ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1618872
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Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 12-MAY-2016
Order number	: ----			Issue Date	: 25-MAY-2016
C-O-C number	: H031665			No. of samples received	: 1
Site	: GROUND INVESTIGATION			No. of samples analysed	: 1

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Lin Wai Yu, Iris	Senior Chemist - Inorganics	Inorganics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 20-MAY-2016

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: HK1618872

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID: EDH01(11.50 - 12.45M)				
			Client sampling date / time	[12-MAY-2016]				
				HK1618872-001				
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	36.8				
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	10				
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2				
EG020: Chromium	7440-47-3	1	mg/kg	46				
EG020: Copper	7440-50-8	1	mg/kg	14				
EG020: Lead	7439-92-1	1	mg/kg	29				
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05				
EG020: Nickel	7440-02-0	1	mg/kg	26				
EG020: Silver	7440-22-4	0.1	mg/kg	0.1				
EG020: Zinc	7440-66-6	1	mg/kg	86				
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3				
PCB 18	37680-65-2	3	µg/kg	<3				
PCB 28	7012-37-5	3	µg/kg	<3				
PCB 44	41464-39-5	3	µg/kg	<3				
PCB 52	35693-99-3	3	µg/kg	<3				
PCB 66	32598-10-0	3	µg/kg	<3				
PCB 77	32598-13-3	3	µg/kg	<3				
PCB 101	37680-73-2	3	µg/kg	<3				
PCB 105	32598-14-4	3	µg/kg	<3				
PCB 118	31508-00-6	3	µg/kg	<3				
PCB 126	57465-28-8	3	µg/kg	<3				
PCB 128	38380-07-3	3	µg/kg	<3				
PCB 138	35065-28-2	3	µg/kg	<3				
PCB 153	35065-27-1	3	µg/kg	<3				
PCB 169	32774-16-6	3	µg/kg	<3				
PCB 170	35065-30-6	3	µg/kg	<3				
PCB 180	35065-29-3	3	µg/kg	<3				
PCB 187	52663-68-0	3	µg/kg	<3				
Total Polychlorinated biphenyls	----	18	µg/kg	<18				
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50				
Acenaphthylene	208-96-8	50	µg/kg	<50				
Acenaphthene	83-32-9	50	µg/kg	<50				
Fluorene	86-73-7	50	µg/kg	<50				
Phenanthrene	85-01-8	50	µg/kg	<50				

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH01 (11.50 - 12.45M) [12-MAY-2016] HK1618872-001
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued				
Anthracene	120-12-7	50	µg/kg	<50
Fluoranthene	206-44-0	150	µg/kg	<150
Pyrene	129-00-0	150	µg/kg	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150
Chrysene	218-01-9	150	µg/kg	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150
Low M.W. PAHs	---	550	µg/kg	<550
High M.W. PAHs	---	1700	µg/kg	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates				
2-Fluorobiphenyl	321-60-8	0.1	%	**84.1**
4-Terphenyl-d14	1718-51-0	0.1	%	**80.5**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate				
Decachlorobiphenyl	2051-24-3	0.1	%	**52.9**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4204737)								
HK1618816-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	7.4	7.4	0.0
EG: Metals and Major Cations (QC Lot: 4204683)								
HK1618872-001	EDH01 (11.50 - 12.45M)	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	10	10	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	46	45	0.0
		EG020: Copper	7440-50-8	1	mg/kg	14	14	0.0
		EG020: Lead	7439-92-1	1	mg/kg	29	28	4.1
		EG020: Nickel	7440-02-0	1	mg/kg	26	27	5.1
		EG020: Zinc	7440-66-6	1	mg/kg	86	86	0.0
HK1618988-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	5	5	0.0
		EG020: Copper	7440-50-8	1	mg/kg	14	14	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EG: Metals and Major Cations (QC Lot: 4204683) - Continued								
HK1618988-001	Anonymous	EG020: Lead	7439-92-1	1	mg/kg	200	200	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	47	46	0.0
EP-065: PCB Single Congeners (QC Lot: 4203744)								
HK1618767-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4203745)								
HK1618767-001	Anonymous	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4204683)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	95.9	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	89.6	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	101	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	94.1	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	94.6	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	102	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	89.7	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	88.4	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4203744)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	57.0	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	61.4	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	63.3	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	68.1	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	64.4	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	68.9	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	64.0	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	61.7	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	64.0	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	61.0	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	71.0	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	66.9	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	64.8	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	63.5	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	88.8	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	72.2	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	68.9	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	62.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4203745)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	81.0	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	66.7	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	80.8	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	85.3	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	94.1	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	73.3	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	107	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	104	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	96.6	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	107	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	95.5	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	94.6	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	78.4	----	58	112	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4203745) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	74.8	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	72.6	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	80.5	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4204683)										
HK1618816-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	91.1	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	94.7	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	96.2	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	103	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	96.2	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	86.8	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1619152
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 13-MAY-2016
Order number	: ----			Issue Date	: 27-MAY-2016
C-O-C number	: H031666			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 20-MAY-2016

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: HK1619152

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH1 12.50 - 13.45M [13-MAY-2016] HK1619152-001	EDH1 13.50 - 14.45M [13-MAY-2016] HK1619152-002	EDH1 14.50 - 15.45M [13-MAY-2016] HK1619152-003		
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	37.4	38.6	40.4		
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	8	7	7		
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2		
EG020: Chromium	7440-47-3	1	mg/kg	39	38	41		
EG020: Copper	7440-50-8	1	mg/kg	13	12	14		
EG020: Lead	7439-92-1	1	mg/kg	28	29	31		
EG020: Mercury	7439-97-6	0.05	mg/kg	0.15	<0.05	<0.05		
EG020: Nickel	7440-02-0	1	mg/kg	24	22	24		
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	0.1		
EG020: Zinc	7440-66-6	1	mg/kg	84	78	84		
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3		
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3		
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3		
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3		
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3		
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3		
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3		
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3		
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3		
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3		
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3		
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3		
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3		
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3		
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3		
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3		
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3		
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3		
Total Polychlorinated biphenyls	---	18	µg/kg	<18	<18	<18		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50		
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50		
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50		
Fluorene	86-73-7	50	µg/kg	<50	<50	<50		
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50		
Anthracene	120-12-7	50	µg/kg	<50	<50	<50		

Sub-Matrix: SEDIMENT				Client sample ID	EDH1 12.50 - 13.45M	EDH1 13.50 - 14.45M	EDH1 14.50 - 15.45M		
				Client sampling date / time	[13-MAY-2016]	[13-MAY-2016]	[13-MAY-2016]		
Compound	CAS Number	LOR	Unit		HK1619152-001	HK1619152-002	HK1619152-003		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued									
Fluoranthene	206-44-0	150	µg/kg		<150	<150	<150		
Pyrene	129-00-0	150	µg/kg		<150	<150	<150		
Benz(a)anthracene	56-55-3	150	µg/kg		<150	<150	<150		
Chrysene	218-01-9	150	µg/kg		<150	<150	<150		
Benzo(b)fluoranthene	205-99-2	150	µg/kg		<150	<150	<150		
Benzo(k)fluoranthene	207-08-9	150	µg/kg		<150	<150	<150		
Benzo(a)pyrene	50-32-8	150	µg/kg		<150	<150	<150		
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg		<150	<150	<150		
Dibenz(a.h)anthracene	53-70-3	150	µg/kg		<150	<150	<150		
Benzo(g.h.i)perylene	191-24-2	150	µg/kg		<150	<150	<150		
Low M.W. PAHs	---	550	µg/kg		<550	<550	<550		
High M.W. PAHs	---	1700	µg/kg		<1700	<1700	<1700		
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**54.0**	**80.2**	**84.6**		
4-Terphenyl-d14	1718-51-0	0.1	%		**59.1**	**81.3**	**77.2**		
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**52.1**	**54.2**	**63.1**		

Laboratory Duplicate (DUP) Report

Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4205804)								
HK1619050-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	26.8	26.8	0.0
HK1619173-004	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	38.9	38.7	0.7
EG: Metals and Major Cations (QC Lot: 4205762)								
HK1619046-001	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	0.12	0.10	13.9
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	3	4	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	17	18	0.0
		EG020: Copper	7440-50-8	1	mg/kg	10	11	0.0
		EG020: Lead	7439-92-1	1	mg/kg	24	23	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	6	6	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	32	34	5.5
HK1619169-001	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	24	23	4.3
		EG020: Copper	7440-50-8	1	mg/kg	7	7	0.0
		EG020: Lead	7439-92-1	1	mg/kg	212	211	0.8

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4205762)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	91.2	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	98.3	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	103	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	87.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.9	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	91.4	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.8	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	92.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	103	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4203744)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	57.0	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	61.4	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	63.3	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	68.1	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	64.4	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	68.9	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	64.0	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	61.7	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	64.0	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	61.0	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	71.0	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	66.9	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	64.8	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	63.5	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	88.8	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	72.2	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	68.9	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	62.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	79.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	73.2	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	74.0	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	76.2	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	82.2	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	78.1	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	88.7	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	87.3	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	79.7	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	82.9	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	91.1	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	89.7	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	77.5	----	58	112	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.4	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	83.4	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	88.1	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4205762)										
HK1619042-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	80.9	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	100	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	97.7	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	78.1	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	97.8	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	89.7	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	80.3	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	95.0	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1619173
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 16-MAY-2016
Order number	: ----			Issue Date	: 28-MAY-2016
C-O-C number	: H031667			No. of samples received	: 4
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 24-MAY-2016

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: HK1619173

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water except Sample #1 EDH1 15.50 - 16.45M.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH1 15.50 - 16.45M	EDH17 11.50 - 12.45M	EDH17 12.50 - 13.45M		
			Client sample ID					
			Client sampling date / time	16-MAY-2016 09:00	16-MAY-2016 14:00	16-MAY-2016 15:30		
				HK1619173-001	HK1619173-003	HK1619173-004		
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	38.8	30.5	38.9		
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	7	6	7		
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2		
EG020: Chromium	7440-47-3	1	mg/kg	40	34	39		
EG020: Copper	7440-50-8	1	mg/kg	14	9	13		
EG020: Lead	7439-92-1	1	mg/kg	29	20	28		
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05		
EG020: Nickel	7440-02-0	1	mg/kg	24	22	24		
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1	<0.1		
EG020: Zinc	7440-66-6	1	mg/kg	79	80	97		
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3		
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3		
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3		
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3		
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3		
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3		
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3		
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3		
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3		
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3		
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3		
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3		
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3		
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3		
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3		
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3		
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3		
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3		
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50		
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50		
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50		
Fluorene	86-73-7	50	µg/kg	<50	<50	<50		
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50		
Anthracene	120-12-7	50	µg/kg	<50	<50	<50		

Sub-Matrix: SEDIMENT			Client sample ID	EDH1 15.50 - 16.45M	EDH17 11.50 - 12.45M	EDH17 12.50 - 13.45M
			Client sampling date / time	16-MAY-2016 09:00	16-MAY-2016 14:00	16-MAY-2016 15:30
Compound	CAS Number	LOR	Unit	HK1619173-001	HK1619173-003	HK1619173-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued						
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150
Low M.W. PAHs	---	550	µg/kg	<550	<550	<550
High M.W. PAHs	---	1700	µg/kg	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates						
2-Fluorobiphenyl	321-60-8	0.1	%	**73.3**	**83.0**	**120**
4-Terphenyl-d14	1718-51-0	0.1	%	**73.1**	**87.6**	**114**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate						
Decachlorobiphenyl	2051-24-3	0.1	%	**56.4**	**55.9**	**57.8**

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	EDH1 15.50 - 16.45M
				Client sampling date / time	16-MAY-2016 09:00
Compound	CAS Number	LOR	Unit		HK1619173-001
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4205804)								
HK1619050-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	26.8	26.8	0.0
HK1619173-004	EDH17 12.50 - 13.45M	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	38.9	38.7	0.7
EG: Metals and Major Cations (QC Lot: 4205762)								
HK1619046-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.12	0.10	13.9
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	3	4	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	17	18	0.0
		EG020: Copper	7440-50-8	1	mg/kg	10	11	0.0
		EG020: Lead	7439-92-1	1	mg/kg	24	23	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	6	6	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	32	34	5.5
HK1619169-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	24	23	4.3
		EG020: Copper	7440-50-8	1	mg/kg	7	7	0.0
		EG020: Lead	7439-92-1	1	mg/kg	212	211	0.8
		EG020: Nickel	7440-02-0	1	mg/kg	3	3	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	55	46	17.0
EP-065: PCB Single Congeners (QC Lot: 4203744)								
HK1618767-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EP-065: PCB Single Congeners (QC Lot: 4203744) - Continued								
HK1618767-001	Anonymous	PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035)								
HK1619152-001	Anonymous	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EP-390: Triorganotins (QC Lot: 4210630)								
HK1619061-003	Anonymous	Tributyltin	56573-85-4	5	ngSn/L	<5	<5	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4205762)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	91.2	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	98.3	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	103	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	87.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.9	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	91.4	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.8	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	92.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	103	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4203744)											

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4203744) - Continued											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	57.0	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	61.4	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	63.3	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	68.1	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	64.4	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	68.9	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	64.0	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	61.7	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	64.0	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	61.0	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	71.0	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	66.9	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	64.8	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	63.5	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	88.8	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	72.2	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	68.9	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	62.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	79.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	73.2	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	74.0	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	76.2	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	82.2	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	78.1	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	88.7	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	87.3	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	79.7	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	82.9	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	91.1	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	89.7	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	77.5	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.4	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	83.4	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	88.1	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4210630)											

