

Annex E2

Sediment Testing Result

Chemical Test Results

CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 12
Contact	: MS MING KAM	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK0927547
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Facsimile	: +852 2723 5660	Facsimile	: +852 2610 2021		
Project	: 0101759	Quote number	: HK/1125a/2009**	Date Samples Received	: 22-DEC-2009
Order number	: ----			Issue Date	: 09-JAN-2010
C-O-C number	: H008302-H008304			No. of samples received	: 12
Site	: SHENZHEN RIVER			No. of samples analysed	: 12

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

Signatories

Anh Ngoc Huynh
Chan Siu Ming, Vico
Wong Wing, Kenneth

Position

Senior Chemist - Organics
Chemist
Assistant Supervisor

Authorised results for

Organics
Inorganics
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 date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client. The completion date of analysis is: 31-DEC-2009

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

Specific comments for Work Order: **HK0927547**

Sample(s) were picked up from client in Lo Wu by ALS Technichem (HK) staff 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 D3974-81 based on ASTM D3974-81, prior to the determination of metals.

Tributyl tin was subcontracted and tested by Hong Kong Productivity Council.

The testing of PCB 8, PCB 66, PCB 77, PCB 126, PCB 169 and PCB 187 (Method: EP065) are not HOKLAS accredited.

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



Analytical Results

Sub-Matrix: SEDIMENT

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	SR1	SR2	SR3	SR5	SR6
				22-DEC-2009 13:00	22-DEC-2009 13:20	22-DEC-2009 13:50	22-DEC-2009 17:45	22-DEC-2009 17:15
				HK0927547-001	HK0927547-002	HK0927547-003	HK0927547-004	HK0927547-005
EA/ED: Physical and Aggregate Properties								
EA055: Moisture Content (dried @ 103°C)	----	0.1	%	17.9	19.2	32.1	27.7	23.7
EG: Metals and Major Cations								
EG020: Arsenic	7440-38-2	1	mg/kg	2	3	6	3	7
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.2	0.4	0.4	0.8
EG020: Chromium	7440-47-3	1	mg/kg	4	6	28	22	8
EG020: Copper	7440-50-8	1	mg/kg	6	9	31	20	14
EG020: Lead	7439-92-1	1	mg/kg	37	57	78	39	97
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	0.11	<0.05
EG020: Nickel	7440-02-0	1	mg/kg	3	3	17	14	10
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.2	0.3	0.7	0.3
EG020: Zinc	7440-66-6	1	mg/kg	31	44	122	84	112
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs)								
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50	<50
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50	<50
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50	<50
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50	<50
Phenanthrene	85-01-8	50	µg/kg	<50	<50	<50	62	<50
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50	<50
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150	<150
Pyrene	129-00-0	150	µg/kg	<150	<150	<150	<150	<150
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150	<150
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150	<150
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	300	µg/kg	<300	<300	<300	<300	<300
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150	<150
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150	<150
Dibenz(a,h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150	<150
Benzo(g,h,i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150	<150
Low M.W. PAHs	----	550	µg/kg	<550	<550	<550	<550	<550
High M.W. PAHs	----	1700	µg/kg	<1700	<1700	<1700	<1700	<1700
EP-065: PCB Single Congeners								
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3	<3
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3	<3
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3	<3
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3	<3
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3	<3
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3	<3



Sub-Matrix: SEDIMENT				Client sample ID	SR1	SR2	SR3	SR5	SR6
Client sampling date / time				22-DEC-2009 13:00	22-DEC-2009 13:20	22-DEC-2009 13:50	22-DEC-2009 17:45	22-DEC-2009 17:15	
Compound	CAS Number	LOR	Unit	HK0927547-001	HK0927547-002	HK0927547-003	HK0927547-004	HK0927547-005	
EP-065: PCB Single Congeners - Continued									
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3	<3	
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3	<3	
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3	<3	
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3	<3	
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3	<3	
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3	<3	
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3	<3	
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3	<3	
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3	<3	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								Surrogate control limits listed at end of this report.	
Nitrobenzene -d5	4165-60-0	0.1	%	53.1	60.5	56.6	54.9	53.1	
4-Terphenyl-d14	1718-51-0	0.1	%	75.2	82.0	64.5	74.3	78.9	
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	95.5	81.2	77.1	86.0	93.5	



