



Environmental

CERTIFICATE OF ANALYSIS

Work Order	: EW1302797	Page	: 1 of 23
Client	: SHOALHAVEN CITY COUNCIL	Laboratory	: Environmental Division NSW South Coast
Contact	: Mr Giordano Bianco	Contact	: Glenn Davies
Address	: PO Box 42 Nowra NSW 2541	Address	: 99 Kenny Street, Wollongong 2500 Unit 4 / 13 Geary Place, PO Box 3105, North Nowra 2541 AUSTRALIA
E-mail	: biancoG@shoalhaven.nsw.gov.au	E-mail	: glenn.davies@alsglobal.com
Telephone	: 02 4429 3554	Telephone	: 02 4225 3125
Facsimile	: ----	Facsimile	: 02 4225 3128
Project	: Huskisson Landfill	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 15435.16780	Date Samples Received	: 25-SEP-2013
C-O-C number	: ----	Issue Date	: 02-OCT-2013
Sampler	: ----	No. of samples received	: 16
Site	: ----	No. of samples analysed	: 16
Quote number	: ----		

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

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

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.

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

- EA015 TDS may bias high for sample ID GA 8 due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.



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
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Ashesh Patel	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong
Hoa Nguyen	Senior Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				DP-02	S1	S2	GA 1	GA 2
				25-SEP-2013 14:20	25-SEP-2013 11:40	25-SEP-2013 10:40	25-SEP-2013 10:45	25-SEP-2013 11:00
Compound	CAS Number	LOR	Unit	EW1302797-001	EW1302797-002	EW1302797-003	EW1302797-004	EW1302797-005
EA015: Total Dissolved Solids								
Total Dissolved Solids @180°C	----	1	mg/L	1090	396	----	----	1100
EA025: Suspended Solids								
Suspended Solids (SS)	----	1	mg/L	10	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	506	----	----	----	81
Total Alkalinity as CaCO3	----	1	mg/L	506	----	----	----	81
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	177	----	----	----	184
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	198	----	----	----	490
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	184	----	----	----	53
Magnesium	7439-95-4	1	mg/L	40	----	----	----	56
Sodium	7440-23-5	1	mg/L	147	----	----	----	319
Potassium	7440-09-7	1	mg/L	36	12	----	----	6
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.15	----	----	----	0.65
Arsenic	7440-38-2	0.001	mg/L	0.003	----	----	----	0.005
Barium	7440-39-3	0.001	mg/L	0.200	----	----	----	0.033
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	<0.0001
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	----	----	0.015
Chromium	7440-47-3	0.001	mg/L	0.009	----	----	----	0.003
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	0.004
Manganese	7439-96-5	0.001	mg/L	0.054	----	----	----	0.171
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	0.006
Zinc	7440-66-6	0.005	mg/L	0.006	----	----	----	0.074
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	<0.0001
EG050T: Total Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	----	----	----	<0.01
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	----	----	----	0.5



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				DP-02	S1	S2	GA 1	GA 2
				25-SEP-2013 14:20	25-SEP-2013 11:40	25-SEP-2013 10:40	25-SEP-2013 10:45	25-SEP-2013 11:00
Compound	CAS Number	LOR	Unit	EW1302797-001	EW1302797-002	EW1302797-003	EW1302797-004	EW1302797-005
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	35.1	0.27	----	----	0.06
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	0.61	----	----	----	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.34	----	----	----	0.09
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.95	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	Not Authorised	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	----	----	----	<0.01
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	19.4	----	----	----	19.3
Total Cations	----	0.01	meq/L	19.8	----	----	----	21.3
Ionic Balance	----	0.01	%	1.06	----	----	----	4.95
EN67 PK: Field Tests								
pH	----	0.1	pH Unit	7.5	6.5	----	----	6.0
Electrical Conductivity (Non Compensated)	----	1	µS/cm	1920	697	----	----	----
Dissolved Oxygen	----	0.01	mg/L	6.83	4.92	----	----	----
Redox Potential	----	0.1	mV	----	----	----	----	73.0
Field Observations	----	0.01	--	----	----	Dry	Dry	----
Standing Water Level	----	0.01	m AHD	----	----	----	----	2.39
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	53	20	----	----	18
EP030: Biochemical Oxygen Demand (BOD)								
Biochemical Oxygen Demand	----	2	mg/L	----	7	----	----	----
EP035G: Total Phenol by Discrete Analyser								
Phenols (Total)	----	0.05	mg/L	<0.05	----	----	----	<0.05
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	----	----	----	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	----	----	----	<0.5
beta-BHC	319-85-7	0.5	µg/L	<0.5	----	----	----	<0.5