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4210630) - Continued											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	81.2	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4205762)										
HK1619042-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	80.9	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	100	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	97.7	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	78.1	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	97.8	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	89.7	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	80.3	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	95.0	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4210630)										
HK1619061-003	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	114	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1618358
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 09-MAY-2016
Order number	: ----			Issue Date	: 23-MAY-2016
C-O-C number	: H018497			No. of samples received	: 4
Site	: GROUND INVESTIGATION			No. of samples analysed	: 4

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Lin Wai Yu, Iris	Senior Chemist - Inorganics	Inorganics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 17-MAY-2016

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: HK1618358

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH2 (11.00 - 11.95M)	EDH2 (12.00 - 12.95M)	EDH2 (13.00 - 13.95M)	EDH2 (14.00 - 14.95M)
			Client sample ID	EDH2 (11.00 - 11.95M)	EDH2 (12.00 - 12.95M)	EDH2 (13.00 - 13.95M)	EDH2 (14.00 - 14.95M)
			Client sampling date / time	09-MAY-2016 11:00	09-MAY-2016 13:10	09-MAY-2016 14:10	09-MAY-2016 15:10
				HK1618358-001	HK1618358-002	HK1618358-003	HK1618358-004
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	29.2	37.0	37.9	37.9
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	5	9	8	8
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	31	40	38	38
EG020: Copper	7440-50-8	1	mg/kg	9	14	15	15
EG020: Lead	7439-92-1	1	mg/kg	23	35	34	34
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	22	25	25	26
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.1	0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	70	79	82	82
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50

Sub-Matrix: SEDIMENT				Client sample ID	EDH2 (11.00 - 11.95M)	EDH2 (12.00 - 12.95M)	EDH2 (13.00 - 13.95M)	EDH2 (14.00 - 14.95M)
				Client sampling date / time	09-MAY-2016 11:00	09-MAY-2016 13:10	09-MAY-2016 14:10	09-MAY-2016 15:10
Compound	CAS Number	LOR	Unit		HK1618358-001	HK1618358-002	HK1618358-003	HK1618358-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
Fluoranthene	206-44-0	150	µg/kg		<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg		<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg		<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg		<150	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg		<150	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg		<150	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg		<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg		<150	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg		<150	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg		<150	<150	<150	<150
Low M.W. PAHs	----	550	µg/kg		<550	<550	<550	<550
High M.W. PAHs	----	1700	µg/kg		<1700	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%		**101**	**91.5**	**99.5**	**103**
4-Terphenyl-d14	1718-51-0	0.1	%		**98.2**	**91.2**	**93.5**	**97.7**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%		**52.0**	**53.1**	**54.2**	**53.2**

Laboratory Duplicate (DUP) Report

Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4203656)								
HK1618335-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	19.4	19.4	0.0
HK1618358-003	EDH2 (13.00 - 13.95M)	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	37.9	37.8	0.5
EG: Metals and Major Cations (QC Lot: 4202319)								
HK1618337-001	Anonymous	**EG020: Silver**	7440-22-4	0.1	mg/kg	0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-6	0.2	mg/kg	0.6	0.6	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	6	6	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	11	12	11.4
		EG020: Copper	7440-50-8	1	mg/kg	82	84	2.1
		EG020: Lead	7439-92-1	1	mg/kg	133	136	2.4
		EG020: Nickel	7440-02-0	1	mg/kg	11	12	8.9
		EG020: Zinc	7440-66-6	1	mg/kg	248	257	3.4
HK1618359-002	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	8	9	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	27	27	0.0
		EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	23	22	6.4

Matrix: SOIL

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 (QC Lot: 4202319) - Continued								
HK1618359-002	Anonymous	EG020: Nickel	7440-02-0	1	mg/kg	16	16	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	43	44	0.0
EP-065: PCB Single Congeners (QC Lot: 4196743)								
HK1617190-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744)								
HK1617605-003	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	630	691	9.3
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	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*

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4202319)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	89.9	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	88.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	106	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	89.5	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	92.9	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	100	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	90.8	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	90.6	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	88.6	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4196743)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	73.7	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	65.5	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	77.8	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	77.6	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	75.7	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	80.6	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	72.6	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	73.0	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	74.8	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	72.5	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	73.9	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	76.7	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	75.5	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	74.6	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.0	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	78.1	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	78.7	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	74.8	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	76.4	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	82.8	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	89.3	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	91.1	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	80.7	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	78.2	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	80.6	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	83.4	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	84.6	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	102	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	85.0	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	93.1	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	79.0	----	58	112	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	91.0	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	86.0	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	87.0	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4202319)										
HK1618335-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	99.3	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	90.4	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	75.8	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	80.8	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	81.5	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	89.1	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1618359
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Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 10-MAY-2016
Order number	: ----			Issue Date	: 24-MAY-2016
C-O-C number	: H018498			No. of samples received	: 2
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 17-MAY-2016

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: HK1618359

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	EDH02 (15.00 - 15.95M)	EDH02 (16.00 - 16.95M)
			Client sample ID	EDH02 (15.00 - 15.95M)	EDH02 (16.00 - 16.95M)
			Client sampling date / time	10-MAY-2016 14:30	10-MAY-2016 15:30
				HK1618359-001	HK1618359-002
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	36.6	24.2
EG: Metals and Major Cations					
EG020: Arsenic	7440-38-2	1	mg/kg	7	8
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	39	27
EG020: Copper	7440-50-8	1	mg/kg	14	8
EG020: Lead	7439-92-1	1	mg/kg	32	23
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	24	16
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	94	43
EP-065: PCB Single Congeners					
PCB 8	34883-43-7	3	µg/kg	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	50	µg/kg	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH02 (15.00 - 15.95M)	EDH02 (16.00 - 16.95M)
Client sample ID				EDH02 (15.00 - 15.95M)	EDH02 (16.00 - 16.95M)
Client sampling date / time				10-MAY-2016 14:30	10-MAY-2016 15:30
				HK1618359-001	HK1618359-002
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued					
Anthracene	120-12-7	50	µg/kg	<50	<50
Fluoranthene	206-44-0	150	µg/kg	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates					
2-Fluorobiphenyl	321-60-8	0.1	%	**99.6**	**74.7**
4-Terphenyl-d14	1718-51-0	0.1	%	**97.0**	**69.8**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	**52.3**	**52.8**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4203656)								
HK1618335-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	19.4	19.4	0.0
HK1618358-003	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	37.9	37.8	0.5
EG: Metals and Major Cations (QC Lot: 4202319)								
HK1618337-001	Anonymous	EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Mercury	7439-97-6	0.2	mg/kg	0.6	0.6	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	6	6	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	11	12	11.4
		EG020: Copper	7440-50-8	1	mg/kg	82	84	2.1
		EG020: Lead	7439-92-1	1	mg/kg	133	136	2.4
		EG020: Nickel	7440-02-0	1	mg/kg	11	12	8.9
		EG020: Zinc	7440-66-6	1	mg/kg	248	257	3.4
HK1618359-002	EDH02 (16.00 - 16.95M)	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	8	9	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	27	27	0.0

Matrix: SOIL

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 (QC Lot: 4202319) - Continued								
HK1618359-002	EDH02 (16.00 - 16.95M)	EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	23	22	6.4
		EG020: Nickel	7440-02-0	1	mg/kg	16	16	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	43	44	0.0
EP-065: PCB Single Congeners (QC Lot: 4196743)								
HK1617190-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744)								
HK1617605-003	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	630	691	9.3
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

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

Matrix: SOIL

		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4202319)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	89.9	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	88.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	106	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	89.5	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	92.9	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	100	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	90.8	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	90.6	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	88.6	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4196743)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	73.7	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	65.5	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	77.8	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	77.6	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	75.7	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	80.6	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	72.6	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	73.0	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	74.8	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	72.5	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	73.9	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	76.7	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	75.5	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	74.6	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.0	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	78.1	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	78.7	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	74.8	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	76.4	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	82.8	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	89.3	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	91.1	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	80.7	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	78.2	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	80.6	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	83.4	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	84.6	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	102	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	85.0	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	93.1	----	74	123	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4196744) - Continued											
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	79.0	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	91.0	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	86.0	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	87.0	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4202319)										
HK1618335-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	99.3	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	90.4	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	75.8	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	80.8	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	81.5	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	89.1	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1623382
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 13-JUN-2016
Order number	: ----			Issue Date	: 28-JUN-2016
C-O-C number	: H031770			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 24-JUN-2016

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: HK1623382

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	EDH04 10.00 - 10.95M	EDH04 11.00 - 11.95M	EDH04 12.00 - 12.95M		
			Client sample ID	EDH04 10.00 - 10.95M	EDH04 11.00 - 11.95M	EDH04 12.00 - 12.95M		
			Client sampling date / time	13-JUN-2016 13:30	13-JUN-2016 14:30	13-JUN-2016 15:30		
				HK1623382-001	HK1623382-002	HK1623382-003		
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	38.7	36.7	41.2		
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	14	11	12		
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2		
EG020: Chromium	7440-47-3	1	mg/kg	31	28	25		
EG020: Copper	7440-50-8	1	mg/kg	8	8	8		
EG020: Lead	7439-92-1	1	mg/kg	31	28	26		
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05		
EG020: Nickel	7440-02-0	1	mg/kg	22	21	18		
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	<0.1		
EG020: Zinc	7440-66-6	1	mg/kg	78	72	67		
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3		
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3		
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3		
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3		
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3		
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3		
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3		
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3		
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3		
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3		
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3		
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3		
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3		
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3		
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3		
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3		
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3		
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3		
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50		
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50		
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50		
Fluorene	86-73-7	50	µg/kg	<50	<50	<50		
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50		
Anthracene	120-12-7	50	µg/kg	<50	<50	<50		

Sub-Matrix: SEDIMENT			Client sample ID	EDH04 10.00 - 10.95M	EDH04 11.00 - 11.95M	EDH04 12.00 - 12.95M		
			Client sampling date / time	13-JUN-2016 13:30	13-JUN-2016 14:30	13-JUN-2016 15:30		
Compound	CAS Number	LOR	Unit	HK1623382-001	HK1623382-002	HK1623382-003		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150		
Pyrene	129-00-0	150	µg/kg	<150	<150	<150		
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150		
Chrysene	218-01-9	150	µg/kg	<150	<150	<150		
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150		
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150		
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150		
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150		
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150		
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150		
Low M.W. PAHs	---	550	µg/kg	<550	<550	<550		
High M.W. PAHs	---	1700	µg/kg	<1700	<1700	<1700		
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**70.7**	**72.1**	**73.5**		
4-Terphenyl-d14	1718-51-0	0.1	%	**72.4**	**80.7**	**72.8**		
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**59.1**	**54.5**	**69.6**		

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4233093)								
HK1623158-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	13.0	13.1	0.9
HK1623311-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	14.6	15.0	2.3
EG: Metals and Major Cations (QC Lot: 4229675)								
HK1623371-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	2	2	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	2	2	0.0
		EG020: Copper	7440-50-8	1	mg/kg	3	3	0.0
		EG020: Lead	7439-92-1	1	mg/kg	100	100	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	36	33	8.8
HK1623520-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	9	10	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	6	5	0.0
		EG020: Copper	7440-50-8	1	mg/kg	2	2	0.0
		EG020: Lead	7439-92-1	1	mg/kg	68	68	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EG: Metals and Major Cations (QC Lot: 4229675) - Continued								
HK1623520-001	Anonymous	EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	52	44	16.1
EP-065: PCB Single Congeners (QC Lot: 4226152)								
HK1622747-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230440)								
HK1623158-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4229675)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	103	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.0	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	85.9	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	97.6	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	88.5	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	92.8	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.6	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	85.0	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	89.5	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4226152)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	101	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	102	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	97.2	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	94.3	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	97.7	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	87.0	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	84.2	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	99.8	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	91.3	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	92.6	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	92.9	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	93.3	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	101	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	102	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	99.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	106	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	108	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	101	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230440)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	88.3	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	70.1	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	84.2	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	84.8	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	87.3	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	73.7	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	99.2	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	94.8	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	80.0	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	99.1	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.1	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	103	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	69.5	----	58	95	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230440) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	103	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	106	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	93.4	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4229675)										
HK1623370-001	Anonymous	EG020: Arsenic	7440-38-2	50 mg/kg	90.8	----	75	125	----	----
		EG020: Cadmium	7440-43-9	50 mg/kg	82.0	----	75	125	----	----
		EG020: Chromium	7440-47-3	50 mg/kg	81.9	----	75	125	----	----
		EG020: Copper	7440-50-8	50 mg/kg	88.8	----	75	125	----	----
		EG020: Lead	7439-92-1	50 mg/kg	93.7	----	75	125	----	----
		EG020: Mercury	7439-97-6	1 mg/kg	82.0	----	75	125	----	----
		EG020: Nickel	7440-02-0	50 mg/kg	82.8	----	75	125	----	----
		EG020: Silver	7440-22-4	50 mg/kg	87.3	----	75	125	----	----
		EG020: Zinc	7440-66-6	50 mg/kg	94.7	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1623590
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 14-JUN-2016
Order number	: ----			Issue Date	: 28-JUN-2016
C-O-C number	: H031771			No. of samples received	: 4
Site	: GROUND INVESTIGATION			No. of samples analysed	: 4

