

KIN WING CONSTRUCTION CO., LTD.

**Supplementary Contamination
Assessment Report (CAR)
for the remaining areas in
Radar Station**

Contract No. : KL/2008/02

Rev. No. : 3

Effective Date : 10 December 2009

Contract No. : KL/2008/02	Revision No. : 3
Title: Supplementary Contamination Assessment Report (CAR) of the remaining areas in Radar Station	Effective Date : 10 December 09 Page: 3 of 7

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1.0 Introduction

1.1 Background

1.1.1 The Radar Station was found to be located within the planning boundary of Kai Tak Development and has not been assessed for land contamination in the previous EIA studies and land contamination studies. As commissioned by the Civil Engineering and Development Department (CEDD) to assess the extent of residual land contamination associated with the historical operation of the former Kai Tak Airport 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) for the Radar Station (hereinafter called the “Study Area”) was prepared. Since the fuel tank room, standby generator room and the transformer room were still in operation at the time of the site investigation, 4 potential contamination hotspots within the buildings could not be completed. Therefore, this supplementary land contamination investigation was carried out to confirm any existence of land contamination at the areas of concerns in accordance with the approved Contamination Assessment Plan (CAP) for Radar Station in Appendix 5.1a of the EIA report (Register No. AEIAR-130/2009) and the Supplementary Sampling Plan for the Remaining Areas in Radar Station in Appendix B of the CAR for Radar Station in Appendix 5.2a of the EIA report.

1.1.2 The CAP which outlined the sampling locations and the testing schedule for site investigation (SI) in the Study Area was approved by Environmental Protection Department (EPD). A total of 4 trial pits have been proposed to supplement the approved CAP and constructed within the building of Radar Station for soil and groundwater sampling and testing.

1.1.3 The SI for land contamination assessment in the Study Area was commenced on 25 August 2009 and completed on 4 September 2009. The trial pits excavation and reinstatement of excavations, were all conducted by Kin Wing Construction Ltd and laboratory analyses were carried out by ALS Laboratory Group.

1.2 Objectives

1.2.1 The objectives of this Contamination assessment Report 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 of the SI (Section 3). Once contamination is confirmed, remediation proposal suggesting appropriate remediation actions for the contaminated area will be provided.

1.2.2 This CAR is submitted to seek endorsement from the Director of Environmental Protection (DEP) in accordance with Condition 2.6 of Environmental Permit No. EP-339/2009/A.

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2.0 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

Contamination Site Concern	Potential Source of Land Contamination	No. of SI
Standby Generator Room (RSB-03)	- Localized spillage of oils /paints	- 1 trial pit is proposed in this area
Standby Generator Room (RSB-04)	- Mishandling/ Localized spillages of lubricating oils, hydraulic fluid, engine coolants, diesel fuel from maintenance and dismantling of equipment	- 1 trial pit is proposed in this area
Fuel Tank Room (RSB-05)	- Spillage of diesel fuel during refueling/ fueling process	- 1 trial pit is proposed in this area
Transformer Room (RSB-06)	- Spillage from improper handling of Polychlorinated Biphenyls (PCBs)/ transformer fluids	- 1 trial pit is proposed in this area

2.1.2 A total of 3 locations at Standby Generator Room (RSB-03 & RSB-04), Fuel Tank Room (RSB-05) and Transformer Room (RSB-06) were identified as potential land contamination hotspots. The criteria for identification of contamination hotspots were based upon the site observation of stain / ground discolourization, machine / chemical storage locations or areas with contamination activities undertaken.

2.1.3 The concrete floors of sampling locations RSB-05 and RSB-06 were broken up during the site investigation. Large concrete chambers with extents covering the entire transformer room, the standby generator room and fuel tank room were discovered. Visual inspection of the underground chambers (i.e. void between concrete floor slab and top side of the concrete footing) identified no apparent evidence of oil staining and oil leakage. The presence of underground chambers has prevented a direct contact of potential contaminants with the soil underneath. No issue of land contamination is therefore expected and thus no soil sampling was proposed at the proposed sampling locations. However, the underground chambers were filled with small amount of residual water (2.5m³) and no free product was observed on the surfaces of the water. Water samples were then taken for laboratory analysis to confirm findings of the visual inspection. Record photos taken during the site investigation at the underground chambers underneath the fuel tank room and transformer room are presented in Appendix B.