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				DP-02	S1	S2	GA 1	GA 2
				25-SEP-2013 14:20	25-SEP-2013 11:40	25-SEP-2013 10:40	25-SEP-2013 10:45	25-SEP-2013 11:00
Compound	CAS Number	LOR	Unit	EW1302797-001	EW1302797-002	EW1302797-003	EW1302797-004	EW1302797-005
EP068A: Organochlorine Pesticides (OC) - Continued								
gamma-BHC	58-89-9	0.5	µg/L	<0.5	----	----	----	<0.5
delta-BHC	319-86-8	0.5	µg/L	<0.5	----	----	----	<0.5
Heptachlor	76-44-8	0.5	µg/L	<0.5	----	----	----	<0.5
Aldrin	309-00-2	0.5	µg/L	<0.5	----	----	----	<0.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	----	----	----	<0.5
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	----	----	----	<0.5
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	----	----	----	<0.5
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	----	----	----	<0.5
Dieldrin	60-57-1	0.5	µg/L	<0.5	----	----	----	<0.5
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	----	----	----	<0.5
Endrin	72-20-8	0.5	µg/L	<0.5	----	----	----	<0.5
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	----	----	----	<0.5
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	----	----	----	<0.5
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	----	----	----	<0.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	----	----	----	<0.5
4,4'-DDT	50-29-3	2.0	µg/L	<2.0	----	----	----	<2.0
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	----	----	----	<0.5
Methoxychlor	72-43-5	2.0	µg/L	<2.0	----	----	----	<2.0
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	----	----	----	<0.5
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	----	----	----	<0.5
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	----	----	----	<2.0
Dimethoate	60-51-5	0.5	µg/L	<0.5	----	----	----	<0.5
Diazinon	333-41-5	0.5	µg/L	<0.5	----	----	----	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	----	----	----	<0.5
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	----	----	----	<2.0
Malathion	121-75-5	0.5	µg/L	<0.5	----	----	----	<0.5
Fenthion	55-38-9	0.5	µg/L	<0.5	----	----	----	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	----	----	----	<0.5
Parathion	56-38-2	2.0	µg/L	<2.0	----	----	----	<2.0
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	----	----	----	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	----	----	----	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	----	----	----	<0.5
Prothiofos	34643-46-4	0.5	µg/L	<0.5	----	----	----	<0.5