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 24-JUN-2016

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: HK1623590

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH04 13.00 - 13.95M [14-JUN-2016] HK1623590-001	EDH04 14.00 - 14.95M [14-JUN-2016] HK1623590-002	EDH04 15.00 - 15.95M [14-JUN-2016] HK1623590-003	EDH04 16.00 - 16.95M [14-JUN-2016] HK1623590-004
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	41.3	40.9	40.5	41.3
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	11	11	11	13
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	26	26	28	28
EG020: Copper	7440-50-8	1	mg/kg	8	8	8	8
EG020: Lead	7439-92-1	1	mg/kg	29	29	32	31
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	19	18	20	20
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	72	76	75	87
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH04 13.00 - 13.95M [14-JUN-2016] HK1623590-001	EDH04 14.00 - 14.95M [14-JUN-2016] HK1623590-002	EDH04 15.00 - 15.95M [14-JUN-2016] HK1623590-003	EDH04 16.00 - 16.95M [14-JUN-2016] HK1623590-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued							
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates							
2-Fluorobiphenyl	321-60-8	0.1	%	**68.2**	**64.3**	**72.9**	**68.9**
4-Terphenyl-d14	1718-51-0	0.1	%	**81.0**	**79.3**	**86.9**	**91.6**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	0.1	%	**72.6**	**63.4**	**64.4**	**71.2**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4233093)								
HK1623158-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	13.0	13.1	0.9
HK1623311-001	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	14.6	15.0	2.3
EA/ED: Physical and Aggregate Properties (QC Lot: 4233094)								
HK1623590-002	EDH04 14.00 - 14.95M	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	40.9	41.5	1.4
HK1623782-003	Anonymous	**EA055: Moisture Content (dried @ 103°C)**	----	0.1	%	20.7	20.8	0.0
EG: Metals and Major Cations (QC Lot: 4229675)								
HK1623371-001	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	2	2	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	2	2	0.0
		EG020: Copper	7440-50-8	1	mg/kg	3	3	0.0
		EG020: Lead	7439-92-1	1	mg/kg	100	100	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	36	33	8.8
HK1623520-001	Anonymous	**EG020: Mercury**	7439-97-6	0.05	mg/kg	0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	9	10	0.0

Matrix: SOIL

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 (QC Lot: 4229675) - Continued								
HK1623520-001	Anonymous	EG020: Chromium	7440-47-3	1	mg/kg	6	5	0.0
		EG020: Copper	7440-50-8	1	mg/kg	2	2	0.0
		EG020: Lead	7439-92-1	1	mg/kg	68	68	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	52	44	16.1
EP-065: PCB Single Congeners (QC Lot: 4226152)								
HK1622747-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230441)								
HK1623590-001	EDH04 13.00 - 13.95M	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4229675)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	103	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.0	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	85.9	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	97.6	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	88.5	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	92.8	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.6	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	85.0	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	89.5	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4226152)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	101	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	102	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	97.2	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	94.3	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	97.7	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	87.0	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	84.2	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	99.8	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	91.3	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	92.6	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	92.9	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	93.3	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	101	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	102	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	99.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	106	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	108	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	101	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230441)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	72.6	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	69.5	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	76.7	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	76.2	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	88.6	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	96.6	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	90.4	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	89.0	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	79.4	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	88.2	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.8	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	91.3	----	66	120	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4230441) - Continued											
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	84.6	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.7	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	79.6	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	88.4	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4229675)										
HK1623370-001	Anonymous	EG020: Arsenic	7440-38-2	50 mg/kg	90.8	----	75	125	----	----
		EG020: Cadmium	7440-43-9	50 mg/kg	82.0	----	75	125	----	----
		EG020: Chromium	7440-47-3	50 mg/kg	81.9	----	75	125	----	----
		EG020: Copper	7440-50-8	50 mg/kg	88.8	----	75	125	----	----
		EG020: Lead	7439-92-1	50 mg/kg	93.7	----	75	125	----	----
		EG020: Mercury	7439-97-6	1 mg/kg	82.0	----	75	125	----	----
		EG020: Nickel	7440-02-0	50 mg/kg	82.8	----	75	125	----	----
		EG020: Silver	7440-22-4	50 mg/kg	87.3	----	75	125	----	----
		EG020: Zinc	7440-66-6	50 mg/kg	94.7	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1617190
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 29-APR-2016
Order number	: ----			Issue Date	: 16-MAY-2016
C-O-C number	: H018495			No. of samples received	: 4
Site	: GROUND INVESTIGATION			No. of samples analysed	: 4

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This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 16-MAY-2016

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: HK1617190

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH6 (10.50 - 11.45M)	EDH6 (11.50 - 12.45M)	EDH6 (12.50 - 13.45M)	EDH7 (19.50 - 20.45M)
			Client sample ID	EDH6 (10.50 - 11.45M)	EDH6 (11.50 - 12.45M)	EDH6 (12.50 - 13.45M)	EDH7 (19.50 - 20.45M)
			Client sampling date / time	29-APR-2016 13:30	29-APR-2016 15:10	29-APR-2016 15:30	29-APR-2016 15:30
				HK1617190-001	HK1617190-002	HK1617190-003	HK1617190-004
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	30.9	39.4	41.2	18.7
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	8	7	7	3
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	34	38	36	18
EG020: Copper	7440-50-8	1	mg/kg	12	15	14	8
EG020: Lead	7439-92-1	1	mg/kg	28	29	29	22
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	23	25	24	11
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	120	91	86	36
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH6 (10.50 - 11.45M)	EDH6 (11.50 - 12.45M)	EDH6 (12.50 - 13.45M)	EDH7 (19.50 - 20.45M)
Client sampling date / time				29-APR-2016 13:30	29-APR-2016 15:10	29-APR-2016 15:30	29-APR-2016 15:30
				HK1617190-001	HK1617190-002	HK1617190-003	HK1617190-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued							
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150
Low M.W. PAHs	---	550	µg/kg	<550	<550	<550	<550
High M.W. PAHs	---	1700	µg/kg	<1700	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates							
2-Fluorobiphenyl	321-60-8	0.1	%	**93.6**	**55.3**	**93.5**	**96.0**
4-Terphenyl-d14	1718-51-0	0.1	%	**99.4**	**77.7**	**86.7**	**86.8**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	0.1	%	**53.3**	**53.4**	**58.3**	**54.8**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4197926)								
HK1616876-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	16.3	16.2	0.0
HK1617154-009	Anonymous	EA055: Moisture Content (dried @ 103°C)	---	0.1	%	18.4	18.3	0.6
EG: Metals and Major Cations (QC Lot: 4199202)								
HK1617154-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.2	0.2	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.2	0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	7	7	0.0
		EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	43	40	7.5
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	125	128	2.7
HK1617190-002	EDH6 (11.50 - 12.45M)	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	7	8	15.2
		EG020: Chromium	7440-47-3	1	mg/kg	38	39	4.4
		EG020: Copper	7440-50-8	1	mg/kg	15	15	0.0
		EG020: Lead	7439-92-1	1	mg/kg	29	30	0.0

Matrix: SOIL

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 (QC Lot: 4199202) - Continued								
HK1617190-002	EDH6 (11.50 - 12.45M)	EG020: Nickel	7440-02-0	1	mg/kg	25	26	4.4
		EG020: Zinc	7440-66-6	1	mg/kg	91	93	2.5
EP-065: PCB Single Congeners (QC Lot: 4196743)								
HK1617190-001	EDH6 (10.50 - 11.45M)	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602)								
HK1617378-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	2700	2600	4.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	2700	2600	4.0

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*

Matrix: SOIL

Method / Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4199202)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	94.5	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	91.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	94.0	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	87.6	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.4	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	102	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	83.7	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	88.4	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	91.9	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4196743)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	73.7	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	65.5	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	77.8	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	77.6	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	75.7	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	80.6	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	72.6	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	73.0	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	74.8	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	72.5	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	73.9	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	76.7	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	75.5	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	74.6	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.0	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	78.1	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	78.7	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	74.8	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	85.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	82.8	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	83.8	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	87.3	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	106	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	76.7	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	97.3	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	97.9	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	87.1	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	97.3	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.3	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	94.6	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	79.2	----	58	112	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.1	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	77.1	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	75.6	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4199202)										
HK1617154-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	87.4	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	95.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.2	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	76.9	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	76.9	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	115	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	91.6	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	88.3	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1617217
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Telephone	: ----	Telephone	: +852 2610 1044		
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 30-APR-2016
Order number	: ----			Issue Date	: 16-MAY-2016
C-O-C number	: H031662, H031664			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 16-MAY-2016

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: HK1617217

Site Name: Ground Investigation for Siu Ho Wan Depot.
Samples #1 and #2 were received in a chilled condition on 30 April, 2016.
Sample #3 was received in a chilled condition on 30 April, 2016 and 03 May, 2016.
Sediment sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.
Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.
Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.
Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg.
Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID / Client sampling date / time	EDH6 (13.50 - 14.45M) 30-APR-2016 09:04	EDH6 (14.50 - 15.45M) 30-APR-2016 10:31	EDH6 (15.50 - 16.45M) 30-APR-2016 11:48
					HK1617217-001	HK1617217-002	HK1617217-003
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	----	0.1	%		40.6	41.7	38.8
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg		6	7	8
EG020: Cadmium	7440-43-9	0.2	mg/kg		<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg		36	38	38
EG020: Copper	7440-50-8	1	mg/kg		13	14	13
EG020: Lead	7439-92-1	1	mg/kg		28	30	30
EG020: Mercury	7439-97-6	0.05	mg/kg		<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg		23	24	23
EG020: Silver	7440-22-4	0.1	mg/kg		<0.1	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg		83	86	84
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg		<3	<3	<3
PCB 18	37680-65-2	3	µg/kg		<3	<3	<3
PCB 28	7012-37-5	3	µg/kg		<3	<3	<3
PCB 44	41464-39-5	3	µg/kg		<3	<3	<3
PCB 52	35693-99-3	3	µg/kg		<3	<3	<3
PCB 66	32598-10-0	3	µg/kg		<3	<3	<3
PCB 77	32598-13-3	3	µg/kg		<3	<3	<3
PCB 101	37680-73-2	3	µg/kg		<3	<3	<3
PCB 105	32598-14-4	3	µg/kg		<3	<3	<3
PCB 118	31508-00-6	3	µg/kg		<3	<3	<3
PCB 126	57465-28-8	3	µg/kg		<3	<3	<3
PCB 128	38380-07-3	3	µg/kg		<3	<3	<3
PCB 138	35065-28-2	3	µg/kg		<3	<3	<3
PCB 153	35065-27-1	3	µg/kg		<3	<3	<3
PCB 169	32774-16-6	3	µg/kg		<3	<3	<3
PCB 170	35065-30-6	3	µg/kg		<3	<3	<3
PCB 180	35065-29-3	3	µg/kg		<3	<3	<3
PCB 187	52663-68-0	3	µg/kg		<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg		<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg		<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg		<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg		<50	<50	<50
Fluorene	86-73-7	50	µg/kg		<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg		<50	<50	<50
Anthracene	120-12-7	50	µg/kg		<50	<50	<50

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH6 (13.50 - 14.45M)	EDH6 (14.50 - 15.45M)	EDH6 (15.50 - 16.45M)
Client sampling date / time				30-APR-2016 09:04	30-APR-2016 10:31	30-APR-2016 11:48
				HK1617217-001	HK1617217-002	HK1617217-003
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued						
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150
Low M.W. PAHs	---	550	µg/kg	<550	<550	<550
High M.W. PAHs	---	1700	µg/kg	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates						
2-Fluorobiphenyl	321-60-8	0.1	%	**102**	**91.9**	**88.5**
4-Terphenyl-d14	1718-51-0	0.1	%	**91.1**	**83.6**	**81.8**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate						
Decachlorobiphenyl	2051-24-3	0.1	%	**54.4**	**55.8**	**55.2**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4197926)								
HK1616876-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	16.3	16.2	0.0
HK1617154-009	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	18.4	18.3	0.6
EG: Metals and Major Cations (QC Lot: 4199202)								
HK1617154-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.2	0.2	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.2	0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	7	7	0.0
		EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	43	40	7.5
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	125	128	2.7
HK1617190-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	7	8	15.2
		EG020: Chromium	7440-47-3	1	mg/kg	38	39	4.4
		EG020: Copper	7440-50-8	1	mg/kg	15	15	0.0
		EG020: Lead	7439-92-1	1	mg/kg	29	30	0.0

Matrix: SOIL

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 (QC Lot: 4199202) - Continued								
HK1617190-002	Anonymous	EG020: Nickel	7440-02-0	1	mg/kg	25	26	4.4
		EG020: Zinc	7440-66-6	1	mg/kg	91	93	2.5
EP-065: PCB Single Congeners (QC Lot: 4196743)								
HK1617190-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602)								
HK1617378-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	2700	2600	4.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	2700	2600	4.0

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*

Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	Spike Recovery (%) DCS	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4199202)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	94.5	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	91.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	94.0	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	87.6	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.4	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	102	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	83.7	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	88.4	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	91.9	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4196743)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	73.7	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	65.5	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	77.8	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	77.6	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	75.7	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	80.6	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	72.6	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	73.0	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	74.8	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	72.5	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	73.9	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	76.7	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	75.5	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	74.6	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.0	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	78.1	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	78.7	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	74.8	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	85.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	82.8	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	83.8	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	87.3	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	106	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	76.7	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	97.3	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	97.9	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	87.1	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	97.3	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.3	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	94.6	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	79.2	----	58	112	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4195602) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.1	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	77.1	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	75.6	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4199202)										
HK1617154-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	87.4	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	95.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.2	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	76.9	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	76.9	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	115	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	91.6	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	88.3	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1621647
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 01-JUN-2016
Order number	: ----			Issue Date	: 16-JUN-2016
C-O-C number	: H031767			No. of samples received	: 5
Site	: GROUND INVESTIGATION			No. of samples analysed	: 4

