



Environmental

## CERTIFICATE OF ANALYSIS

Work Order	: <b>EW1402357</b>	Page	: 1 of 11
Client	: <b>WOLLONGONG CITY COUNCIL</b>	Laboratory	: Environmental Division NSW South Coast
Contact	: MR WAYDE PETERSON	Contact	: Glenn Davies
Address	: 41 BURELLI STREET WOLLONGONG NSW, AUSTRALIA 2500	Address	: 99 Kenny Street, Wollongong 2500 Unit 4 / 13 Geary Place, PO Box 3105, North Nowra 2541 AUSTRALIA
E-mail	: wpeterson@wollongong.nsw.gov.au	E-mail	: glenn.davies@alsglobal.com
Telephone	: +61 02 4227 7111	Telephone	: 02 4225 3125
Facsimile	: +61 02 4227 7277	Facsimile	: 02 4225 3128
Project	: Helensburgh Groundwater Annual	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 3030159	Date Samples Received	: 07-AUG-2014
C-O-C number	: ----	Issue Date	: 14-AUG-2014
Sampler	: Craig Wilson	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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong
Pabi Subba	Senior Organic Chemist	Sydney Organics
Shobhna Chandra	Metals Coordinator	Sydney Inorganics

Address 99 Kenny Street, Wollongong 2500

Environmental Division NSW South Coast, PO Box 3105, North Nowra 2541, Australia. An ALS Limited Company

Environmental

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER



## 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.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

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

- **Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.**
- **Sampling and sample data supplied by ALS Wollongong.**
- **Site LGMB2 - Dry at time of sampling.**



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				BH 1	BH 2	BH 4	BH 5	BH 6
				07-AUG-2014 13:25	07-AUG-2014 12:30	07-AUG-2014 12:15	07-AUG-2014 13:50	07-AUG-2014 11:25
Compound	CAS Number	LOR	Unit	EW1402357-001	EW1402357-002	EW1402357-003	EW1402357-004	EW1402357-005
<b>EG020T: Total Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	0.56	0.27	1.87	1.39	0.61
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	0.038	0.026	0.016	0.012	0.034
Cadmium	7440-43-9	0.0001	mg/L	0.0004	0.0006	<0.0001	0.0002	0.0002
Cobalt	7440-48-4	0.001	mg/L	0.004	<0.001	0.002	0.007	0.004
Chromium	7440-47-3	0.001	mg/L	<0.001	0.001	<0.001	0.002	0.004
Copper	7440-50-8	0.001	mg/L	0.004	0.013	0.002	0.013	0.003
Manganese	7439-96-5	0.001	mg/L	0.108	0.039	0.062	0.112	0.096
Lead	7439-92-1	0.001	mg/L	0.011	0.008	0.003	0.004	0.002
Zinc	7440-66-6	0.005	mg/L	1.04	0.053	0.009	0.029	<0.005
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<b>EG050T: Total Hexavalent Chromium</b>								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
<b>EK040P: Fluoride by PC Titrator</b>								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EK057G: Nitrite as N by Discrete Analyser</b>								
Nitrite as N	----	0.01	mg/L	<0.01	0.04	<0.01	<0.01	<0.01
<b>EK058G: Nitrate as N by Discrete Analyser</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.38	8.91	0.73	0.34	0.02
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.38	8.95	0.73	0.34	0.02
<b>EP035G: Total Phenol by Discrete Analyser</b>								
Phenols (Total)	----	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP068A: Organochlorine Pesticides (OC)</b>								
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



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				BH 1	BH 2	BH 4	BH 5	BH 6
				07-AUG-2014 13:25	07-AUG-2014 12:30	07-AUG-2014 12:15	07-AUG-2014 13:50	07-AUG-2014 11:25
Compound	CAS Number	LOR	Unit	EW1402357-001	EW1402357-002	EW1402357-003	EW1402357-004	EW1402357-005
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
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
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	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Methoxychlor	72-43-5	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
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	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
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	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
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	2.0	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
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