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				DP-02	S1	S2	GA 1	GA 2
				25-SEP-2013 14:20	25-SEP-2013 11:40	25-SEP-2013 10:40	25-SEP-2013 10:45	25-SEP-2013 11:00
Compound	CAS Number	LOR	Unit	EW1302797-001	EW1302797-002	EW1302797-003	EW1302797-004	EW1302797-005
EP068B: Organophosphorus Pesticides (OP) - Continued								
Ethion	563-12-2	0.5	µg/L	<0.5	----	----	----	<0.5
Carbophenothion	786-19-6	0.5	µg/L	<0.5	----	----	----	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	----	----	----	<0.5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	<1.0
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	<1.0
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	<1.0
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	<1.0
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	<1.0
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	<1.0
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	<1.0
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	<1.0
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	<1.0
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	----	----	----	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	----	----	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	----	----	----	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	----	----	----	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	----	----	----	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	----	----	----	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	<20
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	<50
C15 - C28 Fraction	----	100	µg/L	560	----	----	----	<100
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	560	----	----	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	>C10_C16	100	µg/L	----	----	----	----	<100
>C16 - C34 Fraction	----	100	µg/L	----	----	----	----	<100
>C34 - C40 Fraction	----	100	µg/L	----	----	----	----	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	----	----	----	----	<100
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				DP-02	S1	S2	GA 1	GA 2
				25-SEP-2013 14:20	25-SEP-2013 11:40	25-SEP-2013 10:40	25-SEP-2013 10:45	25-SEP-2013 11:00
Compound	CAS Number	LOR	Unit	EW1302797-001	EW1302797-002	EW1302797-003	EW1302797-004	EW1302797-005
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 - Continued								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	<20
>C10 - C16 Fraction	>C10_C16	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	470	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	470	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	----	----	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	<1
Toluene	108-88-3	2	µg/L	<2	----	----	----	<2
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	<2
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	<2
^ Total Xylenes	1330-20-7	2	µg/L	<2	----	----	----	<2
^ Sum of BTEX	----	1	µg/L	<1	----	----	----	<1
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	<5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	77.2	----	----	----	81.1
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	81.3	----	----	----	89.8
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	26.8	----	----	----	36.1
2-Chlorophenol-D4	93951-73-6	0.1	%	54.6	----	----	----	70.1
2,4,6-Tribromophenol	118-79-6	0.1	%	74.0	----	----	----	83.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	62.5	----	----	----	72.2
Anthracene-d10	1719-06-8	0.1	%	61.4	----	----	----	68.3
4-Terphenyl-d14	1718-51-0	0.1	%	65.0	----	----	----	76.8
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	104	----	----	----	103
Toluene-D8	2037-26-5	0.1	%	117	----	----	----	121
4-Bromofluorobenzene	460-00-4	0.1	%	102	----	----	----	105



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA 4	GA 5	GA 6	GA 7	GA 8
				25-SEP-2013 14:10	25-SEP-2013 13:00	25-SEP-2013 13:50	25-SEP-2013 13:35	25-SEP-2013 10:00
Compound	CAS Number	LOR	Unit	EW1302797-006	EW1302797-007	EW1302797-008	EW1302797-009	EW1302797-010
EA015: Total Dissolved Solids								
Total Dissolved Solids @180°C	----	1	mg/L	1120	3500	503	200	222
ED037P: Alkalinity by PC Titrator								
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	53	94	<1	27	3
Total Alkalinity as CaCO3	----	1	mg/L	53	94	<1	27	3
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	106	224	157	61	19
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	544	1680	198	43	30
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	27	61	2	10	<1
Magnesium	7439-95-4	1	mg/L	55	179	20	8	1
Sodium	7440-23-5	1	mg/L	319	957	159	44	30
Potassium	7440-09-7	1	mg/L	7	12	1	3	2
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.34	1.61	1.63	0.43	37.2
Arsenic	7440-38-2	0.001	mg/L	<0.001	0.012	0.002	<0.001	0.010
Barium	7440-39-3	0.001	mg/L	0.040	0.068	0.051	0.018	0.239
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Cobalt	7440-48-4	0.001	mg/L	0.016	0.035	0.003	<0.001	0.004
Chromium	7440-47-3	0.001	mg/L	<0.001	0.003	0.003	<0.001	0.042
Copper	7440-50-8	0.001	mg/L	0.002	0.012	0.001	0.003	0.075
Manganese	7439-96-5	0.001	mg/L	0.748	0.596	0.022	0.012	0.042
Lead	7439-92-1	0.001	mg/L	<0.001	0.006	0.004	0.002	0.051
Zinc	7440-66-6	0.005	mg/L	0.092	0.085	0.035	0.018	0.525
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	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	0.7	0.8	<0.1	<0.1	<0.1
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.22	0.15	0.02	0.14