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This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 14-JUN-2016

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: HK1621647

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water Sample #1 EDH08 11.00 - 11.45M, Sample #3 EDH08 13.50 - 14.45M and Sample #4 EDH08 14.50 - 15.45M.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	EDH08 11.00 - 11.45M [01-JUN-2016] HK1621647-001	EDH08 12.50 - 13.45M [01-JUN-2016] HK1621647-002	EDH08 13.50 - 14.45M [01-JUN-2016] HK1621647-003	EDH08 14.50 - 15.45M [01-JUN-2016] HK1621647-004
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	25.9	23.4	20.3	17.1
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	3	1	2	3
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	14	17	7	6
EG020: Copper	7440-50-8	1	mg/kg	4	6	3	3
EG020: Lead	7439-92-1	1	mg/kg	12	15	15	16
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	8	9	4	4
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	97	74	46	41
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50

Sub-Matrix: SEDIMENT			Client sample ID	EDH08 11.00 - 11.45M	EDH08 12.50 - 13.45M	EDH08 13.50 - 14.45M	EDH08 14.50 - 15.45M
			Client sampling date / time	[01-JUN-2016]	[01-JUN-2016]	[01-JUN-2016]	[01-JUN-2016]
Compound	CAS Number	LOR	Unit	HK1621647-001	HK1621647-002	HK1621647-003	HK1621647-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued							
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates							
2-Fluorobiphenyl	321-60-8	0.1	%	**79.5**	**89.6**	**86.7**	**108**
4-Terphenyl-d14	1718-51-0	0.1	%	**89.5**	**93.6**	**103**	**100**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	0.1	%	**54.9**	**55.0**	**62.2**	**56.0**

Sub-Matrix: INTERSTITIAL WATER			Client sample ID	EDH08 11.00 - 11.45M	EDH08 13.50 - 14.45M	EDH08 14.50 - 15.45M
			Client sampling date / time	[01-JUN-2016]	[01-JUN-2016]	[01-JUN-2016]
Compound	CAS Number	LOR	Unit	HK1621647-001	HK1621647-003	HK1621647-004
EP-390: Triorganotins						
Tributyltin	56573-85-4	0.015	µg TBT /L	<0.015	<0.015	<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4221635)								
HK1621575-017	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	0.4	0.4	0.0
HK1621575-027	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	0.1	0.1	0.0
EG: Metals and Major Cations (QC Lot: 4219387)								
HK1621557-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	1	<1	0.0
		EG020: Copper	7440-50-8	1	mg/kg	<1	<1	0.0
		EG020: Lead	7439-92-1	1	mg/kg	13	14	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	<1	<1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	30	24	18.9
HK1621849-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	28	28	0.0
		EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	187	178	5.3
		EG020: Nickel	7440-02-0	1	mg/kg	<1	1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	39	36	9.7
EP-065: PCB Single Congeners (QC Lot: 4215657)								
HK1621117-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued								
HK1621117-001	Anonymous	PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4217988)								
HK1621326-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4227739)								
HK1621647-004	EDH08 14.50 - 15.45M	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4219387)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	89.6	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.4	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	89.8	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	89.4	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	101	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	101	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.6	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	82.1	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	92.5	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4215657)											

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	61.3	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	62.7	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	82.6	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	105	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	94.0	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	107	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	77.5	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	71.6	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	76.5	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	76.2	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	69.5	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	77.0	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	68.1	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	76.8	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	98.6	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	90.7	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	83.6	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	71.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4217988)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	95.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	69.1	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	89.4	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	92.6	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	97.8	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	68.7	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	101	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	98.8	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	86.2	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	94.2	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.1	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	91.9	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	87.7	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	82.8	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	90.4	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	92.3	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4227739)											

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4227739) - Continued											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	102	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4219387)										
HK1621557-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	98.2	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	92.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	103	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	79.1	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	100	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	112	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	85.6	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	80.7	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4227739)										
HK1621647-003	EDH08 13.50 - 14.45M	Tributyltin	56573-85-4	2 ngSn/L	96.4	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1625524
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 14-JUN-2016
Order number	: ----			Issue Date	: 15-JUL-2016
C-O-C number	: H031771 - H031772			No. of samples received	: 1
Site	: GROUND INVESTIGATION			No. of samples analysed	: 1

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 13-JUL-2016

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: HK1625524

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition on 14 and 15 June, 2016.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg.

Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID: EDH11 18.50 - 19.45M Client sampling date / time: [14-JUN-2016] HK1625524-001
EA/ED: Physical and Aggregate Properties				
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	19.9
EG: Metals and Major Cations				
EG020: Arsenic	7440-38-2	1	mg/kg	3
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	10
EG020: Copper	7440-50-8	1	mg/kg	3
EG020: Lead	7439-92-1	1	mg/kg	8
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	6
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	128
EP-065: PCB Single Congeners				
PCB 8	34883-43-7	3	µg/kg	<3
PCB 18	37680-65-2	3	µg/kg	<3
PCB 28	7012-37-5	3	µg/kg	<3
PCB 44	41464-39-5	3	µg/kg	<3
PCB 52	35693-99-3	3	µg/kg	<3
PCB 66	32598-10-0	3	µg/kg	<3
PCB 77	32598-13-3	3	µg/kg	<3
PCB 101	37680-73-2	3	µg/kg	<3
PCB 105	32598-14-4	3	µg/kg	<3
PCB 118	31508-00-6	3	µg/kg	<3
PCB 126	57465-28-8	3	µg/kg	<3
PCB 128	38380-07-3	3	µg/kg	<3
PCB 138	35065-28-2	3	µg/kg	<3
PCB 153	35065-27-1	3	µg/kg	<3
PCB 169	32774-16-6	3	µg/kg	<3
PCB 170	35065-30-6	3	µg/kg	<3
PCB 180	35065-29-3	3	µg/kg	<3
PCB 187	52663-68-0	3	µg/kg	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)				
Naphthalene	91-20-3	50	µg/kg	<50
Acenaphthylene	208-96-8	50	µg/kg	<50
Acenaphthene	83-32-9	50	µg/kg	<50
Fluorene	86-73-7	50	µg/kg	<50
Phenanthrene	85-01-8	50	µg/kg	<50
Anthracene	120-12-7	50	µg/kg	<50

Sub-Matrix: SEDIMENT			Client sample ID	EDH11 18.50 - 19.45M
			Client sampling date / time	[14-JUN-2016]
Compound	CAS Number	LOR	Unit	HK1625524-001
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued				
Fluoranthene	206-44-0	150	µg/kg	<150
Pyrene	129-00-0	150	µg/kg	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150
Chrysene	218-01-9	150	µg/kg	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150
Low M.W. PAHs	---	550	µg/kg	<550
High M.W. PAHs	---	1700	µg/kg	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates				
2-Fluorobiphenyl	321-60-8	0.1	%	**68.4**
4-Terphenyl-d14	1718-51-0	0.1	%	**75.8**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate				
Decachlorobiphenyl	2051-24-3	0.1	%	**60.2**

Sub-Matrix: INTERSTITIAL WATER

Compound	CAS Number	LOR	Unit	Client sample ID: EDH11 18.50 - 19.45M Client sampling date / time: [14-JUN-2016] HK1625524-001
EP-390: Triorganotins				
Tributyltin	56573-85-4	0.015	µg TBT /L	0.024

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report: Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4239138)								
HK1625208-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	28.0	28.3	0.9
EG: Metals and Major Cations (QC Lot: 4239973)								
HK1625208-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.60	0.70	14.8
		EG020: Silver	7440-22-4	0.1	mg/kg	2.6	2.6	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	4	4	0.0
		EG020: Cadmium	7440-43-9	1	mg/kg	2	2	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	104	87	18.3
		EG020: Copper	7440-50-8	1	mg/kg	354	427	18.6
		EG020: Lead	7439-92-1	1	mg/kg	165	159	4.0
		EG020: Nickel	7440-02-0	1	mg/kg	76	65	15.3
		EG020: Zinc	7440-66-6	1	mg/kg	868	970	11.0
EP-065: PCB Single Congeners (QC Lot: 4239087)								
HK1625020-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239091)								
HK1625524-001	EDH11 18.50 - 19.45M	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239091) - Continued								
HK1625524-001	EDH11 18.50 - 19.45M	Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4251468)								
HK1625454-001	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4239973)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.1	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	110	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	93.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	93.5	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	103	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	89.6	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	93.0	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4239087)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	72.0	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	75.2	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	84.6	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	93.1	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	95.6	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	96.7	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	79.2	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	82.4	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	83.6	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	82.9	----	47	113	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4239087) - Continued											
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	74.4	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	81.0	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	87.7	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	86.1	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.6	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	92.2	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	89.2	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	86.9	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239091)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	88.0	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	70.4	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	85.6	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	82.7	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	80.3	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	72.0	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	85.3	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	86.3	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	81.3	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	93.4	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.1	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	94.8	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	80.0	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	79.1	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	86.5	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	92.3	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4251468)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	91.6	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4239973)										
HK1623043-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	83.9	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4251468)										
HK1625454-001	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	105	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1622747
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	Amendment	: 1
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 04-JUN-2016
Order number	: ----			Issue Date	: 26-APR-2017
C-O-C number	: H031768			No. of samples received	: 2
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. Testing period is from 04-JUN-2016 to 20-JUN-2016.

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: HK1622747

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water except Sample #2 EDH12 11.0 - 11.95M.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg.

Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: **SEDIMENT**

			Client sample ID	EDH12 10.0 - 10.95M	EDH12 11.0 - 11.95M			
			Client sampling date / time	04-JUN-2016 10:00	04-JUN-2016 11:00			
Compound	CAS Number	LOR	Unit	HK1622747-001	HK1622747-002			
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	39.3	26.8			
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	12	5			
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2			
EG020: Chromium	7440-47-3	1	mg/kg	36	24			
EG020: Copper	7440-50-8	1	mg/kg	19	8			
EG020: Lead	7439-92-1	1	mg/kg	38	18			
EG020: Mercury	7439-97-6	0.05	mg/kg	0.05	<0.05			
EG020: Nickel	7440-02-0	1	mg/kg	24	17			
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1			
EG020: Zinc	7440-66-6	1	mg/kg	97	161			
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3			
PCB 18	37680-65-2	3	µg/kg	<3	<3			
PCB 28	7012-37-5	3	µg/kg	<3	<3			
PCB 44	41464-39-5	3	µg/kg	<3	<3			
PCB 52	35693-99-3	3	µg/kg	<3	<3			
PCB 66	32598-10-0	3	µg/kg	<3	<3			
PCB 77	32598-13-3	3	µg/kg	<3	<3			
PCB 101	37680-73-2	3	µg/kg	<3	<3			
PCB 105	32598-14-4	3	µg/kg	<3	<3			
PCB 118	31508-00-6	3	µg/kg	<3	<3			
PCB 126	57465-28-8	3	µg/kg	<3	<3			
PCB 128	38380-07-3	3	µg/kg	<3	<3			
PCB 138	35065-28-2	3	µg/kg	<3	<3			
PCB 153	35065-27-1	3	µg/kg	<3	<3			
PCB 169	32774-16-6	3	µg/kg	<3	<3			
PCB 170	35065-30-6	3	µg/kg	<3	<3			
PCB 180	35065-29-3	3	µg/kg	<3	<3			
PCB 187	52663-68-0	3	µg/kg	<3	<3			
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18			
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50			
Acenaphthylene	208-96-8	50	µg/kg	<50	<50			
Acenaphthene	83-32-9	50	µg/kg	<50	<50			
Fluorene	86-73-7	50	µg/kg	<50	<50			
Phenanthrene	85-01-8	50	µg/kg	<50	<50			
Anthracene	120-12-7	50	µg/kg	<50	<50			

Sub-Matrix: SEDIMENT			Client sample ID	EDH12 10.0 - 10.95M	EDH12 11.0 - 11.95M			
			Client sampling date / time	04-JUN-2016 10:00	04-JUN-2016 11:00			
Compound	CAS Number	LOR	Unit	HK1622747-001	HK1622747-002			
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
Fluoranthene	206-44-0	150	µg/kg	<150	<150			
Pyrene	129-00-0	150	µg/kg	<150	<150			
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150			
Chrysene	218-01-9	150	µg/kg	<150	<150			
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150			
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150			
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150			
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150			
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150			
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150			
Low M.W. PAHs	----	550	µg/kg	<550	<550			
High M.W. PAHs	----	1700	µg/kg	<1700	<1700			
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**99.3**	**115**			
4-Terphenyl-d14	1718-51-0	0.1	%	**97.8**	**114**			
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**77.1**	**64.7**			

Sub-Matrix: INTERSTITIAL WATER			Client sample ID	EDH12 11.0 - 11.95M				
			Client sampling date / time	04-JUN-2016 11:00				
Compound	CAS Number	LOR	Unit	HK1622747-002				
EP-390: Triorganotins								
Tributyltin	56573-85-4	0.015	µg TBT /L	<0.015				

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4226443)								
HK1622312-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	3.2	3.0	6.6
HK1622529-002	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	9.5	9.6	1.2
EG: Metals and Major Cations (QC Lot: 4226183)								
HK1622627-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.13	0.12	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.2	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.2	0.3	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	57	62	8.1
		EG020: Chromium	7440-47-3	1	mg/kg	20	23	16.7
		EG020: Copper	7440-50-8	1	mg/kg	52	62	18.1
		EG020: Lead	7439-92-1	1	mg/kg	59	58	1.9
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	215	242	11.7
HK1622752-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	11	10	9.9
		EG020: Chromium	7440-47-3	1	mg/kg	18	17	6.1
		EG020: Copper	7440-50-8	1	mg/kg	6	6	0.0
		EG020: Lead	7439-92-1	1	mg/kg	16	16	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	11	11	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	128	148	14.3
EP-065: PCB Single Congeners (QC Lot: 4226152)								
HK1622747-001	EDH12 10.0 - 10.95M	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4224635)								