Sub-Matrix: SEDIMENT				Client sample ID	SR7	SR8	SR4 TOP	SR4 0.9M	SR4 1.9M
Client sampling date / time				22-DEC-2009 17:00	22-DEC-2009 16:45	22-DEC-2009 16:00	22-DEC-2009 16:10	22-DEC-2009 16:20	
Compound	CAS Number	LOR	Unit	HK0927547-006	HK0927547-007	HK0927547-008	HK0927547-009	HK0927547-010	
EA/ED: Physical and Aggregate Properties									
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	86.4	18.1	13.8	7.8	13.3	
EG: Metals and Major Cations									
EG020: Arsenic	7440-38-2	1	mg/kg	28	7	6	3	5	
EG020: Cadmium	7440-43-9	0.2	mg/kg	2.6	2.1	0.4	0.2	0.2	
EG020: Chromium	7440-47-3	1	mg/kg	46	3	11	9	7	
EG020: Copper	7440-50-8	1	mg/kg	108	10	21	21	12	
EG020: Lead	7439-92-1	1	mg/kg	167	67	86	54	58	
EG020: Mercury	7439-97-6	0.05	mg/kg	1.16	<0.05	<0.05	<0.05	<0.05	
EG020: Nickel	7440-02-0	1	mg/kg	222	4	13	5	4	
EG020: Silver	7440-22-4	0.1	mg/kg	2.7	0.1	0.1	<0.1	<0.1	
EG020: Zinc	7440-66-6	1	mg/kg	651	228	71	45	34	
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs)									
Naphthalene	91-20-3	50	µg/kg	<50	<50	<50	<50	<50	
Acenaphthylene	208-96-8	50	µg/kg	<50	<50	<50	<50	<50	
Acenaphthene	83-32-9	50	µg/kg	<50	<50	<50	<50	<50	
Fluorene	86-73-7	50	µg/kg	<50	<50	<50	<50	<50	
Phenanthrene	85-01-8	50	µg/kg	94	<50	<50	<50	<50	
Anthracene	120-12-7	50	µg/kg	<50	<50	<50	<50	<50	
Fluoranthene	206-44-0	150	µg/kg	<150	<150	<150	<150	<150	
Pyrene	129-00-0	150	µg/kg	156	<150	<150	<150	<150	
Benz(a)anthracene	56-55-3	150	µg/kg	<150	<150	<150	<150	<150	
Chrysene	218-01-9	150	µg/kg	<150	<150	<150	<150	<150	
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	300	µg/kg	<300	<300	<300	<300	<300	
Benzo(a)pyrene	50-32-8	150	µg/kg	<150	<150	<150	<150	<150	
Indeno(1.2.3.cd)pyrene	193-39-5	150	µg/kg	<150	<150	<150	<150	<150	
Dibenz(a,h)anthracene	53-70-3	150	µg/kg	<150	<150	<150	<150	<150	
Benzo(g,h,i)perylene	191-24-2	150	µg/kg	<150	<150	<150	<150	<150	
Low M.W. PAHs	----	550	µg/kg	<550	<550	<550	<550	<550	
High M.W. PAHs	----	1700	µg/kg	<1700	<1700	<1700	<1700	<1700	
EP-065: PCB Single Congeners									
PCB 8	34883-43-7	3	µg/kg	<3	<3	<3	<3	<3	
PCB 18	37680-65-2	3	µg/kg	<3	<3	<3	<3	<3	
PCB 28	7012-37-5	3	µg/kg	<3	<3	<3	<3	<3	
PCB 52	35693-99-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 44	41464-39-5	3	µg/kg	<3	<3	<3	<3	<3	
PCB 66	32598-10-0	3	µg/kg	<3	<3	<3	<3	<3	
PCB 101	37680-73-2	3	µg/kg	<3	<3	<3	<3	<3	



