



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 6
Contact	: MS KAREN LUI	Contact	: Wong Wai Man, Alice	Work Order	: HK0819955
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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Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date Samples Received	: 26-NOV-2008
Order number	: ----			Issue Date	: 16-DEC-2008
C-O-C number	: ----			No. of samples received	: 18
Site	: ----			No. of samples analysed	: 18

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: 05-DEC-2008

Key: LOR = Limit of reporting; CAS Number = Chemistry Abstract Services number

Specific comments for Work Order: **HK0819955**

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

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

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

Signatories

Anh Ngoc Huynh

Position

Senior Chemist

Authorised results for

Organics

ALS Laboratory Group

Trading Name: **ALS Technichem (HK) Pty Ltd**

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Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	MPB1 ME	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME
				[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]
				HK0819955-001	HK0819955-002	HK0819955-003	HK0819955-004	HK0819955-005
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides								
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	61.6	67.2	65.7	60.4	63.0



Sub-Matrix: MARINE WATER				Client sample ID	MP ME DUP	C2 (NM5) ME	C2 (NM5) ME DUP	MPB1 MF	MPB1 MF DUP
Client sampling date / time				[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	
Compound	CAS Number	LOR	Unit	HK0819955-006	HK0819955-007	HK0819955-008	HK0819955-009	HK0819955-010	
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							Surrogate control limits listed at end of this report.		
Decachlorobiphenyl	2051-24-3	0.1	%	79.6	72.5	66.0	54.2	84.0	



Sub-Matrix: MARINE WATER				Client sample ID	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1 (NM3) MF
Client sampling date / time				[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]
Compound	CAS Number	LOR	Unit	HK0819955-011	HK0819955-012	HK0819955-013	HK0819955-014	HK0819955-015	HK0819955-015
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	65.8	61.9	56.1	55.8	55.0	55.0



Sub-Matrix: MARINE WATER				Client sample ID	C1 (NM3) MF DUP	C3 (NM6) MF	C3 (NM6) MF DUP		
				Client sampling date / time	[26-NOV-2008]	[26-NOV-2008]	[26-NOV-2008]		
Compound	CAS Number	LOR	Unit	HK0819955-016	HK0819955-017	HK0819955-018			
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01			
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01			
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01			
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01			
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							Surrogate control limits listed at end of this report.		
Decachlorobiphenyl	2051-24-3	0.1	%	60.6	56.5	54.9			



Laboratory Duplicate (DUP) Report

- No Laboratory Duplicate (DUP) Results are required to be reported.

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (QC Lot: 827467)											
PCB 8	34883-43-7	0.01	µg/L	<0.01	100 µg/L	62.1	----	50	130	----	----
PCB 18	37680-65-2	0.01	µg/L	<0.01	100 µg/L	65.6	----	50	130	----	----
PCB 28	7012-37-5	0.01	µg/L	<0.01	100 µg/L	97.5	----	50	130	----	----
PCB 52	35693-99-3	0.01	µg/L	<0.01	100 µg/L	67.9	----	50	130	----	----
PCB 44	41464-39-5	0.01	µg/L	<0.01	100 µg/L	66.9	----	50	130	----	----
PCB 66	32598-10-0	0.01	µg/L	<0.01	100 µg/L	89.5	----	50	130	----	----
PCB 101	37680-73-2	0.01	µg/L	<0.01	100 µg/L	65.4	----	50	130	----	----
PCB 77	32598-13-3	0.01	µg/L	<0.01	100 µg/L	84.2	----	50	130	----	----
PCB 149	38380-04-0	0.01	µg/L	<0.01	100 µg/L	82.9	----	50	130	----	----
PCB 118	31508-00-6	0.01	µg/L	<0.01	100 µg/L	72.6	----	50	130	----	----
PCB 153	35065-27-1	0.01	µg/L	<0.01	100 µg/L	96.3	----	50	130	----	----
PCB 105	32598-14-4	0.01	µg/L	<0.01	100 µg/L	70.6	----	50	130	----	----
PCB 126	57465-28-8	0.01	µg/L	<0.01	100 µg/L	118	----	50	130	----	----
PCB 187	52663-68-0	0.01	µg/L	<0.01	100 µg/L	61.0	----	50	130	----	----
PCB 128	38380-07-3	0.01	µg/L	<0.01	100 µg/L	69.7	----	50	130	----	----
PCB 156	38380-08-4	0.01	µg/L	<0.01	100 µg/L	72.8	----	50	130	----	----
PCB 180	35065-29-3	0.01	µg/L	<0.01	100 µg/L	84.2	----	50	130	----	----
PCB 169	60044-26-0	0.01	µg/L	<0.01	100 µg/L	96.0	----	50	130	----	----
PCB 170	35065-30-6	0.01	µg/L	<0.01	100 µg/L	84.6	----	50	130	----	----
PCB 195	52663-78-2	0.01	µg/L	<0.01	100 µg/L	94.5	----	50	130	----	----
EP-065B: Organochlorine Pesticides (QC Lot: 827467)											
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	----	----	----	----	----	----	----
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	----	----	----	----	----	----	----
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	----	----	----	----	----	----	----

