



### CERTIFICATE OF ANALYSIS

Client	: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Laboratory	: ALS Technichem HK Pty Ltd	Page	: 1 of 10
Contact	: IR POPHIL LAM	Contact	: Chan Kwok Fai, Godfrey	Work Order	: HK1202753
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Project	: AGREEMENT NO CE 15_2010(DS) UPGRADING OF CHEUNG CHAU AND TAI O SEWAGE COLLECTION	Quote number	: ----	Date Samples Received	: 31-JAN-2012
Order number	: GE/2009/16.19			Issue Date	: 16-FEB-2012
C-O-C number	: H013968-3969,3971-3972,3975			No. of samples received	: 6
Site	: TAI O			No. of samples analysed	: 5

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

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### 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-FEB-2012

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: **HK1202753**

Project Name: Agreement No. CE 15/2010 (DS) Upgrading of Cheung Chau and Tai O Sewage Collection, Treatment and Disposal Facilities - Design and Construction.

Sample(s) were received in a chilled condition.

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

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



**Analytical Results**

Sub-Matrix: ELUTRIATE

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	D11 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D10 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D9 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D8 (COMPOSITE SAMPLES FROM ALL DEPTHS)	ELUTRIATE BLANK
				[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]
				HK1202753-001	HK1202753-002	HK1202753-003	HK1202753-004	HK1202753-005
<b>ED/EK: Inorganic Nonmetallic Parameters</b>								
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	9.55	5.34	1.63	0.83	0.33
EK057A: Nitrite as N	----	0.01	mg/L	0.03	0.03	0.03	0.03	0.02
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.20	0.21	0.22	0.21	0.24
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	10.6	5.8	2.3	1.7	0.3
EK067A: Total Phosphorus as P	----	0.1	mg/L	<0.1	0.1	<0.1	<0.1	<0.1
EK071K: Reactive Phosphorus as P	----	10	µg/L	20	90	20	10	10
<b>EG: Metals and Major Cations - Filtered</b>								
EG020: Arsenic	7440-38-2	10	µg/L	<10	<10	<10	<10	<10
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	µg/L	<1	<1	<1	<1	<1
EG020: Copper	7440-50-8	1	µg/L	2	<1	<1	<1	<1
EG020: Lead	7439-92-1	1	µg/L	<1	<1	<1	<1	<1
EG020: Mercury	7439-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EG020: Nickel	7440-02-0	1	µg/L	1	<1	1	1	<1
EG020: Silver	7440-22-4	1	µg/L	<1	<1	<1	<1	<1
EG020: Zinc	7440-66-6	10	µg/L	<10	<10	<10	<10	<10
<b>EP-076: Polycyclic Aromatics Hydrocarbons (PAHs)</b>								
Naphthalene	91-20-3	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Acenaphthene	83-32-9	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Fluorene	86-73-7	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Phenanthrene	85-01-8	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Anthracene	120-12-7	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Fluoranthene	206-44-0	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrene	129-00-0	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Chrysene	218-01-9	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Low M.W. PAHs	----	2.2	µg/L	<2.2	<2.2	<2.2	<2.2	<2.2
High M.W. PAHs	----	6.8	µg/L	<6.8	<6.8	<6.8	<6.8	<6.8



Sub-Matrix: ELUTRIATE				Client sample ID	D11 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D10 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D9 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D8 (COMPOSITE SAMPLES FROM ALL DEPTHS)	ELUTRIATE BLANK
Client sampling date / time				[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]
Compound	CAS Number	LOR	Unit	HK1202753-001	HK1202753-002	HK1202753-003	HK1202753-004	HK1202753-005	
<b>EP-065A: PCB Single Congeners</b>									
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 44	41464-39-5	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 66	32598-10-0	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 101	37680-73-2	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 118	31508-00-6	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 128	38380-07-3	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	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 169	32774-16-6	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 180	35065-29-3	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
<b>Total Polychlorinated biphenyls</b>	----	0.18	µg/L	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
<b>EP-067A: Organochlorine Pesticides (OC)</b>									
Aldrin	309-00-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
alpha-BHC	319-84-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
beta-BHC	319-85-7	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
gamma-BHC	58-89-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
delta-BHC	319-86-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Heptachlor	76-44-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Heptachlor epoxide	1024-57-3	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Endosulfan 1	959-98-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Endosulfan sulfate	1031-07-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
4,4'-DDT	50-29-3	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
4,4'-DDD	72-54-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
4,4'-DDE	72-55-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>EP-390: Triorganotins</b>									
Tributyltin	56573-85-4	0.015	µg TBT /L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
<b>EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates</b>								Surrogate control limits listed at end of this report.	
2-Fluorobiphenyl	321-60-8	0.1	%	61.2	66.3	61.6	58.6	74.6	