Sub-Matrix: SEDIMENT				Client sample ID	SR7	SR8	SR4 TOP	SR4 0.9M	SR4 1.9M
Client sampling date / time				22-DEC-2009 17:00	22-DEC-2009 16:45	22-DEC-2009 16:00	22-DEC-2009 16:10	22-DEC-2009 16:20	
Compound	CAS Number	LOR	Unit	HK0927547-006	HK0927547-007	HK0927547-008	HK0927547-009	HK0927547-010	
EP-065: PCB Single Congeners - Continued									
PCB 77	32598-13-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 118	31508-00-6	3	µg/kg	<3	<3	<3	<3	<3	
PCB 153	35065-27-1	3	µg/kg	<3	<3	<3	<3	<3	
PCB 105	32598-14-4	3	µg/kg	<3	<3	<3	<3	<3	
PCB 138	35065-28-2	3	µg/kg	<3	<3	<3	<3	<3	
PCB 126	57465-28-8	3	µg/kg	<3	<3	<3	<3	<3	
PCB 187	52663-68-0	3	µg/kg	<3	<3	<3	<3	<3	
PCB 128	38380-07-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 180	35065-29-3	3	µg/kg	<3	<3	<3	<3	<3	
PCB 169	32774-16-6	3	µg/kg	<3	<3	<3	<3	<3	
PCB 170	35065-30-6	3	µg/kg	<3	<3	<3	<3	<3	
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates Surrogate control limits listed at end of this report.									
Nitrobenzene -d5	4165-60-0	0.1	%	63.5	57.4	58.6	50.1	57.4	
4-Terphenyl-d14	1718-51-0	0.1	%	51.8	51.6	71.3	80.8	76.0	
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	97.3	89.6	87.4	102	89.1	



Sub-Matrix: SEDIMENT				Client sample ID	SR4 2.9M	SR5 (QC/QA)			
				Client sampling date / time	22-DEC-2009 16:20	22-DEC-2009 17:45			
Compound	CAS Number	LOR	Unit	HK0927547-011	HK0927547-012				
EA/ED: Physical and Aggregate Properties									
EA055: Moisture Content (dried @ 103° C)	----	0.1	%	8.9	27.7				
EG: Metals and Major Cations									
EG020: Arsenic	7440-38-2	1	mg/kg	1	3				
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	0.2				
EG020: Chromium	7440-47-3	1	mg/kg	3	28				
EG020: Copper	7440-50-8	1	mg/kg	7	23				
EG020: Lead	7439-92-1	1	mg/kg	41	26				
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05				
EG020: Nickel	7440-02-0	1	mg/kg	2	16				
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	0.2				
EG020: Zinc	7440-66-6	1	mg/kg	20	92				
EP-076: Polycyclic Aromatics 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	56				
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) & Benzo(k)fluoranthene	205-99-2 207-08-9	300	µg/kg	<300	<300				
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-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 52	35693-99-3	3	µg/kg	<3	<3				
PCB 44	41464-39-5	3	µg/kg	<3	<3				
PCB 66	32598-10-0	3	µg/kg	<3	<3				
PCB 101	37680-73-2	3	µg/kg	<3	<3				



Sub-Matrix: SEDIMENT				Client sample ID	SR4 2.9M	SR5 (QC/QA)		
				Client sampling date / time	22-DEC-2009 16:20	22-DEC-2009 17:45		
Compound	CAS Number	LOR	Unit	HK0927547-011	HK0927547-012			
EP-065: PCB Single Congeners - Continued								
PCB 77	32598-13-3	3	µg/kg	<3	<3			
PCB 118	31508-00-6	3	µg/kg	<3	<3			
PCB 153	35065-27-1	3	µg/kg	<3	<3			
PCB 105	32598-14-4	3	µg/kg	<3	<3			
PCB 138	35065-28-2	3	µg/kg	<3	<3			
PCB 126	57465-28-8	3	µg/kg	<3	<3			
PCB 187	52663-68-0	3	µg/kg	<3	<3			
PCB 128	38380-07-3	3	µg/kg	<3	<3			
PCB 180	35065-29-3	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			
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates								
Surrogate control limits listed at end of this report.								
Nitrobenzene -d5	4165-60-0	0.1	%	51.1	69.9			
4-Terphenyl-d14	1718-51-0	0.1	%	89.3	74.8			
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								
Surrogate control limits listed at end of this report.								
Decachlorobiphenyl	2051-24-3	0.1	%	97.4	80.9			