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

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

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130



Environmental Division

CERTIFICATE OF ANALYSIS

CONTACT: MS KAREN LUI
CLIENT: ERM HONG KONG
ADDRESS: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,
 TAIKOO PLACE, ISLAND EAST,
 QUARRY BAY, HONG KONG.
PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

Batch: HK0819955
LABORATORY: HONG KONG
DATE RECEIVED: 26/11/2008
DATE OF ISSUE: 16/12/2008
SAMPLE TYPE: WATER
No. of SAMPLES: 18

COMMENTS

Sample(s) were collected by ALS Technichem (HK) staff on 26 November, 2008.
 Water sample(s) analysed and reported on an as received basis.
 PAHs were subcontracted and tested by ALS Sydney.
 ALS Sydney details report was attached. The attached report contains a total of 14 pages.

Sample Details

ALS Lab ID	Sample ID	Date of Sampling
HK0819955 - 1	MPB1_ME	26/11/2008
HK0819955 - 2	MPB1_ME DUP	26/11/2008
HK0819955 - 3	MPB2_ME	26/11/2008
HK0819955 - 4	MPB2_ME DUP	26/11/2008
HK0819955 - 5	MP_ME	26/11/2008
HK0819955 - 6	MP_ME DUP	26/11/2008
HK0819955 - 7	C2 (NM5)_ME	26/11/2008
HK0819955 - 8	C2 (NM5)_ME DUP	26/11/2008
HK0819955 - 9	MPB1_MF	26/11/2008
HK0819955 - 10	MPB1_MF DUP	26/11/2008
HK0819955 - 11	MPB2_MF	26/11/2008
HK0819955 - 12	MPB2_MF DUP	26/11/2008
HK0819955 - 13	MP_MF	26/11/2008
HK0819955 - 14	MP_MF DUP	26/11/2008
HK0819955 - 15	C1 (NM3)_MF	26/11/2008
HK0819955 - 16	C1 (NM3)_MF DUP	26/11/2008
HK0819955 - 17	C3 (NM6)_MF	26/11/2008
HK0819955 - 18	C3 (NM6)_MF DUP	26/11/2008

ISSUING LABORATORY: HONG KONG**Address**

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Ms Wong Wai Man, Alice
 Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

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Abbreviations: % SPK REC denotes percentage spike recovery
 CHK denotes duplicate check sample
 LOR denotes limit of reporting

LCS % REC denotes Laboratory Control Sample percentage recovery

ALS Technichem (HK) Pty Ltd
 Part of the **ALS Laboratory Group**

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Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: ES0817549	Page	: 1 of 8
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS ALICE WONG	Contact	: Charlie Pierce
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Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: ---	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ---	Date Samples Received	: 01-DEC-2008
C-O-C number	: ---	Issue Date	: 15-DEC-2008
Sampler	: ---	No. of samples received	: 18
Site	: ---	No. of samples analysed	: 18
Quote number	: SY/241/07		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