2.1.4 The floor of the Radar Station is well paved with concrete, visual inspection on the floors of the generator room, the fuel tank room and the transformer room also revealed no apparent sign of oil leakage.

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3.0 Contamination Assessment for the Radar Station

3.1 Assessment Methodology

Water Sampling

3.1.1 The SI works were carried out from 25 August 2009 to 04 September 2009 at Standby Generator Room (RSB-03 & RSB-04), Fuel Tank Room (RSB-05) and Transformer Room (RSB-06) according to the approved CAP.

3.1.2 Only 2 trial pits were constructed within the Study Area as illustrated in Drawing 2.1. Water samples were collected inside the concrete chambers for trial pits located at RSB-05 and RSB-06 to determine any sign of contamination. As the underground concrete chamber at RSB-05 covers the sampling locations RSB-03 and RSB-04, no soil or water sample was taken RSB-03 and RSB-04.

3.1.3 Prior to sampling, the sampler and all equipment in contact with the water were thoroughly decontaminated by laboratory-grade detergent and steam-cleaning/high-pressure hot water jet.

3.1.4 Water samples were properly labeled and stored in cool boxes at around 4°C until delivered to the analytical laboratory. The collected water samples were analyzed in accordance with the analysis schedules detailed in the approved CAP.

3.2 Assessment Criteria

Criteria for Residual Water Contamination

3.2.1 As no groundwater was encountered during the site investigation, the discharges criteria stipulated in the Water Pollution Control Ordinance (WPCO) has been generally adopted in this Study for assessing the water quality parameters of the residual water found in the underground concrete chambers.

3.3 Analytical Results and Interpretation

Results of Water Analysis

3.3.1 A total of 2 water samples excluding those for QA/QC purpose were collected in the SI for laboratory analysis and the laboratory testing results for the water samples are presented in Appendix A.

3.3.2 The TPH values of the water samples collected at RSB-05 and RSB-06 were 220ug/L and 340ug/L respectively.

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Results of QA/QC Analysis

3.3.3 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, 3 sets of field blank, equipment blank and duplicated water sample were collected and analyzed during the course of sampling. The laboratory results for QA/QC samples are presented in Appendix A.

3.3.4 The laboratory results showed that no detectable TPH were found among the QA/QC samples. QA/QC procedures for sample collection and preparation are therefore considered acceptable.

4.0 Conclusions and Recommendations

4.1 The floor of the Radar Station is well paved with concrete, the concrete floors of sampling locations RSB-05 and RSB-06 were broken up during the site investigation and underneath void chambers were observed from the underneath of the generator room, the fuel tank room and the transformer room. They revealed no apparent sign of oil leakage during visual inspection.

4.2 The presence of underground void chambers has prevented a direct contact of potential contaminants with the soil underneath and no issue of land contamination is therefore expected and thus no soil sampling was proposed at the proposed sampling locations.

4.3 Small amount of residual water was observed (no free product was observed on the top) and water samples were taken for laboratory analysis to confirm findings of the visual inspection.