Laboratory Duplicate (DUP) Report

Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 1207266)								
HK0926742-011	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	20.8	20.7	0.0
HK0927547-008	SR4 TOP	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	13.8	14.2	3.1
EG: Metals and Major Cations (QC Lot: 1210595)								
HK0927316-006	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	35	31	12.4
		EG020: Chromium	7440-47-3	1	mg/kg	14	17	20.5
		EG020: Copper	7440-50-8	1	mg/kg	12	12	0.0
		EG020: Lead	7439-92-1	1	mg/kg	91	90	1.3
		EG020: Nickel	7440-02-0	1	mg/kg	3	3	0.0
HK0927547-007	SR8	EG020: Zinc	7440-66-6	1	mg/kg	44	41	6.9
		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	2.1	2.2	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	7	6	0.0
		EG020: Chromium	7440-47-3	1	mg/kg	3	3	0.0
		EG020: Copper	7440-50-8	1	mg/kg	10	9	0.0
		EG020: Lead	7439-92-1	1	mg/kg	67	71	5.0
		EG020: Nickel	7440-02-0	1	mg/kg	4	4	0.0
		EG020: Zinc	7440-66-6	1	mg/kg	228	226	0.8
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 1207457)								
HK0927547-001	SR1	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(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
		Benzo(b) & Benzo(k)fluoranthene	205-99-2	300	µg/kg	<300	<300	0.0
			207-08-9					
		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		



Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 1207457) - Continued								
HK0927547-001	SR1	Low M.W. PAHs	----	550	µg/kg	<550	<550	0.0
EP-065: PCB Single Congeners (QC Lot: 1207458)								
HK0927547-001	SR1	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 52	35693-99-3	3	µg/kg	<3	<3	0.0
		PCB 44	41464-39-5	3	µg/kg	<3	<3	0.0
		PCB 66	32598-10-0	3	µg/kg	<3	<3	0.0
		PCB 101	37680-73-2	3	µg/kg	<3	<3	0.0
		PCB 77	32598-13-3	3	µg/kg	<3	<3	0.0
		PCB 118	31508-00-6	3	µg/kg	<3	<3	0.0
		PCB 153	35065-27-1	3	µg/kg	<3	<3	0.0
		PCB 105	32598-14-4	3	µg/kg	<3	<3	0.0
		PCB 138	35065-28-2	3	µg/kg	<3	<3	0.0
		PCB 126	57465-28-8	3	µg/kg	<3	<3	0.0
		PCB 187	52663-68-0	3	µg/kg	<3	<3	0.0
		PCB 128	38380-07-3	3	µg/kg	<3	<3	0.0
		PCB 180	35065-29-3	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		

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

Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 1210595)											
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	90.1	----	85	115	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	96.5	----	85	115	----	----
EG020: Chromium	7440-47-3	1	mg/kg	<1	5 mg/kg	88.8	----	85	115	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	97.7	----	85	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	90.5	----	85	115	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	95.7	----	85	115	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	97.0	----	85	115	----	----
EG020: Silver	7440-22-4	0.1	mg/kg	<0.1	5 mg/kg	94.1	----	85	115	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	111	----	85	115	----	----
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 1207457)											
Naphthalene	91-20-3	50	µg/kg	<50	----	----	----	----	----	----	----
					49.9 µg/kg	91.2	----	44	117	----	----
Acenaphthylene	208-96-8	5	µg/kg	----	50.9 µg/kg	75.4	----	45	98	----	----
				<50	----	----	----	----	----	----	----
Acenaphthene	83-32-9	5	µg/kg	----	50.4 µg/kg	75.8	----	50	98	----	----



