	mg/kg	<0.5
EP074S: VOC Surrogates		17060-07-0	0.1	%	87.5
1,2-Dichloroethane-D4		17060-07-0	0.1	%	85.1
Toluene-D8		2037-26-5	0.1	%	92.8
Toluene-D8		2037-26-5	0.1	%	93.8
4-Bromofluorobenzene		460-00-4	0.1	%	90.8
4-Bromofluorobenzene		460-00-4	0.1	%	88.7



Page : 5 of 6
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/24/07 2007 Blanket Quote - discount by a further 20%

Analytical Results

Sub-Matrix: WATER

Sub-Matrix: WATER		Client sample ID			
Compound	CAS Number	LOR	Unit	Client sampling date / time	
				HK0809193-9 FIELD BLANK (2) 11-JUN-2008 15:00	HK0809193-10 EQUIPMENT BLANK (2) 11-JUN-2008 16:00
EP074B: Oxygenated Compounds					
2-Propanone (Acetone)	67-64-1	50	µg/L	<50	<50
EP074E: Halogenated Aliphatic Compounds					
Methylene chloride	75-09-2	5	µg/L	<5	<5
EP103: Methyl tert-Butyl Ether					
Methyl tert-Butyl Ether (MTBE)	1634-04-4	5	µg/L	<5	<5
EP074S: VOC Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	89.4	91.8
1,2-Dichloroethane-D4	17060-07-0	0.1	%	91.2	105
Toluene-D8	2037-26-5	0.1	%	107	95.0
Toluene-D8	2037-26-5	0.1	%	91.3	96.3
4-Bromofluorobenzene	460-00-4	0.1	%	113	103
4-Bromofluorobenzene	460-00-4	0.1	%	90.0	99.5



Page : 6 of 6
Work Order : EB0808120
Client : ALS TECHNICHEM (HK)
Project : SY/241/07 2007 Blanket Quote - discount by a further 20%

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EPD/4S-VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	—	—
Toluene-D8	2037-26-5	—	—
4-Bromofluorobenzene	460-00-4	—	—
Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EPD/4S-VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	81	117
4-Bromofluorobenzene	460-00-4	74	121

Appendix E

***(Standard Forms 3.2 & 3.3 –
Soil/Groundwater Data Summary and Comparison
to RBRGs and Csat/solubility limit)***

Chemical	Frequency of detection (x/y)	Range of Detected Concentration	Range of Method Reporting Limit	Analytical Method	Relevant Land Use Categories	Lowest RBRG(s) (mg/kg)	Csat (mg/kg)	Maximum Detected Concentration Exceeds (check if applicable)	
								RBRG	Csat
Volatile Organic Chemicals									
Acetone	0	>5	5	USEPA 8260	Urban Residentials	9590	***	NA	NA
Benzene	0	>0.5	0.5			0.704	336	NA	NA
Bromodichloromethane	0	>0.1	0.1			0.317	1030	NA	NA
2-Butanone	0	>5	5			10000	***	NA	NA
Chloroform	0	>0.04	0.04			0.132	1100	NA	NA
Ethylbenzene	0	>0.5	0.5			709	138	NA	NA
Methyl tert-Butyl Ether	0	>0.5	0.5			6.88	2380	NA	NA
Methylene Chloride	0	>0.5	0.5			1.3	921	NA	NA
Styrene	0	>0.5	0.5			3220	497	NA	NA
Tetrachloroethene	0	>0.04	0.04			0.101	97.1	NA	NA
Toluene	0	>0.5	0.5			1440	235	NA	NA
Trichloroethene	0	>0.5	0.5			0.523	488	NA	NA
Xylenes (Total)	0	>1	1			95	150	NA	NA
Semi-Volatile Organic Chemicals									
Acenaphthene	0	>0.5	0.5	USEPA 8270	Urban Residentials	3510	60.2	NA	NA
Acenaphthylene	0	>0.5	0.5			2340	19.8	NA	NA
Anthracene	0	>0.5	0.5			10000	2.56	NA	NA
Benzo(a)anthracene	0	>0.5	0.5			12	NA	NA	NA
Benzo(a)pyrene	0	>0.5	0.5			1.2	NA	NA	NA
Benzo(b) & Benzo(k) fluoranthene	0	>1	1			9.88	NA	NA	NA
Benzo(g,h,i)perylene	0	>0.5	0.5			1800	NA	NA	NA
bis-(2-Ethylhexyl)phthalate	0	>5	5			30	NA	NA	NA
Chrysene	0	>0.5	0.5			871	NA	NA	NA
Dibenz(a,h)anthracene	0	>0.5	0.5			1.2	NA	NA	NA
Fluoranthene	0	>0.5	0.5			2400	NA	NA	NA
Fluorene	0	>0.5	0.5			2380	54.7	NA	NA
Hexachlorobenzene	0	>0.2	0.2			0.243	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0	>0.5	0.5			12	NA	NA	NA
Naphthalene	0	>0.5	0.5			182	125	NA	NA
Phenanthrene	0	>0.5	0.5			10000	28	NA	NA
Phenol	0	>0.5	0.5			10000	7260	NA	NA
Pyrene	0	>0.5	0.5			1800	NA	NA	NA
Metals									
Antimony	0	>1	1	USEPA 6020	Urban Residentials	29.5	NA	NA	NA
Arsenic	12/12	1-4	1			22.1	NA	NIL	NA
Barium	12/12	3-151	1			10000	NA	NIL	NA
Cadmium	0	>0.2	0.2			73.8	NA	NA	NA
Chromium III	0	>1	1			10000	NA	NA	NA
Chromium VI	0	>1	1			221	NA	NA	NA
Cobalt	10/12	1-3	1			1480	NA	NIL	NA
Copper	5/12	3-27	1			2950	NA	NIL	NA
Lead	12/12	20-126	1			258	NA	NIL	NA
Manganese	12/12	59-1350	1			10000	NA	NIL	NA
Mercury	1/12	1	0.2			11	NA	NIL	NA
Molybdenum	7/12	1-2	1			369	NA	NIL	NA
Nickel	5/12	1-3	1			1480	NA	NIL	NA
Tin	11/12	2-7	1			10000	NA	NIL	NA
Zinc	12/12	12-293	1			10000	NA	NIL	NA
Petroleum Carbon Ranges									
C6 - C8	0	>5	5	USEPA 8015	Urban Residentials	1410	1000	NA	NA
C9 - C16	0	>200	200			2240	3000	NA	NA
C17 - C35	0	>500	500			10000	5000	NA	NA