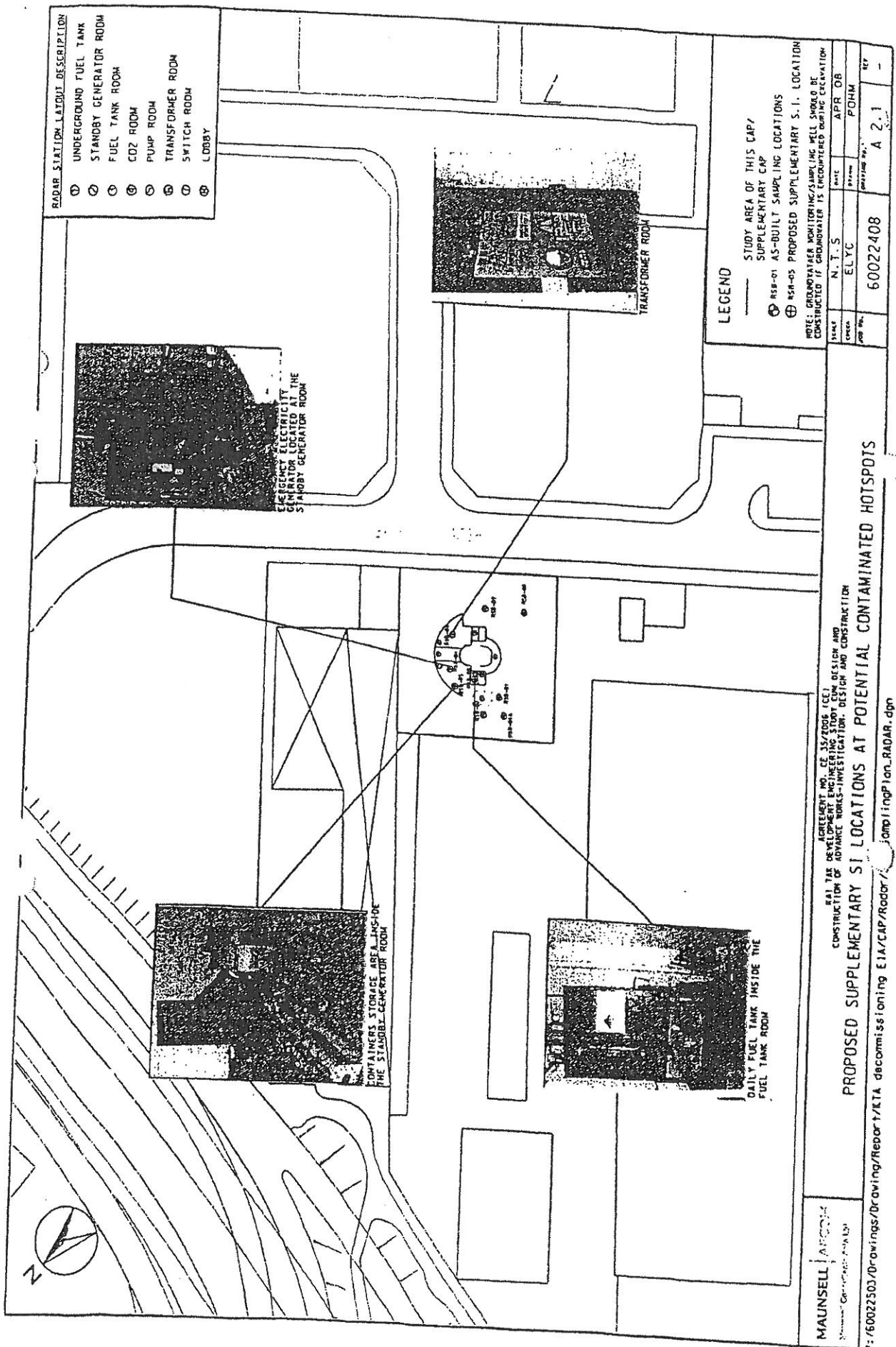
4.4 Based on the results of water samples analysis and visual inspection on site, no significant contamination was found around the area of concerns, and there was no distinctive smell exhibiting signs of contamination was noticeable during the site investigation. Therefore no decontamination work is considered necessary and Remediation Action Plan will not be required.

4.5 As direct discharge of the residual water is not allowed under the WPCO, and in view of the small quantity of the residual water (2.5m³), it is recommended to take a conservative approach to have it collected by a licensed chemical waste collector prior to demolition of the concrete chamber.

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Drawing A2.1

**Proposed Supplementary SI
Locations at Potential
Contaminated Hotspots**



RADAR STATION LAYOUT DESCRIPTION

①	UNDERGROUND FUEL TANK
②	STANDBY GENERATOR ROOM
③	FUEL TANK ROOM
④	CO2 ROOM
⑤	PUMP ROOM
⑥	TRANSFORMER ROOM
⑦	SWITCH ROOM
⑧	LOBBY

EMERGENCY ELECTRICITY GENERATOR LOCATED IN THE STANDBY GENERATOR ROOM

CONTAINERS STORAGE AREA INSIDE THE STANDBY GENERATOR ROOM

TRANSFORMER ROOM

DAILY FUEL TANK INSIDE THE FUEL TANK ROOM

LEGEND

— STUDY AREA OF THIS CAP / SUPPLEMENTARY CAP

⊕ ASP-01 AS-BUILT SAMPLING LOCATIONS

⊕ ASP-05 PROPOSED SUPPLEMENTARY S. I. LOCATION

NOTE: GROUNDWATER MONITORING/SAMPLING WELL SHOULD BE CONSTRUCTED IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION