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4224635) - Continued								
HK1622323-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4232224)								
HK1623280-003	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	63	64	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4226183)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.8	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	87.7	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	88.0	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	86.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.7	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	101	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	89.7	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.5	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	97.1	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4226152)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	101	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	102	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	97.2	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	94.3	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	97.7	----	47	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4226152) - Continued											
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	87.0	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	84.2	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	99.8	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	91.3	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	92.6	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	92.9	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	93.3	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	101	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	102	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	99.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	106	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	108	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	101	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4224635)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	87.3	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	73.3	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	87.2	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	97.0	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	97.9	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	73.5	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	115	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	101	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	93.1	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	113	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	99.0	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	105	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	80.2	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	113	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	106	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	109	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4232224)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	101	----	70	130	----	----

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

Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4226183)										
HK1622627-001	Anonymous	**EG020: Arsenic**	7440-38-2	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	91.8	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.4	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	80.0	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	118	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	84.7	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	79.5	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4232224)										
HK1623042-001	Anonymous	**Tributyltin**	56573-85-4	2 ngSn/L	109	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1622752
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 07-JUN-2016
Order number	: ----			Issue Date	: 24-JUN-2016
C-O-C number	: H031765			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 20-JUN-2016

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: HK1622752

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH12 12.00 - 12.95M	EDH12 13.00 - 13.95M
			Client sampling date / time	07-JUN-2016 09:30	07-JUN-2016 10:30
			Client sample ID	HK1622752-001	HK1622752-002
EA/ED: Physical and Aggregate Properties					
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	29.1	27.9
EG: Metals and Major Cations					
EG020: Arsenic	7440-38-2	1	mg/kg	11	6
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	18	14
EG020: Copper	7440-50-8	1	mg/kg	6	6
EG020: Lead	7439-92-1	1	mg/kg	16	19
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	11	8
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	128	161
EP-065: PCB Single Congeners					
PCB 8	34883-43-7	3	µg/kg	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)					
Naphthalene	91-20-3	50	µg/kg	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID: EDH12 12.00 - 12.95M Client sampling date / time: 07-JUN-2016 09:30 HK1622752-001	EDH12 13.00 - 13.95M 07-JUN-2016 10:30 HK1622752-002
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued					
Fluoranthene	206-44-0	150	µg/kg	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates					
2-Fluorobiphenyl	321-60-8	0.1	%	**117**	**107**
4-Terphenyl-d14	1718-51-0	0.1	%	**122**	**110**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	**66.5**	**58.1**

Sub-Matrix: INTERSTITIAL WATER			Client sample ID	EDH12 12.00 - 12.95M	EDH12 13.00 - 13.95M
			Client sampling date / time	07-JUN-2016 09:30	07-JUN-2016 10:30
Compound	CAS Number	LOR	Unit	HK1622752-001	HK1622752-002
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L	<0.015	<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4229178)								
HK1622657-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	13.8	13.5	1.7
HK1622784-006	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	0.5	0.5	0.0
EG: Metals and Major Cations (QC Lot: 4226183)								
HK1622627-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.13	0.12	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.2	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.2	0.3	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	57	62	8.1
		EG020: Chromium	7440-47-3	1	mg/kg	20	23	16.7
		EG020: Copper	7440-50-8	1	mg/kg	52	62	18.1
		EG020: Lead	7439-92-1	1	mg/kg	59	58	1.9
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	215	242	11.7
HK1622752-001	EDH12 12.00 - 12.95M	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	11	10	9.9
		EG020: Chromium	7440-47-3	1	mg/kg	18	17	6.1
		EG020: Copper	7440-50-8	1	mg/kg	6	6	0.0
		EG020: Lead	7439-92-1	1	mg/kg	16	16	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	11	11	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	128	148	14.3
EP-065: PCB Single Congeners (QC Lot: 4226152)								
HK1622747-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-065: PCB Single Congeners (QC Lot: 4226152) - Continued								
HK1622747-001	Anonymous	PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4224635)								
HK1622323-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4232224)								
HK1623280-003	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	63	64	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4226183)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.8	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	87.7	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	88.0	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	86.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	91.7	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	101	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	89.7	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.5	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	97.1	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4226152)											

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4226152) - Continued											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	101	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	102	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	97.2	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	94.3	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	97.7	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	87.0	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	84.2	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	99.8	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	91.3	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	92.6	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	92.9	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	93.3	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	101	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	102	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	99.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	106	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	108	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	101	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4224635)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	87.3	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	73.3	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	87.2	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	97.0	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	97.9	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	73.5	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	115	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	101	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	93.1	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	113	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	99.0	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	105	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	80.2	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	113	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	106	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	109	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4232224)											

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4232224) - Continued											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	101	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4226183)										
HK1622627-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	91.8	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.4	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	80.0	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	118	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	84.7	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	79.5	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4232224)										
HK1623042-001	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	109	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1620547
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 23-MAY-2016
Order number	: ----			Issue Date	: 06-JUN-2016
C-O-C number	: H031761			No. of samples received	: 6
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 03-JUN-2016

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: HK1620547

Site Name: Ground Investigation for Siu Ho Wan Depot.
Sample(s) were received in chilled condition.
Sediment sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.
Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.
Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water except Sample #1 EDH18 16.50 - 17.45M and Sample #4 EDH13 21.50-22.45M.
Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg.
Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH18 16.50 - 17.45M	EDH13 20.50 - 21.45M	EDH13 21.50 - 22.45M
			Client sample ID	EDH18 16.50 - 17.45M	EDH13 20.50 - 21.45M	EDH13 21.50 - 22.45M
			Client sampling date / time	23-MAY-2016 10:00	23-MAY-2016 09:15	23-MAY-2016 10:15
				HK1620547-001	HK1620547-003	HK1620547-004
EA/ED: Physical and Aggregate Properties						
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	36.0	31.7	18.0
EG: Metals and Major Cations						
EG020: Arsenic	7440-38-2	1	mg/kg	6	8	2
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	36	33	12
EG020: Copper	7440-50-8	1	mg/kg	12	14	20
EG020: Lead	7439-92-1	1	mg/kg	28	28	28
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	22	20	7
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	91	93	89
EP-065: PCB Single Congeners						
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3
Total Polychlorinated biphenyls	---	18	µg/kg	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID / Client sampling date / time	EDH18 16.50 - 17.45M 23-MAY-2016 10:00 HK1620547-001	EDH13 20.50 - 21.45M 23-MAY-2016 09:15 HK1620547-003	EDH13 21.50 - 22.45M 23-MAY-2016 10:15 HK1620547-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued							
Fluoranthene	206-44-0	150	µg/kg		<150	<150	<150
Pyrene	129-00-0	150	µg/kg		<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg		<150	<150	<150
Chrysene	218-01-9	150	µg/kg		<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg		<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg		<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg		<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg		<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg		<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg		<150	<150	<150
Low M.W. PAHs	----	550	µg/kg		<550	<550	<550
High M.W. PAHs	----	1700	µg/kg		<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates							
2-Fluorobiphenyl	321-60-8	0.1	%		**101**	**90.2**	**88.1**
4-Terphenyl-d14	1718-51-0	0.1	%		**83.8**	**74.9**	**72.1**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	0.1	%		**86.8**	**80.5**	**57.7**

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	EDH18 16.50 - 17.45M	EDH13 21.50 - 22.45M
				Client sampling date / time	23-MAY-2016 10:00	23-MAY-2016 10:15
Compound	CAS Number	LOR	Unit		HK1620547-001	HK1620547-004
EP-390: Triorganotins						
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015	<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4214817)								
HK1620547-001	EDH18 16.50 - 17.45M	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	36.0	35.9	0.3
EG: Metals and Major Cations (QC Lot: 4214251)								
HK1620520-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	2	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	4	4	0.0
		EG020: Copper	7440-50-8	1	mg/kg	3	3	0.0
		EG020: Lead	7439-92-1	1	mg/kg	26	23	9.9
		EG020: Nickel	7440-02-0	1	mg/kg	3	3	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	38	40	6.6
HK1620547-003	EDH13 20.50 - 21.45M	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	8	9	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	33	36	8.9
		EG020: Copper	7440-50-8	1	mg/kg	14	16	11.4
		EG020: Lead	7439-92-1	1	mg/kg	28	32	14.8
		EG020: Nickel	7440-02-0	1	mg/kg	20	22	11.4
		EG020: Zinc	7440-66-6	1	mg/kg	93	94	1.7
EP-065: PCB Single Congeners (QC Lot: 4211658)								
HK1620200-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-065: PCB Single Congeners (QC Lot: 4211658) - Continued								
HK1620200-001	Anonymous	PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4212707)								
HK1620305-003	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4219491)								
HK1621117-001	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4214251)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	93.5	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	94.6	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	105	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	96.8	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	104	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	103	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	96.0	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	93.9	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	104	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4211658)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	72.0	----	55	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4211658) - Continued											
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	91.2	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	89.7	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	104	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	102	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	94.3	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	87.4	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	86.1	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	89.7	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	88.2	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	87.1	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	92.6	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	84.3	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	91.8	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	109	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	105	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	95.2	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	88.6	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4212707)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	96.1	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	83.0	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	90.5	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	94.1	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	96.8	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	79.9	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	102	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	100	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	92.6	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	91.4	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	88.8	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	102	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	77.0	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	89.1	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	99.8	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	104	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4219491)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	94.4	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4214251)										
HK1620520-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	96.0	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	95.8	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	94.1	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	81.2	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	85.6	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	85.3	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	91.0	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4219491)										
HK1621117-001	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	104	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

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ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1621116
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Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 25-MAY-2016
Order number	: ----			Issue Date	: 10-JUN-2016
C-O-C number	: H031762, H031764			No. of samples received	: 2
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 07-JUN-2016

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: HK1621116

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition on 25 and 26 May, 2016.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID / Client sampling date / time	EDH14 10.00 - 10.95M [25-MAY-2016] HK1621116-001	EDH14 11.00 - 11.95M [25-MAY-2016] HK1621116-002
EA/ED: Physical and Aggregate Properties						
EA055: Moisture Content (dried @ 103° C)	---	0.1	%		28.0	29.8
EG: Metals and Major Cations						
EG020: Arsenic	7440-38-2	1	mg/kg		5	4
EG020: Cadmium	7440-43-9	0.2	mg/kg		<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg		22	16
EG020: Copper	7440-50-8	1	mg/kg		8	6
EG020: Lead	7439-92-1	1	mg/kg		20	18
EG020: Mercury	7439-97-6	0.05	mg/kg		<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg		17	13
EG020: Silver	7440-22-4	0.1	mg/kg		0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg		363	56
EP-065: PCB Single Congeners						
PCB 8	34883-43-7	3	µg/kg		<3	<3
PCB 18	37680-65-2	3	µg/kg		<3	<3
PCB 28	7012-37-5	3	µg/kg		<3	<3
PCB 44	41464-39-5	3	µg/kg		<3	<3
PCB 52	35693-99-3	3	µg/kg		<3	<3
PCB 66	32598-10-0	3	µg/kg		<3	<3
PCB 77	32598-13-3	3	µg/kg		<3	<3
PCB 101	37680-73-2	3	µg/kg		<3	<3
PCB 105	32598-14-4	3	µg/kg		<3	<3
PCB 118	31508-00-6	3	µg/kg		<3	<3
PCB 126	57465-28-8	3	µg/kg		<3	<3
PCB 128	38380-07-3	3	µg/kg		<3	<3
PCB 138	35065-28-2	3	µg/kg		<3	<3
PCB 153	35065-27-1	3	µg/kg		<3	<3
PCB 169	32774-16-6	3	µg/kg		<3	<3
PCB 170	35065-30-6	3	µg/kg		<3	<3
PCB 180	35065-29-3	3	µg/kg		<3	<3
PCB 187	52663-68-0	3	µg/kg		<3	<3
Total Polychlorinated biphenyls	---	18	µg/kg		<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	91-20-3	50	µg/kg		<50	<50
Acenaphthylene	208-96-8	50	µg/kg		<50	<50
Acenaphthene	83-32-9	50	µg/kg		<50	<50
Fluorene	86-73-7	50	µg/kg		<50	<50
Phenanthrene	85-01-8	50	µg/kg		<50	<50
Anthracene	120-12-7	50	µg/kg		<50	<50

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID: EDH14 10.00 - 10.95M	EDH14 11.00 - 11.95M
			Client sampling date / time	[25-MAY-2016]	[25-MAY-2016]
				HK1621116-001	HK1621116-002
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued					
Fluoranthene	206-44-0	150	µg/kg	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150
Low M.W. PAHs	---	550	µg/kg	<550	<550
High M.W. PAHs	---	1700	µg/kg	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates					
2-Fluorobiphenyl	321-60-8	0.1	%	**99.9**	**116**
4-Terphenyl-d14	1718-51-0	0.1	%	**98.5**	**101**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	**65.8**	**54.6**

Sub-Matrix: INTERSTITIAL WATER			Client sample ID	EDH14 10.00 - 10.95M	EDH14 11.00 - 11.95M		
			Client sampling date / time	[25-MAY-2016]	[25-MAY-2016]		
Compound	CAS Number	LOR	Unit	HK1621116-001	HK1621116-002		
EP-390: Triorganotins							
Tributyltin	56573-85-4	0.015	µg TBT /L	<0.015	<0.015		