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA 4	GA 5	GA 6	GA 7	GA 8
				25-SEP-2013 14:10	25-SEP-2013 13:00	25-SEP-2013 13:50	25-SEP-2013 13:35	25-SEP-2013 10:00
Compound	CAS Number	LOR	Unit	EW1302797-006	EW1302797-007	EW1302797-008	EW1302797-009	EW1302797-010
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	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	<0.01	0.07	<0.01	0.07	0.06
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.02	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	18.6	53.9	8.85	3.02	1.30
Total Cations	----	0.01	meq/L	19.9	59.7	8.69	3.15	1.44
Ionic Balance	----	0.01	%	3.40	5.07	0.98	2.02	----
EN67 PK: Field Tests								
pH	----	0.1	pH Unit	6.2	5.6	5.2	5.2	5.4
Redox Potential	----	0.1	mV	169	23.2	190	222	29.0
Standing Water Level	----	0.01	m AHD	7.71	4.57	8.24	7.91	8.94
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	2	10	9	6	10
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
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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA 4	GA 5	GA 6	GA 7	GA 8
				25-SEP-2013 14:10	25-SEP-2013 13:00	25-SEP-2013 13:50	25-SEP-2013 13:35	25-SEP-2013 10:00
Compound	CAS Number	LOR	Unit	EW1302797-006	EW1302797-007	EW1302797-008	EW1302797-009	EW1302797-010
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	2.0	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
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
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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA 4	GA 5	GA 6	GA 7	GA 8
				25-SEP-2013 14:10	25-SEP-2013 13:00	25-SEP-2013 13:50	25-SEP-2013 13:35	25-SEP-2013 10:00
Compound	CAS Number	LOR	Unit	EW1302797-006	EW1302797-007	EW1302797-008	EW1302797-009	EW1302797-010
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	<100	380	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	380	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	>C10_C16	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	340	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	340	<100	<100
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
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 minus Naphthalene (F2)	----	100	µg/L	<100	<100	<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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA 4	GA 5	GA 6	GA 7	GA 8
				25-SEP-2013 14:10	25-SEP-2013 13:00	25-SEP-2013 13:50	25-SEP-2013 13:35	25-SEP-2013 10:00
Compound	CAS Number	LOR	Unit	EW1302797-006	EW1302797-007	EW1302797-008	EW1302797-009	EW1302797-010
EP080: BTEXN - Continued								
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	81.7	90.1	72.1	77.0	72.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	89.8	102	95.1	85.0	99.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	33.5	29.7	31.8	33.6	30.1
2-Chlorophenol-D4	93951-73-6	0.1	%	64.3	69.0	59.6	62.8	56.2
2,4,6-Tribromophenol	118-79-6	0.1	%	81.8	86.2	78.1	88.9	87.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	67.3	72.7	60.5	65.5	59.6
Anthracene-d10	1719-06-8	0.1	%	68.0	76.0	59.1	66.2	63.1
4-Terphenyl-d14	1718-51-0	0.1	%	74.8	84.0	68.4	74.6	73.1
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	105	95.9	103	103	107
Toluene-D8	2037-26-5	0.1	%	117	111	115	119	117
4-Bromofluorobenzene	460-00-4	0.1	%	101	91.4	97.8	102	98.4