SCALE	N. T. S.
DATE	APR 08
DESIGNER	ELYC
CHECKER	POHM
JOB No.	60022408
DRAWING No.	A 2.1
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AGREEMENT NO. CE 35/2006 (CE)
 FOR THE DEVELOPMENT ENGINEERING STUDY, ERM DESIGN AND
 CONSTRUCTION OF ADVANCED WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION

PROPOSED SUPPLEMENTARY SI LOCATIONS AT POTENTIAL CONTAMINATED HOTSPOTS

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Appendix A
Laboratory Results

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: KIN WING CONSTRUCTION COMPANY LIMITED	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 3
Contact	: MR ERIC WONG	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK0917896
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Project	: CONTRACT KL_2008_02 DECOMMISSIONING OF KAI TAK AIRPORT	Quote number	: ---	Date Samples Received	: 28-AUG-2009
Order number	: ---			Issue Date	: 09-NOV-2009
C-O-C number	: H006140			No. of samples received	: 1
Site	: ---			No. of samples analysed	: 1

General Comments

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

31-AUG-2009

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

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

Signatories

Anth Ngoc Huynh

Position

Senior Chemist

Authorised results for

Organics

ALS Laboratory Group

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A Campbell Brothers Limited Company



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Unit	Client sample ID	Client sampling date / time
Sub-Matrix: WATER					
RSB05WATER/27-08-09					
[27-AUG-2009]					
HK0917896-001					
EP-071: Total Petroleum Hydrocarbons (TPH)					
C6 - C9 Fraction		20	µg/L		<20
C10 - C14 Fraction		50	µg/L		<50
C15 - C28 Fraction		100	µg/L		<100
C29 - C36 Fraction		50	µg/L		<50
Surrogate control limits listed at end of this report.					
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%		86.2
Toluene-D8	2037-26-5	0.1	%		101
4-Bromofluorobenzene	460-00-4	0.1	%		86.2
Surrogate control limits listed at end of this report.					
EP-074S: VOC Surrogates					
Dibromofluoromethane	1868-53-7	0.1	%		86.2
Toluene-D8	2037-26-5	0.1	%		101
4-Bromofluorobenzene	460-00-4	0.1	%		86.2



Page Number : 3 of 3
 Client : KIN WING CONSTRUCTION COMPANY LIMITED
 Work Order : HK0917896, Amendment 1

Laboratory Duplicate (DUP) Report

Matrix: WATER	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
Method: Compound						
Laboratory sample ID	Client sample ID	Method: Compound				
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1079114)	HK0917212-001	Anonymous	µg/L	<20	<20	0.0
		C6 - C9 Fraction	µg/L	<20	<20	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	Spike Recovery (%)	DCS	Recovery Limits (%)	Low	High	Value	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1079114)		20	µg/L	<20	200 µg/L	88.9	---	---	79	122	---	---	---
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1086426)		50	µg/L	<50	150 µg/L	86.0	---	---	37	179	---	---	---
C10 - C14 Fraction		100	µg/L	<100	350 µg/L	77.3	---	---	50	132	---	---	---
C15 - C28 Fraction		50	µg/L	<50	300 µg/L	72.7	---	---	24	169	---	---	---
C29 - C36 Fraction													

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: WATER	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
EP-074S: VOC Surrogates	Dibromofluoromethane	1868-53-7	86	118
	Toluene-D8	2037-26-5	88	110
	4-Bromofluorobenzene	460-00-4	86	115

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



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Project : CONTRACT KL_2008_02 DECOMMISSIONING
OF KAI TAK AIRPORT
Order number : —
C-O-C number : H006110
Site : —

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Quote number : HK/403b/2008**

Page : 1 of 3
Work Order : HK0919594
Amendment : 1

Date Samples Received : 18-SEP-2009
Issue Date : 10-NOV-2009
No. of samples received : 3
No. of samples analysed : 3

General Comments

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25-SEP-2009

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

Specific comments for Work Order: HK0919594

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.

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Authorised results for
Organics

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Page Number : 2 of 3
 Client : KIN WING CONSTRUCTION COMPANY LIMITED
 Work Order : HK0919594, Amendment 1

Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Unit	Client sample ID	
				Client sampling date / time	Client sample ID
EP-071: Total Petroleum Hydrocarbons (TPH)				FIELD/RSB-05/27-08-0 9 [27-AUG-2009]	DUPLICATED/RSB-05/2 7-08-09 [27-AUG-2009]
				HK0919594-001	HK0919594-003
C6 - C9 Fraction		20	µg/L	<20	<20
C10 - C14 Fraction		50	µg/L	<50	<50
C15 - C28 Fraction		100	µg/L	<100	<100
C29 - C36 Fraction		50	µg/L	<50	<50
EP-080S: TPH(Volatile)/BTX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	%	95.5	94.0
Toluene-D8	2037-26-5	0.1	%	99.2	96.1
4-Bromofluorobenzene	480-00-4	0.1	%	86.1	87.8

Surrogate control limits listed at end of this report.