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4216772)								
HK1621115-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	11.6	11.7	1.1
EG: Metals and Major Cations (QC Lot: 4215794)								
HK1620440-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.4	0.4	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	6	6	0.0
		EG020: Copper	7440-50-8	1	mg/kg	19	19	0.0
		EG020: Lead	7439-92-1	1	mg/kg	5	5	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	3	3	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	114	112	1.4
HK1621097-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	1	2	0.0
		EG020: Copper	7440-50-8	1	mg/kg	6	7	0.0
		EG020: Lead	7439-92-1	1	mg/kg	180	169	5.9
		EG020: Nickel	7440-02-0	1	mg/kg	<1	<1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	31	26	18.9
EP-065: PCB Single Congeners (QC Lot: 4211658)								
HK1620200-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-065: PCB Single Congeners (QC Lot: 4211658) - Continued								
HK1620200-001	Anonymous	PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4213434)								
HK1620524-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4219491)								
HK1621117-001	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4215794)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.5	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	88.0	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	91.3	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	90.1	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	90.8	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	89.9	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	83.2	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	88.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	107	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4211658)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	72.0	----	55	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Spike Recovery (%) DCS	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
EP-065: PCB Single Congeners (QC Lot: 4211658) - Continued											
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	91.2	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	89.7	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	104	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	102	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	94.3	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	87.4	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	86.1	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	89.7	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	88.2	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	87.1	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	92.6	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	84.3	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	91.8	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	109	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	105	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	95.2	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	88.6	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4213434)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	103	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	79.9	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	97.3	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	100	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	103	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	74.1	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	99.1	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	97.1	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	87.0	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	99.5	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	90.7	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	103	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	71.9	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	87.0	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	100	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	109	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Spike Recovery (%) DCS	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
EP-390: Triorganotins (QC Lot: 4219491)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	94.4	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4215794)										
HK1620440-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	93.6	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	88.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.4	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	94.3	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	77.3	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	96.2	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	81.3	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	81.7	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4219491)										
HK1621117-001	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	104	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

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ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1621117
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 26-MAY-2016
Order number	: ----			Issue Date	: 10-JUN-2016
C-O-C number	: H031764			No. of samples received	: 1
Site	: GROUND INVESTIGATION			No. of samples analysed	: 1

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 07-JUN-2016

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: HK1621117

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID: EDH14 12.00 - 12.95			
				Client sampling date / time: [26-MAY-2016]			
				HK1621117-001			
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	23.3			
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	1			
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2			
EG020: Chromium	7440-47-3	1	mg/kg	12			
EG020: Copper	7440-50-8	1	mg/kg	4			
EG020: Lead	7439-92-1	1	mg/kg	16			
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05			
EG020: Nickel	7440-02-0	1	mg/kg	10			
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1			
EG020: Zinc	7440-66-6	1	mg/kg	115			
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3			
PCB 18	37680-65-2	3	µg/kg	<3			
PCB 28	7012-37-5	3	µg/kg	<3			
PCB 44	41464-39-5	3	µg/kg	<3			
PCB 52	35693-99-3	3	µg/kg	<3			
PCB 66	32598-10-0	3	µg/kg	<3			
PCB 77	32598-13-3	3	µg/kg	<3			
PCB 101	37680-73-2	3	µg/kg	<3			
PCB 105	32598-14-4	3	µg/kg	<3			
PCB 118	31508-00-6	3	µg/kg	<3			
PCB 126	57465-28-8	3	µg/kg	<3			
PCB 128	38380-07-3	3	µg/kg	<3			
PCB 138	35065-28-2	3	µg/kg	<3			
PCB 153	35065-27-1	3	µg/kg	<3			
PCB 169	32774-16-6	3	µg/kg	<3			
PCB 170	35065-30-6	3	µg/kg	<3			
PCB 180	35065-29-3	3	µg/kg	<3			
PCB 187	52663-68-0	3	µg/kg	<3			
Total Polychlorinated biphenyls	----	18	µg/kg	<18			
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50			
Acenaphthylene	208-96-8	50	µg/kg	<50			
Acenaphthene	83-32-9	50	µg/kg	<50			
Fluorene	86-73-7	50	µg/kg	<50			
Phenanthrene	85-01-8	50	µg/kg	<50			
Anthracene	120-12-7	50	µg/kg	<50			

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID: EDH14 12.00 - 12.95 Client sampling date / time: [26-MAY-2016] HK1621117-001
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued				
Fluoranthene	206-44-0	150	µg/kg	<150
Pyrene	129-00-0	150	µg/kg	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150
Chrysene	218-01-9	150	µg/kg	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150
Low M.W. PAHs	----	550	µg/kg	<550
High M.W. PAHs	----	1700	µg/kg	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates				
2-Fluorobiphenyl	321-60-8	0.1	%	**82.0**
4-Terphenyl-d14	1718-51-0	0.1	%	**91.0**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate				
Decachlorobiphenyl	2051-24-3	0.1	%	**64.0**

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	EDH14 12.00 - 12.95
				Client sampling date / time	[26-MAY-2016]
Compound	CAS Number	LOR	Unit		HK1621117-001
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4216772)								
HK1621115-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	11.6	11.7	1.1
EG: Metals and Major Cations (QC Lot: 4215794)								
HK1620440-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.4	0.4	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	6	6	0.0
		EG020: Copper	7440-50-8	1	mg/kg	19	19	0.0
		EG020: Lead	7439-92-1	1	mg/kg	5	5	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	3	3	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	114	112	1.4
HK1621097-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	1	2	0.0
		EG020: Copper	7440-50-8	1	mg/kg	6	7	0.0
		EG020: Lead	7439-92-1	1	mg/kg	180	169	5.9
		EG020: Nickel	7440-02-0	1	mg/kg	<1	<1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	31	26	18.9
EP-065: PCB Single Congeners (QC Lot: 4215657)								
HK1621117-001	EDH14 12.00 - 12.95	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued								
HK1621117-001	EDH14 12.00 - 12.95	PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4213434)								
HK1620524-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4219491)								
HK1621117-001	EDH14 12.00 - 12.95	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4215794)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.5	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	88.0	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	91.3	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	90.1	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	90.8	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	89.9	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	83.2	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	88.8	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	107	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4215657)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	61.3	----	55	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued											
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	62.7	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	82.6	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	105	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	94.0	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	107	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	77.5	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	71.6	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	76.5	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	76.2	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	69.5	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	77.0	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	68.1	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	76.8	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	98.6	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	90.7	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	83.6	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	71.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4213434)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	103	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	79.9	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	97.3	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	100	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	103	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	74.1	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	99.1	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	97.1	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	87.0	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	99.5	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	90.7	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	103	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	71.9	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	87.0	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	100	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	109	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4219491)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	94.4	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4215794)										
HK1620440-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	93.6	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	88.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	79.4	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	94.3	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	77.3	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	96.2	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	81.3	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	81.7	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4219491)										
HK1621117-001	EDH14 12.00 - 12.95	Tributyltin	56573-85-4	2 ngSn/L	104	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

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ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

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CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1621645
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 31-MAY-2016
Order number	: ----			Issue Date	: 16-JUN-2016
C-O-C number	: H031765			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 14-JUN-2016

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: HK1621645

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water except Sample #2 EDH15 18.00 - 18.95M.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH15 17.00 - 17.95M	EDH15 18.00 - 18.95M			
			Client sampling date / time	31-MAY-2016 11:00	31-MAY-2016 13:30			
			Client sample ID	HK1621645-001	HK1621645-002			
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	35.9	22.2			
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	8	7			
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2			
EG020: Chromium	7440-47-3	1	mg/kg	34	21			
EG020: Copper	7440-50-8	1	mg/kg	13	7			
EG020: Lead	7439-92-1	1	mg/kg	30	20			
EG020: Mercury	7439-97-6	0.05	mg/kg	0.05	<0.05			
EG020: Nickel	7440-02-0	1	mg/kg	21	13			
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1			
EG020: Zinc	7440-66-6	1	mg/kg	325	86			
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3			
PCB 18	37680-65-2	3	µg/kg	<3	<3			
PCB 28	7012-37-5	3	µg/kg	<3	<3			
PCB 44	41464-39-5	3	µg/kg	<3	<3			
PCB 52	35693-99-3	3	µg/kg	<3	<3			
PCB 66	32598-10-0	3	µg/kg	<3	<3			
PCB 77	32598-13-3	3	µg/kg	<3	<3			
PCB 101	37680-73-2	3	µg/kg	<3	<3			
PCB 105	32598-14-4	3	µg/kg	<3	<3			
PCB 118	31508-00-6	3	µg/kg	<3	<3			
PCB 126	57465-28-8	3	µg/kg	<3	<3			
PCB 128	38380-07-3	3	µg/kg	<3	<3			
PCB 138	35065-28-2	3	µg/kg	<3	<3			
PCB 153	35065-27-1	3	µg/kg	<3	<3			
PCB 169	32774-16-6	3	µg/kg	<3	<3			
PCB 170	35065-30-6	3	µg/kg	<3	<3			
PCB 180	35065-29-3	3	µg/kg	<3	<3			
PCB 187	52663-68-0	3	µg/kg	<3	<3			
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18			
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50			
Acenaphthylene	208-96-8	50	µg/kg	<50	<50			
Acenaphthene	83-32-9	50	µg/kg	<50	<50			
Fluorene	86-73-7	50	µg/kg	<50	<50			
Phenanthrene	85-01-8	50	µg/kg	<50	<50			
Anthracene	120-12-7	50	µg/kg	<50	<50			

Sub-Matrix: SEDIMENT			Client sample ID	EDH15 17.00 - 17.95M	EDH15 18.00 - 18.95M
			Client sampling date / time	31-MAY-2016 11:00	31-MAY-2016 13:30
Compound	CAS Number	LOR	Unit	HK1621645-001	HK1621645-002
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued					
Fluoranthene	206-44-0	150	µg/kg	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates					
2-Fluorobiphenyl	321-60-8	0.1	%	**88.9**	**89.8**
4-Terphenyl-d14	1718-51-0	0.1	%	**89.4**	**93.6**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	**54.2**	**53.0**

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	EDH15 18.00 - 18.95M
				Client sampling date / time	31-MAY-2016 13:30
Compound	CAS Number	LOR	Unit		HK1621645-002
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4219090)								
HK1621578-009	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	41.1	40.0	2.6
EG: Metals and Major Cations (QC Lot: 4219387)								
HK1621557-002	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	1	<1	0.0
		EG020: Copper	7440-50-8	1	mg/kg	<1	<1	0.0
		EG020: Lead	7439-92-1	1	mg/kg	13	14	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	<1	<1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	30	24	18.9
HK1621849-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	<1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	28	28	0.0
		EG020: Copper	7440-50-8	1	mg/kg	8	8	0.0
		EG020: Lead	7439-92-1	1	mg/kg	187	178	5.3
		EG020: Nickel	7440-02-0	1	mg/kg	<1	1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	39	36	9.7
EP-065: PCB Single Congeners (QC Lot: 4215657)								
HK1621117-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued								
HK1621117-001	Anonymous	PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4217988)								
HK1621326-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0
		Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EP-390: Triorganotins (QC Lot: 4227739)								
HK1621647-004	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4219387)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	89.6	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.4	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	89.8	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	89.4	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	101	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	101	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	87.6	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	82.1	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	92.5	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4215657)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	61.3	----	55	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4215657) - Continued											
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	62.7	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	82.6	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	105	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	94.0	----	61	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	107	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	77.5	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	71.6	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	76.5	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	76.2	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	69.5	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	77.0	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	68.1	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	76.8	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	98.6	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	90.7	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	83.6	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	71.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4217988)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	95.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	69.1	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	89.4	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	92.6	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	97.8	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	68.7	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	101	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	98.8	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	86.2	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	94.2	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.1	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	91.9	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	87.7	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	82.8	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	90.4	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	92.3	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4227739)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	102	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4219387)										
HK1621557-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	98.2	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	92.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	103	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	79.1	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	100	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	112	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	85.6	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	80.7	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4227739)										
HK1621647-003	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	96.4	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 7
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1625471
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Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 23-JUN-2016
Order number	: ----			Issue Date	: 13-JUL-2016
C-O-C number	: H031774			No. of samples received	: 4
Site	: GROUND INVESTIGATION			No. of samples analysed	: 4

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Lin Wai Yu, Iris	Senior Chemist - Inorganics	Inorganics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 08-JUL-2016

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: HK1625471

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH16 12.00 - 12.95M	EDH16 13.00 - 13.95M	EDH16 14.00 - 14.95M	EDH16 15.00 - 15.95M
			Client sampling date / time	23-JUN-2016 09:00	23-JUN-2016 10:00	23-JUN-2016 11:00	23-JUN-2016 14:00
			Client sample ID	HK1625471-001	HK1625471-002	HK1625471-003	HK1625471-004
EA/ED: Physical and Aggregate Properties							
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	33.4	30.0	37.0	38.1
EG: Metals and Major Cations							
EG020: Arsenic	7440-38-2	1	mg/kg	21	7	10	11
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	41	28	37	38
EG020: Copper	7440-50-8	1	mg/kg	23	8	14	14
EG020: Lead	7439-92-1	1	mg/kg	40	18	29	29
EG020: Mercury	7439-97-6	0.05	mg/kg	0.20	<0.05	<0.05	0.05
EG020: Nickel	7440-02-0	1	mg/kg	23	17	22	22
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	<0.1	<0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	94	66	102	152
EP-065: PCB Single Congeners							
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50

