

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EW1202337	Page	: 1 of 11
Client	: WOLLONGONG CITY COUNCIL	Laboratory	: Environmental Division NSW South Coast
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Project	: Helensburgh Groundwater Annual	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 23-AUG-2012
C-O-C number	: ----	Issue Date	: 03-SEP-2012
Sampler	: ----	No. of samples received	: 9
Site	: ----	No. of samples analysed	: 9
Quote number	: WL/001/11 Helensburgh Groundwater Annual		

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

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	Position	Accreditation Category
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Sarah Millington	Senior Inorganic Chemist	Sydney Inorganics



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 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.

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

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				
				BH 1	BH 2	BH 4	BH 5	BH 6
				23-AUG-2012 07:20	23-AUG-2012 08:05	23-AUG-2012 08:20	23-AUG-2012 09:30	23-AUG-2012 08:35
Compound	CAS Number	LOR	Unit	EW1202337-001	EW1202337-002	EW1202337-003	EW1202337-004	EW1202337-005
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.30	0.21	3.03	2.29	1.56
Arsenic	7440-38-2	0.001	mg/L	0.002	0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.018	0.013	0.018	0.016	0.007
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0006	0.0013	0.0003
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.001	0.004	0.012
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	0.007	0.005
Copper	7440-50-8	0.001	mg/L	0.003	0.009	0.004	0.006	0.004
Manganese	7439-96-5	0.001	mg/L	0.093	0.031	0.046	0.174	0.049
Lead	7439-92-1	0.001	mg/L	0.002	0.001	0.002	0.001	0.001
Zinc	7440-66-6	0.005	mg/L	0.102	0.032	0.069	0.039	0.015
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG050T: Total Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	0.02	0.05	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	1.22	0.59	0.26	0.09
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.02	1.27	0.59	0.26	0.09
EP035G: Total Phenol by Discrete Analyser								
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	BH 1	BH 2	BH 4	BH 5	BH 6
				23-AUG-2012 07:20	23-AUG-2012 08:05	23-AUG-2012 08:20	23-AUG-2012 09:30	23-AUG-2012 08:35
				EW1202337-001	EW1202337-002	EW1202337-003	EW1202337-004	EW1202337-005
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDT	50-29-3	2	µg/L	<2	<2	<2	<2	<2
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Methoxychlor	72-43-5	2	µg/L	<2	<2	<2	<2	<2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Monocrotophos	6923-22-4	2	µg/L	<2	<2	<2	<2	<2
Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	298-00-0	2	µg/L	<2	<2	<2	<2	<2
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Parathion	56-38-2	2	µg/L	<2	<2	<2	<2	<2
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	BH 1	BH 2	BH 4	BH 5	BH 6
				23-AUG-2012 07:20	23-AUG-2012 08:05	23-AUG-2012 08:20	23-AUG-2012 09:30	23-AUG-2012 08:35
				EW1202337-001	EW1202337-002	EW1202337-003	EW1202337-004	EW1202337-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	180	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	280	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	430	60	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	610	340	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	----	20	µg/L	<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	170	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	230	300	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	320	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	720	300	<100	<100	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	1330-20-7	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	69.7	76.0	73.0	73.1	75.4



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

				BH 1	BH 2	BH 4	BH 5	BH 6
				23-AUG-2012 07:20	23-AUG-2012 08:05	23-AUG-2012 08:20	23-AUG-2012 09:30	23-AUG-2012 08:35
Compound	CAS Number	LOR	Unit	EW1202337-001	EW1202337-002	EW1202337-003	EW1202337-004	EW1202337-005
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	68.3	76.2	70.5	67.9	71.7
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	26.6	26.0	30.9	31.6	29.5
2-Chlorophenol-D4	93951-73-6	0.1	%	58.9	51.6	67.0	67.1	66.6
2,4,6-Tribromophenol	118-79-6	0.1	%	78.9	87.1	78.2	80.7	84.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	69.3	67.9	74.5	77.5	75.7
Anthracene-d10	1719-06-8	0.1	%	78.2	70.8	84.6	85.3	85.7
4-Terphenyl-d14	1718-51-0	0.1	%	71.9	77.8	75.7	95.3	77.5
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	133	119	103	119	133
Toluene-D8	2037-26-5	0.1	%	115	99.3	81.8	103	122
4-Bromofluorobenzene	460-00-4	0.1	%	109	94.4	78.0	99.7	97.7