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA9	GA 10	GA 11	GA 12	DUP
				25-SEP-2013 10:30	25-SEP-2013 13:20	25-SEP-2013 12:45	25-SEP-2013 12:15	25-SEP-2013 12:15
Compound	CAS Number	LOR	Unit	EW1302797-011	EW1302797-012	EW1302797-013	EW1302797-014	EW1302797-015
EA015: Total Dissolved Solids								
Total Dissolved Solids @180°C	----	1	mg/L	----	618	302	1480	1420
ED037P: Alkalinity by PC Titrator								
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	86	3	<1	<1
Total Alkalinity as CaCO3	----	1	mg/L	----	86	3	<1	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	----	195	44	281	281
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	----	158	101	650	660
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	----	39	<1	<1	<1
Magnesium	7439-95-4	1	mg/L	----	24	3	57	57
Sodium	7440-23-5	1	mg/L	----	160	85	506	510
Potassium	7440-09-7	1	mg/L	----	5	<1	<1	<1
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	0.62	7.35	11.0	11.3
Arsenic	7440-38-2	0.001	mg/L	----	0.004	0.005	0.002	0.002
Barium	7440-39-3	0.001	mg/L	----	0.037	0.054	0.076	0.081
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	7440-48-4	0.001	mg/L	----	0.008	0.002	0.003	0.003
Chromium	7440-47-3	0.001	mg/L	----	0.003	0.010	0.006	0.006
Copper	7440-50-8	0.001	mg/L	----	0.041	0.018	0.020	0.022
Manganese	7439-96-5	0.001	mg/L	----	0.342	0.037	0.040	0.040
Lead	7439-92-1	0.001	mg/L	----	0.004	0.014	0.009	0.008
Zinc	7440-66-6	0.005	mg/L	----	0.082	0.032	0.030	0.035
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	0.01	mg/L	----	<0.01	<0.01	<0.01	<0.01
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	----	<0.1	<0.1	0.3	0.3
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	----	0.02	0.01	0.02	0.02



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA9	GA 10	GA 11	GA 12	DUP
				25-SEP-2013 10:30	25-SEP-2013 13:20	25-SEP-2013 12:45	25-SEP-2013 12:15	25-SEP-2013 12:15
Compound	CAS Number	LOR	Unit	EW1302797-011	EW1302797-012	EW1302797-013	EW1302797-014	EW1302797-015
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	----	0.06	<0.01	<0.01	<0.01
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	----	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	----	10.2	3.83	24.2	24.5
Total Cations	----	0.01	meq/L	----	11.0	3.94	26.7	26.9
Ionic Balance	----	0.01	%	----	3.63	1.50	4.92	4.66
EN67 PK: Field Tests								
pH	----	0.1	pH Unit	----	5.7	4.4	3.6	3.6
Redox Potential	----	0.1	mV	----	110	195	322	321
Field Observations	----	0.01	--	Dry	----	----	----	----
Standing Water Level	----	0.01	m AHD	----	10.2	8.63	10.9	10.9
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	----	1	mg/L	----	18	4	8	8
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
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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA9	GA 10	GA 11	GA 12	DUP
				25-SEP-2013 10:30	25-SEP-2013 13:20	25-SEP-2013 12:45	25-SEP-2013 12:15	25-SEP-2013 12:15
Compound	CAS Number	LOR	Unit	EW1302797-011	EW1302797-012	EW1302797-013	EW1302797-014	EW1302797-015
EP068A: Organochlorine Pesticides (OC) - Continued								
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	2.0	µg/L	----	<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
Methoxychlor	72-43-5	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
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	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
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	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
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	2.0	µg/L	----	<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
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
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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA9	GA 10	GA 11	GA 12	DUP
				25-SEP-2013 10:30	25-SEP-2013 13:20	25-SEP-2013 12:45	25-SEP-2013 12:15	25-SEP-2013 12:15
Compound	CAS Number	LOR	Unit	EW1302797-011	EW1302797-012	EW1302797-013	EW1302797-014	EW1302797-015
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	130	<100
C29 - C36 Fraction	----	50	µg/L	----	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	----	100	<50	130	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	>C10_C16	100	µg/L	----	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	----	100	<100	110	<100
>C34 - C40 Fraction	----	100	µg/L	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	----	100	<100	110	<100
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	----	<20	<20	<20	<20
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	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