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				BH 1	BH 2	BH 4	BH 5	BH 6
				07-AUG-2014 13:25	07-AUG-2014 12:30	07-AUG-2014 12:15	07-AUG-2014 13:50	07-AUG-2014 11:25
Compound	CAS Number	LOR	Unit	EW1402357-001	EW1402357-002	EW1402357-003	EW1402357-004	EW1402357-005
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
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
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+j)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
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	220	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	220	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013</b>								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
>C10 - C16 Fraction	>C10_C16	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	170	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	170	<100	<100	<100
<b>EP080: BTEXN</b>								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				BH 1	BH 2	BH 4	BH 5	BH 6
				07-AUG-2014 13:25	07-AUG-2014 12:30	07-AUG-2014 12:15	07-AUG-2014 13:50	07-AUG-2014 11:25
Compound	CAS Number	LOR	Unit	EW1402357-001	EW1402357-002	EW1402357-003	EW1402357-004	EW1402357-005
<b>EP080: BTEXN - Continued</b>								
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
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.1	%	70.3	71.7	72.1	73.5	65.8
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.1	%	76.9	77.9	73.6	82.0	75.9
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.1	%	24.8	23.9	24.2	31.9	23.4
2-Chlorophenol-D4	93951-73-6	0.1	%	52.5	48.7	48.4	66.4	48.1
2,4,6-Tribromophenol	118-79-6	0.1	%	99.3	107	66.9	73.1	56.1
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.1	%	77.4	86.2	54.8	59.2	51.7
Anthracene-d10	1719-06-8	0.1	%	73.2	73.9	67.1	79.2	64.2
4-Terphenyl-d14	1718-51-0	0.1	%	67.8	69.0	64.5	73.6	57.6
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	112	105	118	107	106
Toluene-D8	2037-26-5	0.1	%	97.2	100	98.7	94.7	87.1
4-Bromofluorobenzene	460-00-4	0.1	%	100	96.9	104	96.2	90.5



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				LGMB1	LGMB2	LGMB3	LGMB4	----
				07-AUG-2014 13:35	07-AUG-2014 13:15	07-AUG-2014 13:05	07-AUG-2014 12:45	----
Compound	CAS Number	LOR	Unit	EW1402357-006	EW1402357-007	EW1402357-008	EW1402357-009	----
<b>EG020T: Total Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	5.40	----	0.23	1.20	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	<0.001	<0.001	----
Barium	7440-39-3	0.001	mg/L	0.018	----	0.006	0.005	----
Cadmium	7440-43-9	0.0001	mg/L	0.0001	----	0.0002	0.0002	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	0.002	<0.001	----
Chromium	7440-47-3	0.001	mg/L	0.004	----	<0.001	0.002	----
Copper	7440-50-8	0.001	mg/L	0.084	----	0.004	0.002	----
Manganese	7439-96-5	0.001	mg/L	0.010	----	0.023	0.042	----
Lead	7439-92-1	0.001	mg/L	0.012	----	0.003	0.002	----
Zinc	7440-66-6	0.005	mg/L	0.103	----	0.013	0.013	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	<0.0001	<0.0001	----
<b>EG050T: Total Hexavalent Chromium</b>								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	----	<0.01	<0.01	----
<b>EK040P: Fluoride by PC Titrator</b>								
Fluoride	16984-48-8	0.1	mg/L	<0.1	----	<0.1	<0.1	----
<b>EK057G: Nitrite as N by Discrete Analyser</b>								
Nitrite as N	----	0.01	mg/L	<0.01	----	<0.01	<0.01	----
<b>EK058G: Nitrate as N by Discrete Analyser</b>								
Nitrate as N	14797-55-8	0.01	mg/L	0.16	----	0.10	1.75	----
<b>EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser</b>								
Nitrite + Nitrate as N	----	0.01	mg/L	0.16	----	0.10	1.75	----
<b>EN67 PK: Field Tests</b>								
Field Observations	----	0.01	--	----	DRY	----	----	----
<b>EP035G: Total Phenol by Discrete Analyser</b>								
Phenols (Total)	----	0.05	mg/L	<0.05	----	<0.05	<0.05	----
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	----	<0.5	<0.5	----
beta-BHC	319-85-7	0.5	µg/L	<0.5	----	<0.5	<0.5	----
gamma-BHC	58-89-9	0.5	µg/L	<0.5	----	<0.5	<0.5	----
delta-BHC	319-86-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Heptachlor	76-44-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				LGMB1	LGMB2	LGMB3	LGMB4	----
				07-AUG-2014 13:35	07-AUG-2014 13:15	07-AUG-2014 13:05	07-AUG-2014 12:45	----
Compound	CAS Number	LOR	Unit	EW1402357-006	EW1402357-007	EW1402357-008	EW1402357-009	----
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Aldrin	309-00-2	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	----	<0.5	<0.5	----
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	----	<0.5	<0.5	----
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Dieldrin	60-57-1	0.5	µg/L	<0.5	----	<0.5	<0.5	----
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Endrin	72-20-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	----	<0.5	<0.5	----
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
4,4'-DDT	50-29-3	2.0	µg/L	<2.0	----	<2.0	<2.0	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Methoxychlor	72-43-5	2.0	µg/L	<2.0	----	<2.0	<2.0	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	----	<2.0	<2.0	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Diazinon	333-41-5	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	----	<2.0	<2.0	----
Malathion	121-75-5	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Fenthion	55-38-9	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Parathion	56-38-2	2.0	µg/L	<2.0	----	<2.0	<2.0	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Ethion	563-12-2	0.5	µg/L	<0.5	----	<0.5	<0.5	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	----	<0.5	<0.5	----





## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				LGMB1	LGMB2	LGMB3	LGMB4	----
				07-AUG-2014 13:35	07-AUG-2014 13:15	07-AUG-2014 13:05	07-AUG-2014 12:45	----
Compound	CAS Number	LOR	Unit	EW1402357-006	EW1402357-007	EW1402357-008	EW1402357-009	----
<b>EP068B: Organophosphorus Pesticides (OP) - Continued</b>								
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	----	<0.5	<0.5	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Benzo(b+j)fluoranthene	205-99-2	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<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	----
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	----	<1.0	<1.0	----
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	----	<1.0	<1.0	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	----	<0.5	<0.5	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	20	µg/L	<20	----	<20	<20	----
C10 - C14 Fraction	----	50	µg/L	<50	----	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	----	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	----	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	<50	<50	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013</b>								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	<20	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	<20	<20	----
>C10 - C16 Fraction	>C10_C16	100	µg/L	<100	----	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	<100	<100	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				LGMB1	LGMB2	LGMB3	LGMB4	----
				07-AUG-2014 13:35	07-AUG-2014 13:15	07-AUG-2014 13:05	07-AUG-2014 12:45	----
Compound	CAS Number	LOR	Unit	EW1402357-006	EW1402357-007	EW1402357-008	EW1402357-009	----
<b>EP080: BTEXN</b>								
Benzene	71-43-2	1	µg/L	<1	----	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	----	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	<2	<2	----
^ Total Xylenes	1330-20-7	2	µg/L	<2	----	<2	<2	----
^ Sum of BTEX	----	1	µg/L	<1	----	<1	<1	----
Naphthalene	91-20-3	5	µg/L	<5	----	<5	<5	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.1	%	72.7	----	66.9	68.3	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.1	%	77.5	----	70.7	71.3	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.1	%	27.8	----	22.1	24.8	----
2-Chlorophenol-D4	93951-73-6	0.1	%	50.6	----	45.8	52.0	----
2,4,6-Tribromophenol	118-79-6	0.1	%	73.8	----	63.2	53.6	----
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.1	%	67.0	----	51.6	53.4	----
Anthracene-d10	1719-06-8	0.1	%	77.9	----	68.7	68.7	----
4-Terphenyl-d14	1718-51-0	0.1	%	72.1	----	65.6	64.1	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	116	----	113	118	----
Toluene-D8	2037-26-5	0.1	%	97.3	----	97.4	92.0	----
4-Bromofluorobenzene	460-00-4	0.1	%	98.8	----	100	98.1	----



## Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	30	120
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	26.8	129
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	10.0	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27.4	113
4-Terphenyl-d14	1718-51-0	32	112
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128