Sub-Matrix: ELUTRIATE				Client sample ID	D11 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D10 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D9 (COMPOSITE SAMPLES FROM ALL DEPTHS)	D8 (COMPOSITE SAMPLES FROM ALL DEPTHS)	ELUTRIATE BLANK
Client sampling date / time				[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]	[31-JAN-2012]
Compound	CAS Number	LOR	Unit	HK1202753-001	HK1202753-002	HK1202753-003	HK1202753-004	HK1202753-005	
<b>EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates - Continued</b>								Surrogate control limits listed at end of this report.	
4-Terphenyl-d14	1718-51-0	0.1	%	92.1	96.3	81.6	75.2	89.2	
<b>EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate</b>								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	68.6	70.8	65.8	58.7	73.2	
<b>EP-067S: Pesticide Surrogate</b>								Surrogate control limits listed at end of this report.	
Dibutylchloredate	1770-80-5	0.1	%	127	127	120	104	111	



**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 (%)
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151421)</b>								
HK1202550-001	Anonymous	EK067A: Total Phosphorus as P	----	0.1	mg/L	1.8	1.9	0.0
HK1202646-004	Anonymous	EK067A: Total Phosphorus as P	----	0.1	mg/L	0.4	0.4	0.0
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151422)</b>								
HK1202782-001	Anonymous	EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	<0.1	0.0
HK1202773-001	Anonymous	EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	<0.1	0.0
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155253)</b>								
HK1202803-001	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.15	0.14	6.9
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155761)</b>								
HK1203032-001	Anonymous	EK057A: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0
HK1203045-001	Anonymous	EK057A: Nitrite as N	----	0.01	mg/L	0.21	0.21	0.0
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155778)</b>								
HK1203085-001	Anonymous	EK071K: Reactive Phosphorus as P	----	0.01	mg/L	0.09	0.09	0.0
<b>EG: Metals and Major Cations - Filtered (QC Lot: 2160149)</b>								
HK1202618-002	Anonymous	EG020: Mercury	7439-97-6	0.1	µg/L	<0.1	<0.1	0.0
		EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Chromium	7440-47-3	1	µg/L	<1	<1	0.0
		EG020: Copper	7440-50-8	1	µg/L	<1	<1	0.0
		EG020: Lead	7439-92-1	1	µg/L	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	µg/L	<1	<1	0.0
		EG020: Silver	7440-22-4	1	µg/L	<1	<1	0.0
		EG020: Arsenic	7440-38-2	10	µg/L	<10	<10	0.0
		EG020: Zinc	7440-66-6	10	µg/L	<10	<10	0.0
<b>EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 2149836)</b>								
HK1202753-005	ELUTRIATE BLANK	Naphthalene	91-20-3	0.2	µg/L	<0.2	<0.2	0.0
		Acenaphthylene	208-96-8	0.2	µg/L	<0.2	<0.2	0.0
		Acenaphthene	83-32-9	0.2	µg/L	<0.2	<0.2	0.0
		Fluorene	86-73-7	0.2	µg/L	<0.2	<0.2	0.0
		Phenanthrene	85-01-8	0.2	µg/L	<0.2	<0.2	0.0
		Anthracene	120-12-7	0.2	µg/L	<0.2	<0.2	0.0
		Fluoranthene	206-44-0	0.2	µg/L	<0.2	<0.2	0.0
		Pyrene	129-00-0	0.2	µg/L	<0.2	<0.2	0.0
		Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	<0.2	0.0
		Chrysene	218-01-9	0.2	µg/L	<0.2	<0.2	0.0
		Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	<0.2	0.0
		Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	<0.2	0.0
		Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	<0.2	0.0
		Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	<0.2	0.0
		Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	<0.2	0.0
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	<0.2	0.0		



Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 2149836) - Continued</b>								
HK1202753-005	ELUTRIATE BLANK	Low M.W. PAHs	----	2.2	µg/L	<2.2	<2.2	0.0
		High M.W. PAHs	----	6.8	µg/L	<6.8	<6.8	0.0
<b>EP-065A: PCB Single Congeners (QC Lot: 2149837)</b>								
HK1202753-005	ELUTRIATE BLANK	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 44	41464-39-5	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 66	32598-10-0	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 101	37680-73-2	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 118	31508-00-6	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 128	38380-07-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 138	35065-28-2	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 169	32774-16-6	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 180	35065-29-3	0.01	µg/L	<0.01	<0.01	0.0
		PCB 187	52663-68-0	0.01	µg/L	<0.01	<0.01	<0.01
		Total Polychlorinated biphenyls	----	0.18	µg/L	<0.18	<0.18	0.0
<b>EP-067A: Organochlorine Pesticides (OC) (QC Lot: 2149838)</b>								
HK1202753-005	ELUTRIATE BLANK	Aldrin	309-00-2	0.10	µg/L	<0.10	<0.10	0.0
		alpha-BHC	319-84-6	0.10	µg/L	<0.10	<0.10	0.0
		beta-BHC	319-85-7	0.10	µg/L	<0.10	<0.10	0.0
		gamma-BHC	58-89-9	0.10	µg/L	<0.10	<0.10	0.0
		delta-BHC	319-86-8	0.10	µg/L	<0.10	<0.10	0.0
		Heptachlor	76-44-8	0.10	µg/L	<0.10	<0.10	0.0
		Heptachlor epoxide	1024-57-3	0.10	µg/L	<0.10	<0.10	0.0
		Endosulfan 1	959-98-8	0.10	µg/L	<0.10	<0.10	0.0
		Endosulfan sulfate	1031-07-8	0.10	µg/L	<0.10	<0.10	0.0
		4,4'-DDT	50-29-3	0.10	µg/L	<0.10	<0.10	0.0
		4,4'-DDD	72-54-8	0.10	µg/L	<0.10	<0.10	0.0
		4,4'-DDE	72-55-9	0.10	µg/L	<0.10	<0.10	0.0
		<b>EP-390: Triorganotin (QC Lot: 2153956)</b>						
HK1202618-001	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: WATER	Method Blank (MB) Report	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report
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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
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151421)</b>											
EK067A: Total Phosphorus as P	----	0.1	mg/L	<0.1	0.5 mg/L	96.2	----	85	115	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151422)</b>											
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	0.5 mg/L	96.9	----	85	115	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155253)</b>											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	108	----	85	115	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155761)</b>											
EK057A: Nitrite as N	----	0.01	mg/L	<0.01	0.4 mg/L	115	----	85	115	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155778)</b>											
EK071K: Reactive Phosphorus as P	----	0.01	mg/L	<0.01	0.5 mg/L	98.7	----	85	115	----	----
<b>EG: Metals and Major Cations - Filtered (QC Lot: 2160149)</b>											
EG020: Arsenic	7440-38-2	10	µg/L	<10	10 µg/L	98.2	----	78	114	----	----
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	10 µg/L	96.5	----	80	112	----	----
EG020: Chromium	7440-47-3	1	µg/L	<1	10 µg/L	97.4	----	80	114	----	----
EG020: Copper	7440-50-8	1	µg/L	<1	10 µg/L	98.8	----	79	113	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	10 µg/L	96.3	----	81	109	----	----
EG020: Mercury	7439-97-6	0.5	µg/L	<0.1	0.2 µg/L	110	----	81	113	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	10 µg/L	98.3	----	78	112	----	----
EG020: Silver	7440-22-4	1	µg/L	<1	10 µg/L	92.8	----	79	111	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	10 µg/L	92.4	----	73	121	----	----
<b>EP-076: Polycyclic Aromatics Hydrocarbons (PAHs) (QC Lot: 2149836)</b>											
Naphthalene	91-20-3	0.2	µg/L	<0.2	0.5 µg/L	104	----	44	114	----	----
Acenaphthylene	208-96-8	0.2	µg/L	<0.2	0.5 µg/L	100	----	40	109	----	----
Acenaphthene	83-32-9	0.2	µg/L	<0.2	0.5 µg/L	100	----	44	108	----	----
Fluorene	86-73-7	0.2	µg/L	<0.2	0.5 µg/L	102	----	43	113	----	----
Phenanthrene	85-01-8	0.2	µg/L	<0.2	0.5 µg/L	107	----	45	115	----	----
Anthracene	120-12-7	0.2	µg/L	<0.2	0.5 µg/L	106	----	45	112	----	----
Fluoranthene	206-44-0	0.2	µg/L	<0.2	0.5 µg/L	104	----	56	121	----	----
Pyrene	129-00-0	0.2	µg/L	<0.2	0.5 µg/L	105	----	57	122	----	----
Benz(a)anthracene	56-55-3	0.2	µg/L	<0.2	0.5 µg/L	110	----	61	118	----	----
Chrysene	218-01-9	0.2	µg/L	<0.2	0.5 µg/L	113	----	65	126	----	----
Benzo(b)fluoranthene	205-99-2	0.2	µg/L	<0.2	0.5 µg/L	110	----	49	138	----	----
Benzo(k)fluoranthene	207-08-9	0.2	µg/L	<0.2	0.5 µg/L	109	----	69	123	----	----
Benzo(a)pyrene	50-32-8	0.2	µg/L	<0.2	0.5 µg/L	112	----	51	134	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	<0.2	0.5 µg/L	94.8	----	54	129	----	----
Dibenz(a,h)anthracene	53-70-3	0.2	µg/L	<0.2	0.5 µg/L	102	----	51	138	----	----
Benzo(g,h,i)perylene	191-24-2	0.2	µg/L	<0.2	0.5 µg/L	104	----	59	135	----	----
Low M.W. PAHs	----	1.2	µg/L	<1.2	----	----	----	----	----	----	----
High M.W. PAHs	----	2.0	µg/L	<2.0	----	----	----	----	----	----	----
<b>EP-065A: PCB Single Congeners (QC Lot: 2149837)</b>											