Sub-Matrix: SEDIMENT			Client sample ID	EDH16 12.00 - 12.95M	EDH16 13.00 - 13.95M	EDH16 14.00 - 14.95M	EDH16 15.00 - 15.95M
			Client sampling date / time	23-JUN-2016 09:00	23-JUN-2016 10:00	23-JUN-2016 11:00	23-JUN-2016 14:00
Compound	CAS Number	LOR	Unit	HK1625471-001	HK1625471-002	HK1625471-003	HK1625471-004
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued							
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates							
2-Fluorobiphenyl	321-60-8	0.1	%	**67.3**	**65.9**	**62.8**	**65.1**
4-Terphenyl-d14	1718-51-0	0.1	%	**75.7**	**70.4**	**66.8**	**69.4**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	0.1	%	**66.7**	**55.7**	**65.1**	**55.0**

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: 4243553)								
HK1625454-006	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	30.0	30.8	2.5
HK1625471-004	EDH16 15.00 - 15.95M	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	38.1	38.1	0.0
EG: Metals and Major Cations (QC Lot: 4239971)								
HK1625304-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.08	0.09	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	2	3	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	6	6	0.0
		EG020: Copper	7440-50-8	1	mg/kg	3	4	0.0
		EG020: Lead	7439-92-1	1	mg/kg	16	18	11.0
		EG020: Nickel	7440-02-0	1	mg/kg	2	2	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	26	30	13.9
HK1625454-005	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	14	12	12.1
		EG020: Chromium	7440-47-3	1	mg/kg	32	31	0.0
		EG020: Copper	7440-50-8	1	mg/kg	11	10	0.0
		EG020: Lead	7439-92-1	1	mg/kg	26	27	0.0

Matrix: SOIL

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 (QC Lot: 4239971) - Continued								
HK1625454-005	Anonymous	EG020: Nickel	7440-02-0	1	mg/kg	19	19	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	56	55	1.8
EP-065: PCB Single Congeners (QC Lot: 4240255)								
HK1625454-005	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4240256)								
HK1625454-005	Anonymous	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	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*

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4239971)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	100	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	105	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	104	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	101	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	97.2	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	110	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	90.9	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.6	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	99.8	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4240255)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	88.1	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	95.3	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	84.9	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	85.6	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	92.8	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	86.8	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	82.0	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	87.7	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	90.1	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	90.1	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	82.5	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	88.9	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	92.8	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	91.2	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	82.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	101	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	99.0	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	94.5	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4240256)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	75.0	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	72.1	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	75.4	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	77.2	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	79.5	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	69.0	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	84.7	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	82.9	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	76.8	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	89.0	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	80.8	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	86.2	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	68.7	----	58	95	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4240256) - Continued											
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	87.1	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	83.0	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	103	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4239971)										
HK1625303-001	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	92.0	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	101	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	80.8	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	80.4	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	94.6	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	78.6	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1625726
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 24-JUN-2016
Order number	: ----			Issue Date	: 13-JUL-2016
C-O-C number	: H031775			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 2

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 11-JUL-2016

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: HK1625726

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH16 16.00 - 16.95M	EDH16 17.00 - 17.95M			
			Client sampling date / time	24-JUN-2016 09:00	24-JUN-2016 10:00			
			Client sample ID	HK1625726-001	HK1625726-002			
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	38.4	40.1			
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	8	9			
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2			
EG020: Chromium	7440-47-3	1	mg/kg	46	46			
EG020: Copper	7440-50-8	1	mg/kg	16	16			
EG020: Lead	7439-92-1	1	mg/kg	31	30			
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05			
EG020: Nickel	7440-02-0	1	mg/kg	28	30			
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1			
EG020: Zinc	7440-66-6	1	mg/kg	115	201			
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3			
PCB 18	37680-65-2	3	µg/kg	<3	<3			
PCB 28	7012-37-5	3	µg/kg	<3	<3			
PCB 44	41464-39-5	3	µg/kg	<3	<3			
PCB 52	35693-99-3	3	µg/kg	<3	<3			
PCB 66	32598-10-0	3	µg/kg	<3	<3			
PCB 77	32598-13-3	3	µg/kg	<3	<3			
PCB 101	37680-73-2	3	µg/kg	<3	<3			
PCB 105	32598-14-4	3	µg/kg	<3	<3			
PCB 118	31508-00-6	3	µg/kg	<3	<3			
PCB 126	57465-28-8	3	µg/kg	<3	<3			
PCB 128	38380-07-3	3	µg/kg	<3	<3			
PCB 138	35065-28-2	3	µg/kg	<3	<3			
PCB 153	35065-27-1	3	µg/kg	<3	<3			
PCB 169	32774-16-6	3	µg/kg	<3	<3			
PCB 170	35065-30-6	3	µg/kg	<3	<3			
PCB 180	35065-29-3	3	µg/kg	<3	<3			
PCB 187	52663-68-0	3	µg/kg	<3	<3			
Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18			
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50			
Acenaphthylene	208-96-8	50	µg/kg	<50	<50			
Acenaphthene	83-32-9	50	µg/kg	<50	<50			
Fluorene	86-73-7	50	µg/kg	<50	<50			
Phenanthrene	85-01-8	50	µg/kg	<50	<50			
Anthracene	120-12-7	50	µg/kg	<50	<50			

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH16 16.00 - 16.95M 24-JUN-2016 09:00 HK1625726-001	EDH16 17.00 - 17.95M 24-JUN-2016 10:00 HK1625726-002
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued					
Fluoranthene	206-44-0	150	µg/kg	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates					
2-Fluorobiphenyl	321-60-8	0.1	%	**69.5**	**59.6**
4-Terphenyl-d14	1718-51-0	0.1	%	**72.3**	**64.4**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	**58.0**	**56.4**

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4245124)								
HK1625554-003	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	39.8	38.6	3.3
HK1625564-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	45.9	46.6	1.6
EG: Metals and Major Cations (QC Lot: 4241195)								
HK1625564-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	0.43	0.45	2.7
		EG020: Silver	7440-22-4	0.1	mg/kg	1.5	1.5	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.3	0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	10	10	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	51	49	3.2
		EG020: Copper	7440-50-8	1	mg/kg	73	75	2.6
		EG020: Lead	7439-92-1	1	mg/kg	37	36	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	26	24	6.0
		EG020: Zinc	7440-66-6	1	mg/kg	147	138	6.2
HK1625724-003	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	<1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	4	4	0.0
		EG020: Copper	7440-50-8	1	mg/kg	1	1	0.0
		EG020: Lead	7439-92-1	1	mg/kg	30	29	5.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EG: Metals and Major Cations (QC Lot: 4241195) - Continued								
HK1625724-003	Anonymous	EG020: Nickel	7440-02-0	1	mg/kg	1	1	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	33	34	5.4
EP-065: PCB Single Congeners (QC Lot: 4240255)								
HK1625454-005	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-065: PCB Single Congeners (QC Lot: 4241294)								
HK1625726-002	EDH16 17.00 - 17.95M	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4241292)								
HK1625544-002	Anonymous	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4241292) - Continued								
HK1625544-002	Anonymous	Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4241195)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	93.1	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	85.8	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	104	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	101	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	90.8	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	85.4	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	102	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	87.2	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	106	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4240255)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	88.1	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	95.3	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	84.9	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	85.6	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	92.8	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	86.8	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	82.0	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	87.7	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	90.1	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	90.1	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	82.5	----	53	107	----	----

Matrix: SOIL

Method / Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4240255) - Continued											
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	88.9	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	92.8	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	91.2	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	82.1	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	101	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	99.0	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	94.5	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-065: PCB Single Congeners (QC Lot: 4241294)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	79.9	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	85.8	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	76.1	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	77.2	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	83.0	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	78.0	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	78.8	----	52	108	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	84.5	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	88.2	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	88.6	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	81.3	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	89.3	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	91.2	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	89.2	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	94.9	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	100	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	97.4	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	92.6	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4241292)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	72.8	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	74.4	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	74.6	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	73.5	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	75.3	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	74.8	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	79.9	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	80.3	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	75.6	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	84.7	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	78.1	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	84.6	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	73.1	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	76.3	----	60	115	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4241292) - Continued											
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	77.6	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	84.2	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4241195)										
HK1625563-003	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	87.9	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	90.9	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	85.5	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	95.6	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	89.6	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	93.5	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	87.3	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1619696
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Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 17-MAY-2016
Order number	: ----			Issue Date	: 31-MAY-2016
C-O-C number	: H031669			No. of samples received	: 3
Site	: GROUND INVESTIGATION			No. of samples analysed	: 3

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 31-MAY-2016

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: HK1619696

Site Name: Ground Investigation for Siu Ho Wan Depot.

Sample(s) were received in a chilled condition.

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Analysis of Tributyltin in interstitial water was cancelled due to insufficient volume of interstitial water except Sample #3 EDH17 15.50 - 16.45M.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg. Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	EDH17 13.50 - 14.45M [17-MAY-2016] HK1619696-001	EDH17 14.50 - 15.45M [17-MAY-2016] HK1619696-002	EDH17 15.50 - 16.45M [17-MAY-2016] HK1619696-003
EA/ED: Physical and Aggregate Properties						
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	40.1	38.4	17.9
EG: Metals and Major Cations						
EG020: Arsenic	7440-38-2	1	mg/kg	9	6	3
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	34	35	8
EG020: Copper	7440-50-8	1	mg/kg	13	14	3
EG020: Lead	7439-92-1	1	mg/kg	31	31	12
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	22	22	4
EG020: Silver	7440-22-4	0.1	mg/kg	0.1	0.1	<0.1
EG020: Zinc	7440-66-6	1	mg/kg	104	201	31
EP-065: PCB Single Congeners						
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3
Total Polychlorinated biphenyls	---	18	µg/kg	<18	<18	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50

Sub-Matrix: SEDIMENT			Client sample ID	EDH17 13.50 - 14.45M	EDH17 14.50 - 15.45M	EDH17 15.50 - 16.45M		
			Client sampling date / time	[17-MAY-2016]	[17-MAY-2016]	[17-MAY-2016]		
Compound	CAS Number	LOR	Unit	HK1619696-001	HK1619696-002	HK1619696-003		
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued								
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150		
Pyrene	129-00-0	150	µg/kg	<150	<150	<150		
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150		
Chrysene	218-01-9	150	µg/kg	<150	<150	<150		
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	<150		
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	<150		
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150		
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150		
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	<150		
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	<150		
Low M.W. PAHs	---	550	µg/kg	<550	<550	<550		
High M.W. PAHs	---	1700	µg/kg	<1700	<1700	<1700		
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**112**	**105**	**97.6**		
4-Terphenyl-d14	1718-51-0	0.1	%	**111**	**98.1**	**90.4**		
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**93.7**	**99.2**	**95.4**		

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	EDH17 15.50 - 16.45M
				Client sampling date / time	[17-MAY-2016]
Compound	CAS Number	LOR	Unit		HK1619696-003
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
				Laboratory Duplicate (DUP) Report				
EA/ED: Physical and Aggregate Properties (QC Lot: 4210333)								
HK1619550-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	15.3	15.0	2.1
HK1619588-005	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	19.0	19.5	2.7
EA/ED: Physical and Aggregate Properties (QC Lot: 4210334)								
HK1619696-003	EDH17 15.50 - 16.45M	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	17.9	17.7	1.2
HK1619917-005	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	22.5	21.8	2.9
EG: Metals and Major Cations (QC Lot: 4209238)								
HK1619624-003	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	1	1	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	14	15	0.0
		EG020: Copper	7440-50-8	1	mg/kg	14	14	0.0
		EG020: Lead	7439-92-1	1	mg/kg	34	34	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	3	4	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	47	44	5.3
EP-065: PCB Single Congeners (QC Lot: 4203744)								
HK1618767-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035)								

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035) - Continued								
HK1619152-001	Anonymous	Fluoranthene	206-44-0	150	µg/kg	<150	<150	0.0
		Pyrene	129-00-0	150	µg/kg	<150	<150	0.0
		Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	0.0
		Chrysene	218-01-9	150	µg/kg	<150	<150	0.0
		Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150	<150	0.0
		Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150	<150	0.0
		Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	0.0
		Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150	<150	0.0
		Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150	<150	0.0
		High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	50	µg/kg	<50	<50	0.0
		Acenaphthylene	208-96-8	50	µg/kg	<50	<50	0.0
		Acenaphthene	83-32-9	50	µg/kg	<50	<50	0.0
		Fluorene	86-73-7	50	µg/kg	<50	<50	0.0
		Phenanthrene	85-01-8	50	µg/kg	<50	<50	0.0
		Anthracene	120-12-7	50	µg/kg	<50	<50	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4215761)								
HK1619696-003	EDH17 15.50 - 16.45M	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4209238)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	88.8	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	91.7	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	98.4	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	88.9	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	94.7	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	85.9	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	82.8	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	97.4	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	100	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4203744)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	57.0	----	55	111	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	61.4	----	58	105	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	63.3	----	63	105	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	68.1	----	61	111	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	64.4	----	61	111	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4203744) - Continued											
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	68.9	----	62	111	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	64.0	----	59	114	----	----
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	61.7	----	54	117	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	64.0	----	60	115	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	61.0	----	55	117	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	71.0	----	65	112	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	66.9	----	62	116	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	64.8	----	58	117	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	63.5	----	58	117	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	88.8	----	74	111	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	72.2	----	70	112	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	68.9	----	67	114	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	62.2	----	58	118	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4206035)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	79.8	----	71	116	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	73.2	----	52	112	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	74.0	----	71	112	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	76.2	----	72	109	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	82.2	----	74	115	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	78.1	----	50	112	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	88.7	----	71	118	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	87.3	----	72	119	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	79.7	----	68	109	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	82.9	----	78	117	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	91.1	----	63	121	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	89.7	----	74	123	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	77.5	----	58	112	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	81.4	----	61	129	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	83.4	----	58	129	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	88.1	----	52	135	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4215761)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	95.2	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4209238)										
HK1619624-002	Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	79.9	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	90.6	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	96.5	----	75	125	----	----
		EG020: Copper	7440-50-8	5 mg/kg	76.6	----	75	125	----	----
		EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	92.4	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	79.6	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	95.4	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4215761)										
HK1619696-003	EDH17 15.50 - 16.45M	Tributyltin	56573-85-4	2 ngSn/L	90.8	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

HOKLAS 066 TEST

CERTIFICATE OF ANALYSIS

Client	: VIBRO (H.K.) LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 8
Contact	: MR ERIC LEUNG	Contact	: Fung Lim Chee, Richard	Work Order	: HK1625125
Address	: 11/F., CHEVALIER COMMERCIAL CENTRE, NO. 8 WANG HOI ROAD, KOWLOON BAY, KOWLOON HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: +852 2580 8137	Facsimile	: +852 2610 2021		
Project	: NEX_1063	Quote number	: ----	Date Samples Received	: 22-JUN-2016
Order number	: ----			Issue Date	: 08-JUL-2016
C-O-C number	: H014971			No. of samples received	: 1
Site	: GROUND INVESTIGATION			No. of samples analysed	: 1

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Hong Kong Accreditation Service (HKAS) has accredited this laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066) under Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories.