Analytical Results

Sub-Matrix: WATER

				Client sample ID	LGMB1	LGMB2	LGMB3	LGMB4	----
				Client sampling date / time	23-AUG-2012 07:10	23-AUG-2012 07:30	23-AUG-2012 07:50	23-AUG-2012 07:40	----
Compound	CAS Number	LOR	Unit		EW1202337-006	EW1202337-007	EW1202337-008	EW1202337-009	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		16.7	23.6	0.26	1.37	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.002	<0.001	<0.001	----
Barium	7440-39-3	0.001	mg/L		0.048	0.018	0.012	0.007	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	0.0003	0.0002	----
Cobalt	7440-48-4	0.001	mg/L		0.003	<0.001	0.022	<0.001	----
Chromium	7440-47-3	0.001	mg/L		0.023	0.037	0.002	0.003	----
Copper	7440-50-8	0.001	mg/L		0.014	0.004	0.003	0.007	----
Manganese	7439-96-5	0.001	mg/L		0.014	0.017	0.080	0.061	----
Lead	7439-92-1	0.001	mg/L		0.037	0.007	<0.001	<0.001	----
Zinc	7440-66-6	0.005	mg/L		0.013	0.018	0.015	0.034	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
EG050T: Total Hexavalent Chromium									
Hexavalent Chromium	18540-29-9	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		<0.1	<0.1	<0.1	<0.1	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	----	0.01	mg/L		<0.01	<0.01	0.01	<0.01	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.20	0.02	0.01	0.77	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		0.20	0.02	0.02	0.77	----
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Aldrin	309-00-2	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				LGMB1	LGMB2	LGMB3	LGMB4	----
				23-AUG-2012 07:10	23-AUG-2012 07:30	23-AUG-2012 07:50	23-AUG-2012 07:40	----
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EW1202337-006	EW1202337-007	EW1202337-008	EW1202337-009	----
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
4,4'-DDT	50-29-3	2	µg/L	<2	<2	<2	<2	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Methoxychlor	72-43-5	2	µg/L	<2	<2	<2	<2	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Monocrotophos	6923-22-4	2	µg/L	<2	<2	<2	<2	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Parathion-methyl	298-00-0	2	µg/L	<2	<2	<2	<2	----
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Parathion	56-38-2	2	µg/L	<2	<2	<2	<2	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				LGMB1	LGMB2	LGMB3	LGMB4	----
				23-AUG-2012 07:10	23-AUG-2012 07:30	23-AUG-2012 07:50	23-AUG-2012 07:40	----
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EW1202337-006	EW1202337-007	EW1202337-008	EW1202337-009	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	20	µg/L	<20	<20	<20	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	----	20	µg/L	<20	<20	<20	<20	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	----
^ Total Xylenes	1330-20-7	2	µg/L	<2	<2	<2	<2	----
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	70.8	71.7	72.1	76.8	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID	LGMB1	LGMB2	LGMB3	LGMB4	----
				Client sampling date / time	23-AUG-2012 07:10	23-AUG-2012 07:30	23-AUG-2012 07:50	23-AUG-2012 07:40	----
Compound	CAS Number	LOR	Unit		EW1202337-006	EW1202337-007	EW1202337-008	EW1202337-009	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		67.7	69.1	72.1	73.8	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		27.4	28.7	23.4	29.4	----
2-Chlorophenol-D4	93951-73-6	0.1	%		62.5	65.1	51.1	65.8	----
2,4,6-Tribromophenol	118-79-6	0.1	%		77.1	72.7	73.7	84.1	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		71.0	76.1	64.3	74.2	----
Anthracene-d10	1719-06-8	0.1	%		82.1	87.4	81.6	87.5	----
4-Terphenyl-d14	1718-51-0	0.1	%		71.8	71.2	73.3	80.8	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		129	133	128	116	----
Toluene-D8	2037-26-5	0.1	%		108	108	120	114	----
4-Bromofluorobenzene	460-00-4	0.1	%		98.8	101	105	101	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	33.6	142.5
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	28.1	147.7
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	64.1
2-Chlorophenol-D4	93951-73-6	11.3	122.9
2,4,6-Tribromophenol	118-79-6	11.7	144.0
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	19.9	122.8
Anthracene-d10	1719-06-8	23.3	125.8
4-Terphenyl-d14	1718-51-0	20.3	134.5
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128