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
<b>EP-065A: PCB Single Congeners (QC Lot: 2149837) - Continued</b>											
PCB 8	34883-43-7	0.01	µg/L	<0.01	0.1 µg/L	79.2	----	50	130	----	----
PCB 18	37680-65-2	0.01	µg/L	<0.01	0.1 µg/L	77.3	----	50	130	----	----
PCB 28	7012-37-5	0.01	µg/L	<0.01	0.1 µg/L	63.9	----	50	130	----	----
PCB 44	41464-39-5	0.01	µg/L	<0.01	0.1 µg/L	54.9	----	50	130	----	----
PCB 52	35693-99-3	0.01	µg/L	<0.01	0.1 µg/L	62.0	----	50	130	----	----
PCB 66	32598-10-0	0.01	µg/L	<0.01	0.1 µg/L	56.6	----	50	130	----	----
PCB 77	32598-13-3	0.01	µg/L	<0.01	0.1 µg/L	86.9	----	50	130	----	----
PCB 101	37680-73-2	0.01	µg/L	<0.01	0.1 µg/L	98.7	----	50	130	----	----
PCB 105	32598-14-4	0.01	µg/L	<0.01	0.1 µg/L	88.4	----	50	130	----	----
PCB 118	31508-00-6	0.01	µg/L	<0.01	0.1 µg/L	88.3	----	50	130	----	----
PCB 126	57465-28-8	0.01	µg/L	<0.01	0.1 µg/L	88.1	----	50	130	----	----
PCB 128	38380-07-3	0.01	µg/L	<0.01	0.1 µg/L	88.8	----	50	130	----	----
PCB 138	35065-28-2	0.01	µg/L	<0.01	0.1 µg/L	88.4	----	50	130	----	----
PCB 153	35065-27-1	0.01	µg/L	<0.01	0.1 µg/L	89.2	----	50	130	----	----
PCB 169	32774-16-6	0.01	µg/L	<0.01	0.1 µg/L	85.9	----	50	130	----	----
PCB 170	35065-30-6	0.01	µg/L	<0.01	0.1 µg/L	87.2	----	50	130	----	----
PCB 180	35065-29-3	0.01	µg/L	<0.01	0.1 µg/L	87.1	----	50	130	----	----
PCB 187	52663-68-0	0.01	µg/L	<0.01	0.1 µg/L	87.6	----	50	130	----	----
Total Polychlorinated biphenyls	----	0.18	µg/L	<0.18	----	----	----	----	----	----	----
<b>EP-067A: Organochlorine Pesticides (OC) (QC Lot: 2149838)</b>											
Aldrin	309-00-2	0.02	µg/L	<0.02	0.1 µg/L	64.2	----	50	130	----	----
alpha-BHC	319-84-6	0.02	µg/L	<0.02	0.1 µg/L	110	----	50	130	----	----
beta-BHC	319-85-7	0.02	µg/L	<0.02	0.1 µg/L	98.4	----	50	130	----	----
gamma-BHC	58-89-9	0.02	µg/L	<0.02	0.1 µg/L	87.0	----	50	130	----	----
delta-BHC	319-86-8	0.02	µg/L	<0.02	0.1 µg/L	67.9	----	50	130	----	----
Heptachlor	76-44-8	0.02	µg/L	<0.02	0.1 µg/L	101	----	50	130	----	----
Heptachlor epoxide	1024-57-3	0.02	µg/L	<0.02	0.1 µg/L	67.6	----	50	130	----	----
Endosulfan 1	959-98-8	0.02	µg/L	<0.02	0.1 µg/L	60.8	----	50	130	----	----
Endosulfan sulfate	1031-07-8	0.02	µg/L	<0.02	0.1 µg/L	59.4	----	50	130	----	----
4,4'-DDT	50-29-3	0.02	µg/L	<0.02	0.1 µg/L	67.8	----	50	130	----	----
4,4'-DDD	72-54-8	0.02	µg/L	<0.02	0.1 µg/L	67.2	----	50	130	----	----
4,4'-DDE	72-55-9	0.02	µg/L	<0.02	0.1 µg/L	60.7	----	50	130	----	----
<b>EP-390: Triorganotin (QC Lot: 2153956)</b>											
Tributyltin	56573-85-4	5	ngSn/L	<5	5 ngSn/L	94.3	----	81	117	----	----