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

Signatories

Alex Rossi
Victor Kedicioglu

Position

Organic Chemist
Business Manager - NSW

Accreditation Category

Organics
Organics

Page 3 of 8
Work Order : ES0817549
Client : ALS TECHNICHEM (HK)
Project : ---



General Comments

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

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

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

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

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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



Analytical Results

Sub-Matrix: MARINE WATER

Compound	CAS Number	LOB	Unit	Client sample ID:	HK0819955_1	HK0819955_2	HK0819955_3	HK0819955_4	HK0819955_5
				Client sampling date / time	MPB1_ME	MPB1_ME DUP	MPB2_ME	MPB2_ME DUP	MP_ME
					26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00
				ES0817549-001	ES0817549-002	ES0817549-003	ES0817549-004	ES0817549-005	
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-95-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs		0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		102	102	114	117	111
Anthracene-d10	1719-06-8	0.1	%		106	106	119	123	118
4-Terphenyl-d14	1718-51-0	0.1	%		110	114	128	97.9	128



Analytical Results

Sub-Matrix: MARINE WATER				Client sample ID:	HK0819955_6	HK0819955_7	HK0819955_8	HK0819955_9	HK0819955_10
				Client sampling date / time:	MP_ME DUP	C2 (NM5)_ME	C2 (NM5)_ME DUP	MPB1_MF	MPB1_MF DUP
					26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00
Compound	CAS Number	LOR	Unit	ES0817549-006	ES0817549-007	ES0817549-008	ES0817549-009	ES0817549-009	ES0817549-010
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-98-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs		0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	100	106	95.7	110	104	
Anthracene-d10	1719-06-8	0.1	%	104	112	99.6	114	108	
4-Terphenyl-d14	1718-51-0	0.1	%	115	119	107	124	117	



Analytical Results

Sub-Matrix: MARINE WATER

Compound	CAS Number	LDR	Unit	Client sample ID	Client sample ID	Client sample ID	Client sample ID	Client sample ID
				HK0819955_11	HK0819955_12	HK0819955_13	HK0819955_14	HK0819955_15
				MPB2_MF	MPB2_MF DUP	MP_MF	MP_MF DUP	C1 (NM3)_MF
Client sampling date / time	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00	26-NOV-2008 14:00			
				ES0817549-011	ES0817549-012	ES0817549-013	ES0817549-014	ES0817549-015
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	81-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs	----	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	112	106	113	97.7	104
Anthracene-d10	1719-06-8	0.1	%	118	111	115	104	123
4-Terphenyl-d14	1718-51-0	0.1	%	115	118	124	112	124



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

HK0819955_16

HK0819955_17

HK0819955_18

Client sampling date / time

C1 (NM3)_MF DUP
26-NOV-2008 14:00

C3 (NM6)_MF
26-NOV-2008 14:00

C3 (NM6)_MF DUP
26-NOV-2008 14:00

Compound	CAS Number	LOR	Unit	ES0817549-016	ES0817549-017	ES0817549-018		
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	---	---
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	---	---
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Sum of PAHs	---	0.1	µg/L	<0.1	<0.1	<0.1	---	---
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	124	109	112	---	---
Anthracene-d10	1719-06-8	0.1	%	127	114	116	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	126	120	125	---	---



Surrogate Control Limits

Sub-Matrix: MARINE WATER	Compound	CAS Number	Recovery Limits (%)	
			Low	High
EP132T: Base/Neutral Extractable Surrogates				
	2-Fluorobiphenyl	321-60-8	43	116
	Anthracene-d10	1719-06-8	27	133
	4-Terphenyl-d14	1718-51-0	33	141