Page Number : 3 of 3
 Client : KIN WING CONSTRUCTION COMPANY LIMITED
 Work Order : HK0919594, Amendment 1

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Method: Compound	Laboratory Duplicate (DUP) Report				
			CAS Number	Unit	Original Result	Duplicate Result	RPD (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1108835)							
HK0918937-002	Anonymous	C10 - C14 Fraction	10	µg/L	10	10	0.0
		C15 - C28 Fraction	10	µg/L	100	100	0.0
		C29 - C36 Fraction	10	µg/L	50	50	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1109606)							
HK0919594-001	FIELD/RSB-05/27-08-09	C6 - C9 Fraction	20	µg/L	<20	<20	0.0

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

Method: Compound	CAS Number	LOR	Unit	Result	Method Blank (MB) Report				Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report			
					Spike Concentration	Spike Recovery (%)	LCS	DCS	Recovery Limits (%)	Value	Control Limit	RPD (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1108835)												
C10 - C14 Fraction		50	µg/L	<50	150 µg/L	70.2	37	179				
C15 - C28 Fraction		100	µg/L	<100	350 µg/L	66.2	50	132				
C29 - C36 Fraction		50	µg/L	<50	300 µg/L	72.4	24	169				
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1109606)												
C6 - C9 Fraction		20	µg/L	<20	200 µg/L	83.2	79	122				

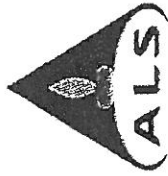
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

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

Surrogate Control Limits

Sub-Matrix: WATER	Recovery Limits (%)		
Compound	CAS Number	Low	High
EP-080S: TPH(Volatile)/BTEX Surrogate			
Dibromofluoromethane	1888-53-7	86	118
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

ALS Technichem (HK) Pty Ltd



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Project : CONTRACT KL_2008_02 DECOMMISSIONING
OF KAI TAK AIRPORT
Order number : ----
C-O-C number : H005101
Site : ----

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Quote number : ----

Page : 1 of 3
Work Order : HK0918460
Amendment : 1

Date Samples Received : 03-SEP-2009
Issue Date : 09-NOV-2009
No. of samples received : 1
No. of samples analysed : 1

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client. The completion date of analysis is: 12-SEP-2009

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
Specific comments for Work Order: HK0918460

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Page Number : 2 of 3
 Client : KIN WING CONSTRUCTION COMPANY LIMITED
 Work Order : HK0918460, Amendment 1

Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	Client sample ID		Unit	LOR	Client sampling date / time
		RSB-06WATER/02-09-09	09			
EP-071: Total Petroleum Hydrocarbons (TPH)						
C6 - C9 Fraction		20		µg/L		<20
C10 - C14 Fraction		50		µg/L		<50
C15 - C28 Fraction		100		µg/L		200
C29 - C36 Fraction		50		µg/L		70
Surrogate control limits listed at end of this report.						
EP-080S: TPH(Volatile)/BTX Surrogate						
Dibromofluoromethane	1868-53-7	0.1		%		94.6
Toluene-D8	2037-26-5	0.1		%		97.7
4-Bromofluorobenzene	460-00-4	0.1		%		92.8
Surrogate control limits listed at end of this report.						
EP-074S: VOC Surrogates						
Dibromofluoromethane	1868-53-7	0.1		%		94.6
Toluene-D8	2037-26-5	0.1		%		97.7
4-Bromofluorobenzene	460-00-4	0.1		%		92.8



Laboratory Duplicate (DUP) Report

Matrix: WATER		Method: Compound	
Laboratory sample ID	Client sample ID	Original Result	Duplicate Result
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1091184)	C6 - C9 Fraction	<20	<20
HK0918196-011	Anonymous	<20	<20