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

Matrix: WATER

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151421)</b>										
HK1202550-001	Anonymous	EK067A: Total Phosphorus as P	----	5 mg/L	100	----	75	125	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2151422)</b>										
HK1202698-001	Anonymous	EK061A: Total Kjeldahl Nitrogen as N	----	0.5 mg/L	110	----	75	125	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155253)</b>										
HK1202803-001	Anonymous	EK055K: Ammonia as N	7664-41-7	0.5 mg/L	94.4	----	75	125	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155761)</b>										
HK1203032-001	Anonymous	EK057A: Nitrite as N	----	0.5 mg/L	119	----	75	125	----	----
<b>ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 2155778)</b>										
HK1203085-001	Anonymous	EK071K: Reactive Phosphorus as P	----	0.5 mg/L	102	----	75	125	----	----
<b>EG: Metals and Major Cations - Filtered (QC Lot: 2160149)</b>										
HK1202618-001	Anonymous	EG020: Arsenic	7440-38-2	10 µg/L	112	----	75	125	----	----
		EG020: Cadmium	7440-43-9	10 µg/L	96.7	----	75	125	----	----
		EG020: Chromium	7440-47-3	10 µg/L	99.6	----	75	125	----	----
		EG020: Copper	7440-50-8	10 µg/L	96.9	----	75	125	----	----
		EG020: Lead	7439-92-1	10 µg/L	99.2	----	75	125	----	----
		EG020: Mercury	7439-97-6	0.2 µg/L	100	----	75	125	----	----
		EG020: Nickel	7440-02-0	10 µg/L	90.9	----	75	125	----	----
		EG020: Silver	7440-22-4	10 µg/L	93.5	----	75	125	----	----
		EG020: Zinc	7440-66-6	10 µg/L	105	----	75	125	----	----

**Surrogate Control Limits**

Sub-Matrix: ELUTRIATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP-076S: Polycyclic Aromatics Hydrocarbons (PAHs) Surrogates</b>			
2-Fluorobiphenyl	321-60-8	50	130
4-Terphenyl-d14	1718-51-0	50	130
<b>EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate</b>			
Decachlorobiphenyl	2051-24-3	50	130
<b>EP-067S: Pesticide Surrogate</b>			
Dibutylchloroendate	1770-80-5	50	130