Environmental Division

QUALITY CONTROL REPORT

Work Order	: ES0817549	Page	: 1 of 6
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
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Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: ---	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ---	Date Samples Received	: 01-DEC-2008
C-O-C number	: ---	Issue Date	: 15-DEC-2008
Sampler	: ---	No. of samples received	: 18
Order number	: ---	No. of samples analysed	: 18
Quote number	: SY/241/07		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

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



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics
Victor Kedicicoglu	Business Manager - NSW	Organics

Page : 2 of 6
Work Order : ES0817549
Client : ALS TECHNICHEM (HK)
Project : ----



General Comments

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

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

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

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

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



Laboratory Duplicate (DUP) Report

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

No Limit

- **No Laboratory Duplicate (DUP) Results are required to be reported.**



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

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

Sub-Matrix: WATER

Method/Compound	CAS Number	LOR	Unit	Method Blank (MB)	Spike Concentration	Laboratory Control Spike (LCS) Report		
				Report Result		Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 831339)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	109	66.6	121
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	71.2	67.7	112
EP132: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	101	11.6	146
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	88.2	73.2	111
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	88.6	72.4	112
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	91.4	73.4	113
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	99.6	73.6	114
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	93.0	75.2	117
EP132: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	87.2	71.4	119
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	# 57.2	75.3	118
EP132: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	104	66.6	121
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	94.3	74.8	118
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	93.2	69.6	120
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	92.5	47.4	131
EP132: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	103	71.5	117
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	93.3	74.8	117
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	89.0	72.9	114
EP132: Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	----	----	----	----
		0.10	µg/L	----	2 µg/L	102	67.8	119



Sub-Matrix: WATER

Method/Compound	CAS Number	LOR	Unit	Method Blank (MB)	Spike	Laboratory Control Spike (LCS) Report		
				Report		Concentration	Spike Recovery (%)	Recovery Limits (%)
				Result		LCS	Low	High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 831338) - continued								
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	79.2	53.6	131
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	82.7	68.3	116
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	107	68	122
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	91.3	74.8	112
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	93.8	75.1	117



Matrix Spike (MS) Report

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

- **No Matrix Spike (MS) Results are required to be reported.**



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 7
Contact	: MS KAREN LUI	Contact	: Wong Wai Man, Alice	Work Order	: HK0821679
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		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: +852 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: +852 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date Samples Received	: 10-DEC-2008
Order number	: ----			Issue Date	: 30-DEC-2008
C-O-C number	: ----			No. of samples received	: 18
Site	: ----			No. of samples analysed	: 18

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: 18-DEC-2008

Key: LOR = Limit of reporting; CAS Number = Chemistry Abstract Services number

Specific comments for Work Order: **HK0821679**

Sample(s) were collected by ALS Technichem (HK) staff on 10 December, 2008.

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

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

Signatories

Anh Ngoc Huynh

Position

Senior Chemist

Authorised results for

Organics

ALS Laboratory Group

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A Campbell Brothers Limited Company



Analytical Results

Sub-Matrix: MARINE WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	MPB1 ME	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME
				[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]
				HK0821679-001	HK0821679-002	HK0821679-003	HK0821679-004	HK0821679-005
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides								
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate						Surrogate control limits listed at end of this report.		
Decachlorobiphenyl	2051-24-3	0.1	%	68.4	71.7	64.0	67.4	66.8



Sub-Matrix: MARINE WATER				Client sample ID	MP ME DUP	C2 (NM5) ME	C2 (NM5) ME DUP	MPB1 MF	MPB1 MF DUP
Client sampling date / time				[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	
Compound	CAS Number	LOR	Unit	HK0821679-006	HK0821679-007	HK0821679-008	HK0821679-009	HK0821679-010	
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							Surrogate control limits listed at end of this report.		
Decachlorobiphenyl	2051-24-3	0.1	%	61.3	65.7	59.8	68.0	68.6	