This document has been signed by those names that appear on this report and are the authorised signatories.

Signatories	*Position*	*Authorised results for*
Chan Ka Yu, Karen	Manager - Organics	Organics
Wong Wing, Kenneth	Manager - Metals	Inorganics

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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. The completion date of analysis is: 07-JUL-2016

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: HK1625125

Site Name: Ground Investigation for Siu Ho Wan Depot.

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

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

Sediment sample(s) as received, digested by In-house method E-ASTM D3974-09 prior to determination of metals. The In-house method is developed based on ASTM D3974-09 method.

Total PCBs results (Method: EP065) are not HOKLAS accredited. The values are calculated from summation of the 18 PCB congeners, based on Limit of Detection (LOD) of 1 µg/kg.

Low and High M.W. PAHs results (Method: EP076HK) are not HOKLAS accredited. Low M.W. PAHs is sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene; High M.W. PAHs is sum of Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene.

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID: REFERENCE SEDIMENT Client sampling date / time: 22-JUN-2016 12:43 HK1625125-001
EA/ED: Physical and Aggregate Properties				
EA055: Moisture Content (dried @ 103° C)	---	0.1	%	49.7
EG: Metals and Major Cations				
EG020: Arsenic	7440-38-2	1	mg/kg	4
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2
EG020: Chromium	7440-47-3	1	mg/kg	38
EG020: Copper	7440-50-8	1	mg/kg	13
EG020: Lead	7439-92-1	1	mg/kg	28
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	22
EG020: Silver	7440-22-4	0.1	mg/kg	0.1
EG020: Zinc	7440-66-6	1	mg/kg	77
EP-065: PCB Single Congeners				
PCB 8	34883-43-7	3	µg/kg	<3
PCB 18	37680-65-2	3	µg/kg	<3
PCB 28	7012-37-5	3	µg/kg	<3
PCB 44	41464-39-5	3	µg/kg	<3
PCB 52	35693-99-3	3	µg/kg	<3
PCB 66	32598-10-0	3	µg/kg	<3
PCB 77	32598-13-3	3	µg/kg	<3
PCB 101	37680-73-2	3	µg/kg	<3
PCB 105	32598-14-4	3	µg/kg	<3
PCB 118	31508-00-6	3	µg/kg	<3
PCB 126	57465-28-8	3	µg/kg	<3
PCB 128	38380-07-3	3	µg/kg	<3
PCB 138	35065-28-2	3	µg/kg	<3
PCB 153	35065-27-1	3	µg/kg	<3
PCB 169	32774-16-6	3	µg/kg	<3
PCB 170	35065-30-6	3	µg/kg	<3
PCB 180	35065-29-3	3	µg/kg	<3
PCB 187	52663-68-0	3	µg/kg	<3
Total Polychlorinated biphenyls	---	18	µg/kg	<18
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs)				
Naphthalene	91-20-3	50	µg/kg	<50
Acenaphthylene	208-96-8	50	µg/kg	<50
Acenaphthene	83-32-9	50	µg/kg	<50
Fluorene	86-73-7	50	µg/kg	<50
Phenanthrene	85-01-8	50	µg/kg	<50

Sub-Matrix: **SEDIMENT**

Compound	CAS Number	LOR	Unit	Client sample ID: REFERENCE SEDIMENT Client sampling date / time: 22-JUN-2016 12:43 HK1625125-001
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) - Continued				
Anthracene	120-12-7	50	µg/kg	<50
Fluoranthene	206-44-0	150	µg/kg	<150
Pyrene	129-00-0	150	µg/kg	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150
Chrysene	218-01-9	150	µg/kg	<150
Benzo(b)fluoranthene	205-99-2	150	µg/kg	<150
Benzo(k)fluoranthene	207-08-9	150	µg/kg	<150
Benzo(a)pyrene	50-32-8	150	µg/kg	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150
Dibenz(a.h)anthracene	53-70-3	150	µg/kg	<150
Benzo(g.h.i)perylene	191-24-2	150	µg/kg	<150
Low M.W. PAHs	---	550	µg/kg	<550
High M.W. PAHs	---	1700	µg/kg	<1700
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates				
2-Fluorobiphenyl	321-60-8	0.1	%	**66.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**83.3**
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate				
Decachlorobiphenyl	2051-24-3	0.1	%	**62.4**

Sub-Matrix: INTERSTITIAL WATER				Client sample ID	REFERENCE SEDIMENT
				Client sampling date / time	22-JUN-2016 12:43
Compound	CAS Number	LOR	Unit		HK1625125-001
EP-390: Triorganotins					
Tributyltin	56573-85-4	0.015	µg TBT /L		<0.015

Laboratory Duplicate (DUP) Report

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4239137)								
HK1625116-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	16.4	16.4	0.0
HK1625127-006	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	43.8	42.9	2.2
EG: Metals and Major Cations (QC Lot: 4237951)								
HK1625212-001	Anonymous	EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	<0.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	4	4	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	9	9	0.0
		EG020: Copper	7440-50-8	1	mg/kg	4	3	0.0
		EG020: Lead	7439-92-1	1	mg/kg	39	39	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	3	4	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	31	30	0.0
EP-065: PCB Single Congeners (QC Lot: 4239087)								
HK1625020-001	Anonymous	Total Polychlorinated biphenyls	----	18	µg/kg	<18	<18	0.0
		PCB 8	34883-43-7	3	µg/kg	<3	<3	0.0
		PCB 18	37680-65-2	3	µg/kg	<3	<3	0.0
		PCB 28	7012-37-5	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 169	32774-16-6	3	µg/kg	<3	<3	0.0
		PCB 170	35065-30-6	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239089)								
HK1625108-001	Anonymous	High M.W. PAHs	----	1700	µg/kg	<1700	<1700	0.0
		Naphthalene	91-20-3	500	µg/kg	<500	<500	0.0

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239089) - Continued								
HK1625108-001	Anonymous	Acenaphthylene	208-96-8	500	µg/kg	<500	<500	0.0
		Acenaphthene	83-32-9	500	µg/kg	<500	<500	0.0
		Fluorene	86-73-7	500	µg/kg	<500	<500	0.0
		Phenanthrene	85-01-8	500	µg/kg	<500	<500	0.0
		Anthracene	120-12-7	500	µg/kg	<500	<500	0.0
		Fluoranthene	206-44-0	500	µg/kg	<500	<500	0.0
		Pyrene	129-00-0	500	µg/kg	<500	<500	0.0
		Benz(a)anthracene	56-55-3	500	µg/kg	<500	<500	0.0
		Chrysene	218-01-9	500	µg/kg	<500	<500	0.0
		Benzo(b)fluoranthene	205-99-2	500	µg/kg	<500	<500	0.0
		Benzo(k)fluoranthene	207-08-9	500	µg/kg	<500	<500	0.0
		Benzo(a)pyrene	50-32-8	500	µg/kg	<500	<500	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	500	µg/kg	<500	<500	0.0
		Dibenz(a.h)anthracene	53-70-3	500	µg/kg	<500	<500	0.0
		Benzo(g.h.i)perylene	191-24-2	500	µg/kg	<500	<500	0.0
		Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-390: Triorganotins (QC Lot: 4246692)								
HK1625238-004	Anonymous	Tributyltin	56573-85-4	6	ngSn/L	<6	<6	0.0

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

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EG: Metals and Major Cations (QC Lot: 4237951)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	100	----	75	111	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	98.0	----	79	109	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	112	----	81	123	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	97.5	----	79	109	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	95.2	----	81	109	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	92.4	----	75	113	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	101	----	77	111	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	88.4	----	75	113	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	98.4	----	80	122	----	----
EP-065: PCB Single Congeners (QC Lot: 4239087)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	72.0	----	43	112	----	----
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	75.2	----	47	106	----	----
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	84.6	----	47	111	----	----
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	93.1	----	49	113	----	----
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	95.6	----	47	111	----	----
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	96.7	----	50	116	----	----
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	79.2	----	52	108	----	----

Matrix: SOIL

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 4239087) - Continued											
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	82.4	----	48	107	----	----
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	83.6	----	51	112	----	----
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	82.9	----	47	113	----	----
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	74.4	----	53	107	----	----
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	81.0	----	56	106	----	----
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	87.7	----	50	111	----	----
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	86.1	----	50	111	----	----
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	89.6	----	66	117	----	----
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	92.2	----	53	114	----	----
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	89.2	----	54	110	----	----
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	86.9	----	51	107	----	----
Total Polychlorinated biphenyls	----	18	µg/kg	<18	----	----	----	----	----	----	----
EP-076HK: Polycyclic Aromatic Hydrocarbons (PAHs) (QC Lot: 4239089)											
Naphthalene	91-20-3	25	µg/kg	<50	500 µg/kg	64.8	----	63	112	----	----
Acenaphthylene	208-96-8	25	µg/kg	<50	500 µg/kg	67.8	----	58	88	----	----
Acenaphthene	83-32-9	25	µg/kg	<50	500 µg/kg	76.6	----	69	104	----	----
Fluorene	86-73-7	25	µg/kg	<50	500 µg/kg	76.4	----	69	106	----	----
Phenanthrene	85-01-8	25	µg/kg	<50	500 µg/kg	94.8	----	71	112	----	----
Anthracene	120-12-7	25	µg/kg	<50	500 µg/kg	67.2	----	58	98	----	----
Fluoranthene	206-44-0	25	µg/kg	<50	500 µg/kg	102	----	68	129	----	----
Pyrene	129-00-0	25	µg/kg	<50	500 µg/kg	99.6	----	69	129	----	----
Benz(a)anthracene	56-55-3	25	µg/kg	<50	500 µg/kg	86.7	----	62	102	----	----
Chrysene	218-01-9	25	µg/kg	<50	500 µg/kg	88.4	----	71	119	----	----
Benzo(b)fluoranthene	205-99-2	25	µg/kg	<50	500 µg/kg	102	----	64	108	----	----
Benzo(k)fluoranthene	207-08-9	25	µg/kg	<50	500 µg/kg	104	----	66	120	----	----
Benzo(a)pyrene	50-32-8	25	µg/kg	<50	500 µg/kg	76.7	----	58	95	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	25	µg/kg	<50	500 µg/kg	86.1	----	60	115	----	----
Dibenz(a.h)anthracene	53-70-3	25	µg/kg	<50	500 µg/kg	78.0	----	58	113	----	----
Benzo(g.h.i)perylene	191-24-2	25	µg/kg	<50	500 µg/kg	91.6	----	53	121	----	----
Low M.W. PAHs	----	550	µg/kg	<550	----	----	----	----	----	----	----
High M.W. PAHs	----	1700	µg/kg	<1700	----	----	----	----	----	----	----

Matrix: WATER

Method: Compound	CAS Number	Method Blank (MB) Report LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%) LCS	DCS	Recovery Limits (%) Low	High	RPD (%) Value	Control Limit
EP-390: Triorganotins (QC Lot: 4246692)											
Tributyltin	56573-85-4	5	ngSn/L	<5	2 ngSn/L	84.8	----	70	130	----	----

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

Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EG: Metals and Major Cations (QC Lot: 4237951)										
HK1625099-001	Anonymous	EG020: Arsenic	7440-38-2	50 mg/kg	94.3	----	75	125	----	----
		EG020: Cadmium	7440-43-9	5 mg/kg	102	----	75	125	----	----
		EG020: Chromium	7440-47-3	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Copper	7440-50-8	50 mg/kg	104	----	75	125	----	----
		EG020: Lead	7439-92-1	50 mg/kg	107	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.1 mg/kg	102	----	75	125	----	----
		EG020: Nickel	7440-02-0	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Silver	7440-22-4	5 mg/kg	# Not Determined	----	75	125	----	----
		EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPD (%) Value	RPD (%) Control Limit
EP-390: Triorganotins (QC Lot: 4246692)										
HK1625238-004	Anonymous	Tributyltin	56573-85-4	2 ngSn/L	112	----	70	130	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130