Note:
 *** indicates that the Csat value exceeds the 'ceiling limit' therefore the RBRG applies
 NA= Not Applicable

Chemical	Frequency of detection (x/y)	Range of Detected Concentration	Range of Method Reporting Limit	Analytical Method	Relevant Land Use Categories	Lowest RBRG(s) (ug/kg)	Solubility Limit (ug/L)	Maximum Detected Concentration Exceeds (check if applicable)	
								RBRG	Solubility
Volatile Organic Chemicals									
Acetone	0	>50	50	USEPA 8260	Urban Residentials	10000000	***	NA	NA
Benzene	0	>5	5			3860	1750000	NA	NA
Bromodichloromethane	0	>5	5			2220	6740000	NA	NA
2-Butanone	0	>50	50			10000000	***	NA	NA
Chloroform	0	>5	5			956	7920000	NA	NA
Ethylbenzene	0	>5	5			1020000	169000	NA	NA
Methyl tert-Butyl Ether	0	>5	5			153000	***	NA	NA
Methylene Chloride	0	>5	5			19000	***	NA	NA
Styrene	0	>5	5			3020000	310000	NA	NA
Tetrachloroethene	0	>5	5			250	200000	NA	NA
Toluene	0	>5	5			5110000	526000	NA	NA
Trichloroethene	0	>5	5			1210	1100000	NA	NA
Xylenes (Total)	0	>15	15			112000	175000	NA	NA
Semi-Volatile Organic Chemicals									
Acenaphthene	0	>2	2	USEPA 8270	Urban Residentials	10000000	4240	NA	NA
Acenaphthylene	0	>2	2			1410000	3930	NA	NA
Anthracene	0	>2	2			10000000	43.4	NA	NA
Benzo(b) & Benzo(k) fluoranthene	0	>4	4			539	1.5	NA	NA
Chrysene	0	>2	2			58100	1.6	NA	NA
Fluoranthene	0	>2	2			10000000	206	NA	NA
Fluorene	0	>2	2			10000000	1980	NA	NA
Hexachlorobenzene	0	>4	4			58.9	6200	NA	NA
Naphthalene	0	>2	2			61700	31000	NA	NA
Phenanthrene	0	>2	2			10000000	1000	NA	NA
Pyrene	0	>2	2			10000000	135	NA	NA
Metals									
Mercury	0	>0.05	0.05	USEPA 6020	Urban Residentials	486	NA	NA	NA
Petroleum Carbon Ranges									
C6 - C8	0	>20	20	USEPA 8015	Urban Residentials	82200	5230	NA	NA
C9 - C16	0	>500	500			714000	2800	NA	NA
C17 - C35	3/17	500-1700	500			12800	2800	NIL	NIL

Note:

*** indicates that the Csat value exceeds the 'ceiling limit' therefore the RBRG applies

NA= Not Applicable