Sub-Matrix: MARINE WATER				Client sample ID	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1 (NM3) MF
Client sampling date / time				[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]
Compound	CAS Number	LOR	Unit	HK0821679-011	HK0821679-012	HK0821679-013	HK0821679-014	HK0821679-015	
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	67.8	61.0	62.5	61.6	68.8	



Sub-Matrix: MARINE WATER				Client sample ID	C1 (NM3) MF DUP	C3 (NM6) MF	C3 (NM6) MF DUP		
				Client sampling date / time	[10-DEC-2008]	[10-DEC-2008]	[10-DEC-2008]		
Compound	CAS Number	LOR	Unit	HK0821679-016	HK0821679-017	HK0821679-018			
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	<0.01			
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	<0.01			
EP-065B: Organochlorine Pesticides									
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	<0.01			
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	<0.01			
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01			
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							Surrogate control limits listed at end of this report.		
Decachlorobiphenyl	2051-24-3	0.1	%	61.5	64.3	56.4			



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-065A: PCB Single Congeners (QC Lot: 843113)								
HK0821679-001	MPB1 ME	PCB 8	34883-43-7	0.01	µg/L	<0.01	<0.01	0.0
		PCB 18	37680-65-2	0.01	µg/L	<0.01	<0.01	0.0
		PCB 28	7012-37-5	0.01	µg/L	<0.01	<0.01	0.0
		PCB 52	35693-99-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 44	41464-39-5	0.01	µg/L	<0.01	<0.01	0.0
		PCB 66	32598-10-0	0.01	µg/L	<0.01	<0.01	0.0
		PCB 101	37680-73-2	0.01	µg/L	<0.01	<0.01	0.0
		PCB 77	32598-13-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 149	38380-04-0	0.01	µg/L	<0.01	<0.01	0.0
		PCB 118	31508-00-6	0.01	µg/L	<0.01	<0.01	0.0
		PCB 153	35065-27-1	0.01	µg/L	<0.01	<0.01	0.0
		PCB 105	32598-14-4	0.01	µg/L	<0.01	<0.01	0.0
		PCB 126	57465-28-8	0.01	µg/L	<0.01	<0.01	0.0
		PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	0.0
		PCB 128	38380-07-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 156	38380-08-4	0.01	µg/L	<0.01	<0.01	0.0
		PCB 180	35065-29-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 169	60044-26-0	0.01	µg/L	<0.01	<0.01	0.0
		PCB 170	35065-30-6	0.01	µg/L	<0.01	<0.01	0.0
PCB 195	52663-78-2	0.01	µg/L	<0.01	<0.01	0.0		
EP-065B: Organochlorine Pesticides (QC Lot: 843113)								
HK0821679-001	MPB1 ME	4.4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	0.0
		4.4'-DDE	72-55-9	0.01	µg/L	<0.01	<0.01	0.0
		4.4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	0.0

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration n	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (QC Lot: 843113)											
PCB 8	34883-43-7	0.01	µg/L	<0.01	100 µg/L	95.6	----	50	130	----	----
PCB 18	37680-65-2	0.01	µg/L	<0.01	100 µg/L	88.5	----	50	130	----	----
PCB 28	7012-37-5	0.01	µg/L	<0.01	100 µg/L	67.1	----	50	130	----	----
PCB 52	35693-99-3	0.01	µg/L	<0.01	100 µg/L	61.2	----	50	130	----	----
PCB 44	41464-39-5	0.01	µg/L	<0.01	100 µg/L	62.1	----	50	130	----	----
PCB 66	32598-10-0	0.01	µg/L	<0.01	100 µg/L	59.4	----	50	130	----	----
PCB 101	37680-73-2	0.01	µg/L	<0.01	100 µg/L	118	----	50	130	----	----
PCB 77	32598-13-3	0.01	µg/L	<0.01	100 µg/L	115	----	50	130	----	----
PCB 149	38380-04-0	0.01	µg/L	<0.01	100 µg/L	115	----	50	130	----	----