Matrix: SOIL		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Method: Compound	CAS Number					LCS	DCS	Low	High	Value	Control Limit
EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 1207457) - Continued											
Acenaphthene	83-32-9	50	µg/kg	<50	---	---	---	---	---	---	---
Fluorene	86-73-7	5	µg/kg	<50	51.0 µg/kg	74.5	---	37	110	---	---
Phenanthrene	85-01-8	5	µg/kg	<50	51.2 µg/kg	81.1	---	43	108	---	---
Anthracene	120-12-7	5	µg/kg	<50	50.7 µg/kg	70.7	---	41	103	---	---
Fluoranthene	206-44-0	5	µg/kg	<150	51.0 µg/kg	90.5	---	51	113	---	---
Pyrene	129-00-0	5	µg/kg	<150	51.1 µg/kg	95.0	---	48	1121	---	---
Benz(a)anthracene	56-55-3	5	µg/kg	<150	50.1 µg/kg	90.2	---	45	115	---	---
Chrysene	218-01-9	5	µg/kg	<150	50.8 µg/kg	90.6	---	48	122	---	---
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	300	µg/kg	<300	101.9 µg/kg	78.2	---	50	119	---	---
Benzo(a)pyrene	50-32-8	5	µg/kg	<150	50.7 µg/kg	65.4	---	40	119	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	5	µg/kg	<150	49.0 µg/kg	82.1	---	24	128	---	---
Dibenz(a,h)anthracene	53-70-3	150	µg/kg	<150	50.2 µg/kg	94.4	---	22	117	---	---
Benzo(g,h,i)perylene	191-24-2	5	µg/kg	<150	50.7 µg/kg	73.8	---	35	120	---	---
Low M.W. PAHs	---	550	µg/kg	<550	---	---	---	---	---	---	---
High M.W. PAHs	---	1700	µg/kg	<1700	---	---	---	---	---	---	---
EP-065: PCB Single Congeners (QC Lot: 1207458)											
PCB 8	34883-43-7	3	µg/kg	<3	5 µg/kg	88.7	---	63	120	---	---
PCB 18	37680-65-2	3	µg/kg	<3	5 µg/kg	98.9	---	61	121	---	---
PCB 28	7012-37-5	3	µg/kg	<3	5 µg/kg	111	---	55	132	---	---
PCB 52	35693-99-3	3	µg/kg	<3	5 µg/kg	97.0	---	68	121	---	---
PCB 44	41464-39-5	3	µg/kg	<3	5 µg/kg	83.0	---	68	122	---	---
PCB 66	32598-10-0	3	µg/kg	<3	5 µg/kg	97.6	---	69	113	---	---
PCB 101	37680-73-2	3	µg/kg	<3	5 µg/kg	116	---	68	121	---	---
PCB 77	32598-13-3	3	µg/kg	<3	5 µg/kg	114	---	41	142	---	---
PCB 118	31508-00-6	3	µg/kg	<3	5 µg/kg	114	---	62	122	---	---
PCB 153	35065-27-1	3	µg/kg	<3	5 µg/kg	112	---	60	122	---	---
PCB 105	32598-14-4	3	µg/kg	<3	5 µg/kg	116	---	64	126	---	---
PCB 138	35065-28-2	3	µg/kg	<3	5 µg/kg	108	---	60	124	---	---
PCB 126	57465-28-8	3	µg/kg	<3	5 µg/kg	115	---	57	133	---	---



Matrix: SOIL		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
Method: Compound		CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
							LCS	DCS	Low	High	Value	Control Limit
EP-065: PCB Single Congeners (QC Lot: 1207458) - Continued												
PCB 187	52663-68-0	3	µg/kg	<3	5 µg/kg	106	----	65	121	----	----	
PCB 128	38380-07-3	3	µg/kg	<3	5 µg/kg	114	----	61	121	----	----	
PCB 180	35065-29-3	3	µg/kg	<3	5 µg/kg	109	----	64	124	----	----	
PCB 169	32774-16-6	3	µg/kg	<3	5 µg/kg	119	----	66	121	----	----	
PCB 170	35065-30-6	3	µg/kg	<3	5 µg/kg	110	----	70	122	----	----	