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	Recovery Limits (%)	Control Limit
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1091184)		20	µg/L	<20	200 µg/L	79 - 122	—
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1095601)		50	µg/L	<50	150 µg/L	37 - 179	—
C10 - C14 Fraction		100	µg/L	<100	350 µg/L	50 - 132	—
C15 - C28 Fraction		50	µg/L	<50	300 µg/L	24 - 169	—

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

Compound	CAS Number	Low	High
Sub-Matrix: WATER			
EP-080S: TPH(Volatile)/BTX Surrogate			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-28-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP-074S: VOC Surrogates			
Dibromofluoromethane	1868-53-7	86	118
Toluene-D8	2037-28-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



CERTIFICATE OF ANALYSIS

Client	: KIN WING CONSTRUCTION COMPANY LIMITED	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 4
Contact	: MS JACKIE LAU	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK0919597
Address	: FLAT A, BLOCK 2, 6/F., KIN HO INDUSTRIAL BUILDING, 14-24 AU PUI WAN STREET, FOTAN, SHATIN, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment	: 1
E-mail	: Jackielau1118@hotmail.com	E-mail	: Godfrey.Chan@alsenviro.com	Date Samples Received	: 18-SEP-2009
Telephone	: +852 2785 8152	Telephone	: +852 2610 1044	Issue Date	: 10-NOV-2009
Facsimile	: +852 2725 9316	Facsimile	: +852 2610 2021	No. of samples received	: 3
Project	: CONTRACT KL_2008_02 DECOMMISSIONING OF KAI TAK AIRPORT	Quote number	: HK/403b/2008**	No. of samples analysed	: 3
Order number	: ---				
C-O-C number	: H006111				
Site	: ---				

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

Signatories
Anh Ngoc Huynh

Position
Senior Chemist

Authorised results for
Organics



Page Number : 2 of 4
Client : KIN WING CONSTRUCTION COMPANY LIMITED
Work Order : HK0919597, Amendment 1

General Comments

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

25-SEP-2009

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

Specific comments for Work Order: HK0919597

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

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

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

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

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



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Client sample ID		Unit
			Client sampling date / time	Client sampling date / time	
EP-071: Total Petroleum Hydrocarbons (TPH)			FIELD/RSB-06/02-09-0 9 [02-SEP-2009]	DUPLICATED/RSB-06/0 2-09-09 [02-SEP-2009]	
			HK0919597-001	HK0919597-002	HK0919597-003
C6 - C9 Fraction		20	<20	<20	<20
C10 - C14 Fraction		50	<50	<50	<50
C15 - C28 Fraction		100	<100	<100	<100
C29 - C38 Fraction		50	<50	<50	<50
EP-080S: TPH(Volatile)/BTEX Surrogate					
Dibromofluoromethane	1868-53-7	0.1	93.3	95.8	98.2
Toluene-DB	2037-26-5	0.1	96.4	99.5	97.6
4-Bromofluorobenzene	480-00-4	0.1	86.4	81.6	93.1

Surrogate control limits listed at end of this report.



Page Number : 4 of 4
 Client : KIN WING CONSTRUCTION COMPANY LIMITED
 Work Order : HK0919597, Amendment 1

Laboratory Duplicate (DUP) Report

Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1108835)									
HK0918937-002	Anonymous		C10 - C14 Fraction		10	µg/L	10	10	0.0
			C15 - C28 Fraction		10	µg/L	100	100	0.0
			C29 - C36 Fraction		10	µg/L	50	50	0.0
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1109606)									
HK0919594-001	Anonymous		C6 - C9 Fraction		20	µg/L	<20	<20	0.0

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										
Matrix: WATER		CAS Number	Spike Concentration	Result	Unit	LOR	Spike	LCS	DCS	Recovery Limits (%)	Value	Control Limit
Method: Compound												
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1108835)												
C10 - C14 Fraction		50	150 µg/L	<50	µg/L		70.2	37	179			
C15 - C28 Fraction		100	350 µg/L	<100	µg/L		68.2	50	132			
C29 - C36 Fraction		50	300 µg/L	<50	µg/L		72.4	24	189			
EP-071: Total Petroleum Hydrocarbons (TPH) (QC Lot: 1109606)												
C6 - C9 Fraction		20	200 µg/L	<20	µg/L		83.2	79	122			

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: WATER	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

Contract No. : KL/2008/02	Revision No. : 3 Effective Date : 10 December 09
Title: Supplementary Contamination Assessment Report (CAR) of the remaining areas in Radar Station	