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (QC Lot: 843113) - Continued											
PCB 118	31508-00-6	0.01	µg/L	<0.01	100 µg/L	116	----	50	130	----	----
PCB 153	35065-27-1	0.01	µg/L	<0.01	100 µg/L	116	----	50	130	----	----
PCB 105	32598-14-4	0.01	µg/L	<0.01	100 µg/L	119	----	50	130	----	----
PCB 126	57465-28-8	0.01	µg/L	<0.01	100 µg/L	120	----	50	130	----	----
PCB 187	52663-68-0	0.01	µg/L	<0.01	100 µg/L	120	----	50	130	----	----
PCB 128	38380-07-3	0.01	µg/L	<0.01	100 µg/L	117	----	50	130	----	----
PCB 156	38380-08-4	0.01	µg/L	<0.01	100 µg/L	116	----	50	130	----	----
PCB 180	35065-29-3	0.01	µg/L	<0.01	100 µg/L	123	----	50	130	----	----
PCB 169	60044-26-0	0.01	µg/L	<0.01	100 µg/L	123	----	50	130	----	----
PCB 170	35065-30-6	0.01	µg/L	<0.01	100 µg/L	125	----	50	130	----	----
PCB 195	52663-78-2	0.01	µg/L	<0.01	100 µg/L	115	----	50	130	----	----
EP-065B: Organochlorine Pesticides (QC Lot: 843113)											
4,4'-DDT	50-29-3	0.01	µg/L	<0.01	25 µg/L	# Not Determined	----	50	130	----	----
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	25 µg/L	# Not Determined	----	50	130	----	----
4,4'-DDD	72-54-8	0.01	µg/L	<0.01	25 µg/L	# Not Determined	----	50	130	----	----

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

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

Surrogate Control Limits

Sub-Matrix: MARINE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	2051-24-3	50	130



Environmental Division

CERTIFICATE OF ANALYSIS

CONTACT: MS KAREN LUI
CLIENT: ERM HONG KONG
ADDRESS: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,
TAIKOO PLACE, ISLAND EAST,
QUARRY BAY, HONG KONG.
PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

Batch: HK0821679
LABORATORY: HONG KONG
DATE RECEIVED: 10/12/2008
DATE OF ISSUE: 24/12/2008
SAMPLE TYPE: WATER
No. of SAMPLES: 18

COMMENTS

Sample(s) were collected by ALS Technichem (HK) staff on 10 December, 2008.
Water sample(s) analysed and reported on an as received basis.
PAHs were subcontracted and tested by ALS Sydney.
ALS Sydney details report was attached. The attached report contains a total of 14 pages.

Sample Details

ALS Lab ID	Sample ID	Date of Sampling
HK0821679 - 1	MPB1_ME	10/12/2008
HK0821679 - 2	MPB1_ME DUP	10/12/2008
HK0821679 - 3	MPB2_ME	10/12/2008
HK0821679 - 4	MPB2_ME DUP	10/12/2008
HK0821679 - 5	MP_ME	10/12/2008
HK0821679 - 6	MP_ME DUP	10/12/2008
HK0821679 - 7	C2 (NM5)_ME	10/12/2008
HK0821679 - 8	C2 (NM5)_ME DUP	10/12/2008
HK0821679 - 9	MPB1_MF	10/12/2008
HK0821679 - 10	MPB1_MF DUP	10/12/2008
HK0821679 - 11	MPB2_MF	10/12/2008
HK0821679 - 12	MPB2_MF DUP	10/12/2008
HK0821679 - 13	MP_MF	10/12/2008
HK0821679 - 14	MP_MF DUP	10/12/2008
HK0821679 - 15	C1 (NM3)_MF	10/12/2008
HK0821679 - 16	C1 (NM3)_MF DUP	10/12/2008
HK0821679 - 17	C3 (NM6)_MF	10/12/2008
HK0821679 - 18	C3 (NM6)_MF DUP	10/12/2008