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

Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
						MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations (QC Lot: 1210595)											
HK0927316-005		Anonymous	EG020: Arsenic	7440-38-2	5 mg/kg	102	----	75	125	----	----
			EG020: Cadmium	7440-43-9	5 mg/kg	97.3	----	75	125	----	----
			EG020: Chromium	7440-47-3	5 mg/kg	104	----	75	125	----	----
			EG020: Copper	7440-50-8	5 mg/kg	99.7	----	75	125	----	----
			EG020: Lead	7439-92-1	5 mg/kg	# Not Determined	----	75	125	----	----
			EG020: Mercury	7439-97-6	0.1 mg/kg	99.7	----	75	125	----	----
			EG020: Nickel	7440-02-0	5 mg/kg	89.0	----	75	125	----	----
			EG020: Silver	7440-22-4	5 mg/kg	92.0	----	75	125	----	----
			EG020: Zinc	7440-66-6	5 mg/kg	# Not Determined	----	75	125	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates			
Nitrobenzene -d5	4165-60-0	50	130
4-Terphenyl-d14	1718-51-0	50	130
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130

Biological Screening Result

Table 1.4 Summary of Test Results

ALS ID	Sample ID	Amphipod Test	Polychaete Test	Bivalve Test	Overall Result
HK1002195002	SR3	Pass	Pass	Fail	<u>Fail</u>
HK1002195003	SR6	Pass	Pass	Fail	<u>Fail</u>
HK1002195004	SR8	Pass	Pass	Pass	Pass
HK1002195005	SR4 Top	Pass	Pass	Fail	<u>Fail</u>

Results are determined according to ETWB TCW No. 34/2002

Table 1.4 Summary of Test Results

10-Day Amphipod Survival Test

ALS ID	Sample ID	Survival (%)		Pass / Fail
		Mean	SD	
Control	Control	91.0	7.4	NA
HK1002195006	REFERENCE SEDIMENT	86.0	6.5	NA
HK1002195002	SR3	83.0	8.4	Pass
HK1002195003	SR6	88.0	7.6	Pass
HK1002195004	SR8	89.0	5.5	Pass
HK1002195005	SR4 Top	91.0	8.2	Pass

* Mean survival in test sediment is significantly different ($p < 0.05$) from that in reference sediment

Mean survival in test sediment is <80% of that in reference sediment

Table 1.4 Summary of Test Results

20-Day Polychaete Survival and Growth Test

ALS ID	Sample ID	Total Dry Weight (mg)		Pass / Fail
		Mean	SD	
Control	Control	75.4	14.2	NA
HK1002195006	REFERENCE SEDIMENT	75.5	17.6	NA
HK1002195002	SR3	61.4	18.2	Pass
HK1002195003	SR6	67.2	16.7	Pass
HK1002195004	SR8	82.1	14.0	Pass
HK1002195005	SR4 Top	88.5	34.0	Pass

*Mean total dry weight in test sediment is significantly different ($p < 0.05$) from that in reference sediment

Mean total dry weight in test sediment is <90% of that in reference sediment

Table 1.4 Summary of Test Results

48-Hour Bivalve Survival and Normality Test

ALS ID	Sample ID	Normal Survival (%)		Pass / Fail
		Mean	SD	
Control	Control	86.8	6.4	NA
HK1002195006	REFERENCE SEDIMENT	71.3	6.4	NA
HK1002195002	SR3	*#30.2	7.1	Fail
HK1002195003	SR6	*#34.9	3.0	Fail
HK1002195004	SR8	63.2	10.0	Pass
HK1002195005	SR4 Top	*#49.0	9.3	Fail

* Mean normality survival in test sediment is significantly different (p<0.05) from that in reference sediment

Mean normality survival in test sediment is <80% of that in reference sediment