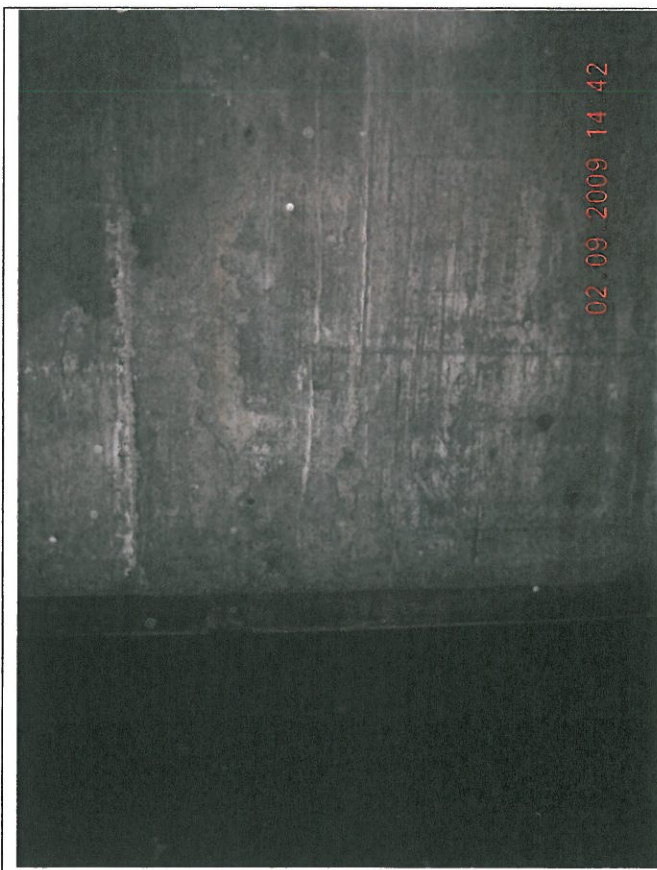
Appendix B
Record Photos at Transformer Room and Generator Room

Contamination Assessment Report for the Radar Station

Record Photos at Transformer Room



General view
of Transformer
Room



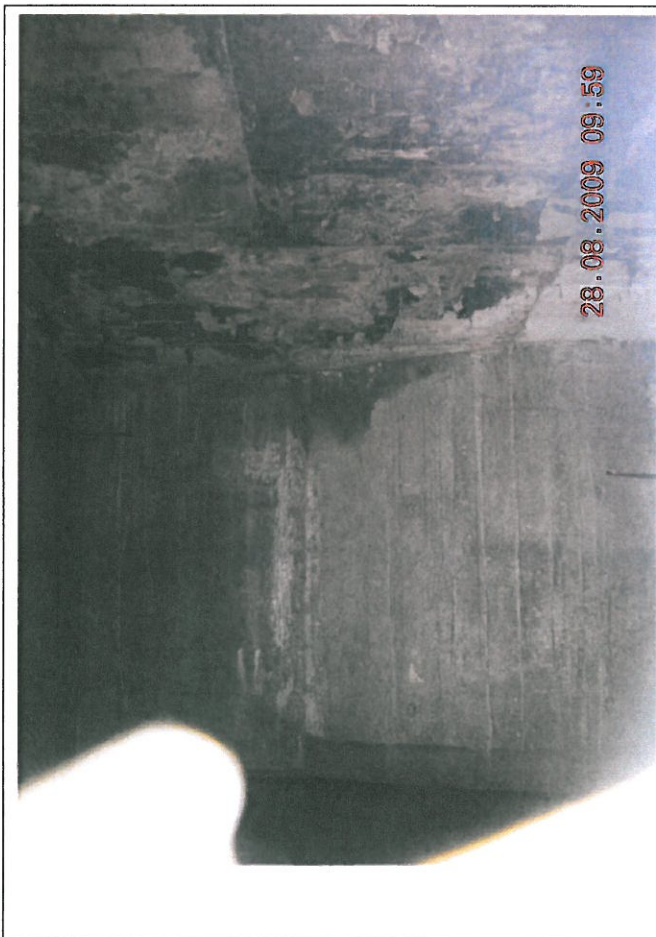
View Inside
Concrete
Chamber of
Transformer
Room

Contamination Assessment Report for the Radar Station

Record Photos at Generator Room



General view of
Generator
Room



View Inside
Concrete
Chamber of
Generator
Room