ISSUING LABORATORY: HONG KONG

Address
ALS Technichem (HK) Pty Ltd
11/F Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
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Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA	AMERICAS
Brisbane	Vancouver
Hong Kong	Santiago
Melbourne	Amtofagasta
Sydney	Lima
Newcastle	Bogor
	Singapore
	Kuala Lumpur

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Abbreviations: % SPK REC denotes percentage spike recovery
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: ES0818462	Page	: 1 of 8
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS ALICE WONG	Contact	: Charlie Pierce
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alice.wong@alsenviro.com	E-mail	: charlie.pierce@alsenviro.com
Telephone	: +852 001185226101044	Telephone	: +61-2-8784 8555
Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 15-DEC-2008
C-O-C number	: ----	Issue Date	: 24-DEC-2008
Sampler	: ----	No. of samples received	: 18
Site	: ----	No. of samples analysed	: 18
Quote number	: SY/241/07		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



WORLD RECOGNISED
ACCREDITATION

NATA Accredited Laboratory 825

This document is issued in
accordance with NATA
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories

Alex Rossi

Position

Organic Chemist

Accreditation Category

Organics

Page : 3 of 8
Work Order : ES0818462
Client : ALS TECHNICHEM (HK)
Project : ----



General Comments

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

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

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

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

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

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



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0821679-1	HK0821679-2	HK0821679-3	HK0821679-4	HK0821679-5
				MPB1-ME	MPB1-ME DUP	MPB2-ME	MPB2-ME DUP	MP-ME
				10-DEC-2008 15:00	10-DEC-2008 15:00	10-DEC-2008 15:00	10-DEC-2008 15:00	10-DEC-2008 15:00
				ES0818462-001	ES0818462-002	ES0818462-003	ES0818462-004	ES0818462-005
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs	---	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	97.8	97.9	109	100	109
Anthracene-d10	1719-06-8	0.1	%	101	102	108	100	112
4-Terphenyl-d14	1718-51-0	0.1	%	108	109	117	109	123



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Unit	Client sample ID	Client sampling date / time	ES0818462-006	ES0818462-007	ES0818462-008	ES0818462-009	ES0818462-010
				HK0821679-6 MP-ME DUP	HK0821679-7 C2 (NM5)-ME	HK0821679-8 C2 (NM5)-ME DUP	HK0821679-9 MPB1-MF	HK0821679-10 MPB1-MF DUP		
EP132B: Polynuclear Aromatic Hydrocarbons										
3-Methylcholanthrene	96-49-5	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	56-55-3	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L		10-DEC-2008 15:00	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs	---	0.1	µg/L		10-DEC-2008 15:00	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates										
2-Fluorobiphenyl	321-60-8	0.1	%		10-DEC-2008 15:00	118	114	109	114	104
Anthracene-d10	1719-06-8	0.1	%		10-DEC-2008 15:00	112	110	109	134	110
4-Terphenyl-d14	1718-51-0	0.1	%		10-DEC-2008 15:00	122	121	118	130	119



Analytical Results

Sub-Matrix: WATER

Client sample ID:

HK0821679-11
MPB2-MF

HK0821679-12
MPB2-MF DUP

HK0821679-13
MP-MF

HK0821679-14
MP-MF DUP

HK0821679-15
C1 (NM3)-MF

Client sampling date / time:

10-DEC-2008 15:00

10-DEC-2008 15:00

10-DEC-2008 15:00

10-DEC-2008 15:00

10-DEC-2008 15:00

Compound	CAS Number	LOR	Unit	ES0818462-011	ES0818462-012	ES0818462-013	ES0818462-014	ES0818462-015
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Sum of PAHs	----	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	79.6	91.3	81.8	91.9	82.6
Anthracene-d10	1719-06-8	0.1	%	92.7	104	96.4	105	111
4-Terphenyl-d14	1718-51-0	0.1	%	101	112	104	115	121



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LDR	Unit	Client sample ID	Client sample ID	Client sample ID	---	---
				HK0821679-16	HK0821679-17	HK0821679-18	---	---
				C1 (NM3)-MF DUP	C3 (NM6)-MF	C3 (NM6)-MF DUP	---	---
				Client sampling date / time	Client sampling date / time	Client sampling date / time	---	---
				10-DEC-2008 15:00	10-DEC-2008 15:00	10-DEC-2008 15:00	---	---
				ES0818462-016	ES0818462-017	ES0818462-018	---	---
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-48-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	---	---
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	---	---
Benzo(b)fluoranthene	205-98-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Indeno(1,2,3-cd)pyrene	183-39-5	0.1	µg/L	<0.1	<0.1	<0.1	---	---
N-2-Fluorenyl Acetamide	63-88-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	---	---
Sum of PAHs	----	0.1	µg/L	<0.1	<0.1	<0.1	---	---
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	94.6	96.0	105	---	---
Anthracene-d10	1719-06-8	0.1	%	110	104	103	---	---
4-Terphenyl-d14	1718-51-0	0.1	%	119	114	111	---	---

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Surrogate Control Limits

SUB-Matrix: WATER

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141



Environmental Division

QUALITY CONTROL REPORT

Work Order	: ES0818462	Page	: 1 of 6
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS ALICE WONG	Contact	: Charlie Pierce
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alice.wong@alsenviro.com	E-mail	: charlie.pierce@alsenviro.com
Telephone	: +852 001185226101044	Telephone	: +61-2-8784 8555
Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 15-DEC-2008
C-O-C number	: ----	Issue Date	: 24-DEC-2008
Sampler	: ----	No. of samples received	: 18
Order number	: ----	No. of samples analysed	: 18
Quote number	: SY/241/07		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

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



WORLD RECOGNISED
ACCREDITATION

NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics

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General Comments

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

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

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

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

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

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Laboratory Duplicate (DUP) Report

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

No Limit

- **No Laboratory Duplicate (DUP) Results are required to be reported.**



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

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

Sub-Matrix: WATER

Method: Compound	CAS Number	LDR	Unit	Method Blank (MB)	Spike Concentration	Laboratory Control Spike (LCS) Report		
				Report Result		Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 844804)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	77.9	65.8	121
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	82.2	67.7	112
EP132: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	95.2	11.6	146
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	92.8	73.2	111
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	92.9	72.4	112
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	96.1	73.4	113
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	93.3	73.6	114
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	88.8	75.2	117
EP132: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	84.5	71.4	119
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	88.4	75.3	118
EP132: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	79.7	66.6	121
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	99.8	74.8	118
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	95.0	69.6	120
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	63.8	47.4	131
EP132: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	83.2	71.5	117
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	96.4	74.8	117
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	94.4	72.4	114
EP132: Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	---	---	---	---
		0.10	µg/L	---	2 µg/L	81.4	67.5	119



Sub Matrix: WATER

Method Component	CAS Number	LDR	Unit	Method Blank (MB)	Spike	Laboratory Control Spike (LCS) Report			
				Report		Concentration	Spike Recovery (%)	Recovery Limits (%)	
				Result		LCS	Low	High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 844804) - continued									
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	---	---	---	---	
		0.10	µg/L	---	2 µg/L	106	53.6	131	
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	---	---	---	---	
		0.10	µg/L	---	2 µg/L	94.1	68.3	116	
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	---	---	---	---	
		0.10	µg/L	---	2 µg/L	89.1	68	122	
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	---	---	---	---	
		0.10	µg/L	---	2 µg/L	96.4	74.8	112	
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	---	---	---	---	
		0.10	µg/L	---	2 µg/L	99.2	75.1	117	

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Matrix Spike (MS) Report

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

- **No Matrix Spike (MS) Results are required to be reported.**