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				GA9	GA 10	GA 11	GA 12	DUP
				25-SEP-2013 10:30	25-SEP-2013 13:20	25-SEP-2013 12:45	25-SEP-2013 12:15	25-SEP-2013 12:15
Compound	CAS Number	LOR	Unit	EW1302797-011	EW1302797-012	EW1302797-013	EW1302797-014	EW1302797-015
EP080: BTEXN - Continued								
^ 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	%	----	78.7	69.7	73.6	70.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	87.4	75.0	76.9	76.0
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	33.7	33.1	34.0	33.3
2-Chlorophenol-D4	93951-73-6	0.1	%	----	66.8	60.3	65.5	62.7
2,4,6-Tribromophenol	118-79-6	0.1	%	----	95.1	80.4	82.0	83.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	68.4	62.3	67.8	66.2
Anthracene-d10	1719-06-8	0.1	%	----	57.4	60.8	61.2	58.3
4-Terphenyl-d14	1718-51-0	0.1	%	----	75.0	68.2	71.3	67.3
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	----	104	106	98.0	110
Toluene-D8	2037-26-5	0.1	%	----	110	116	101	119
4-Bromofluorobenzene	460-00-4	0.1	%	----	94.4	99.4	88.8	102



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				Blank - Rinsate	---	---	---	---
				25-SEP-2013 10:00	---	---	---	---
				EW1302797-016	---	---	---	---
Compound	CAS Number	LOR	Unit					
EA015: Total Dissolved Solids								
Total Dissolved Solids @180°C	---	1	mg/L	<1	---	---	---	---
ED037P: Alkalinity by PC Titrator								
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	---	---	---	---
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	---	---	---	---
Total Alkalinity as CaCO3	---	1	mg/L	<1	---	---	---	---
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	---	---	---	---
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	---	---	---	---
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	---	---	---	---
Magnesium	7439-95-4	1	mg/L	<1	---	---	---	---
Sodium	7440-23-5	1	mg/L	<1	---	---	---	---
Potassium	7440-09-7	1	mg/L	<1	---	---	---	---
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	---	---	---	---
Arsenic	7440-38-2	0.001	mg/L	<0.001	---	---	---	---
Barium	7440-39-3	0.001	mg/L	<0.001	---	---	---	---
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	---	---	---	---
Cobalt	7440-48-4	0.001	mg/L	<0.001	---	---	---	---
Chromium	7440-47-3	0.001	mg/L	<0.001	---	---	---	---
Copper	7440-50-8	0.001	mg/L	<0.001	---	---	---	---
Manganese	7439-96-5	0.001	mg/L	<0.001	---	---	---	---
Lead	7439-92-1	0.001	mg/L	<0.001	---	---	---	---
Zinc	7440-66-6	0.005	mg/L	<0.005	---	---	---	---
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	---	---	---	---
EG050T: Total Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	---	---	---	---
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	---	---	---	---
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	---	---	---	---



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				Blank - Rinsate	---	---	---	---
				25-SEP-2013 10:00	---	---	---	---
				EW1302797-016	---	---	---	---
Compound	CAS Number	LOR	Unit					
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	---	0.01	mg/L	<0.01	---	---	---	---
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	---	---	---	---
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	---	---	---	---
EN055: Ionic Balance								
Total Anions	---	0.01	meq/L	<0.01	---	---	---	---
Total Cations	---	0.01	meq/L	<0.01	---	---	---	---
EN67 PK: Field Tests								
pH	---	0.1	pH Unit	5.6	---	---	---	---
Redox Potential	---	0.1	mV	226	---	---	---	---
EP005: Total Organic Carbon (TOC)								
Total Organic Carbon	---	1	mg/L	<1	---	---	---	---
EP035G: Total Phenol by Discrete Analyser								
Phenols (Total)	---	0.05	mg/L	<0.05	---	---	---	---
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	---	---	---	---
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	---	---	---	---
beta-BHC	319-85-7	0.5	µg/L	<0.5	---	---	---	---
gamma-BHC	58-89-9	0.5	µg/L	<0.5	---	---	---	---
delta-BHC	319-86-8	0.5	µg/L	<0.5	---	---	---	---
Heptachlor	76-44-8	0.5	µg/L	<0.5	---	---	---	---
Aldrin	309-00-2	0.5	µg/L	<0.5	---	---	---	---
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	---	---	---	---
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	---	---	---	---
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	---	---	---	---
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	---	---	---	---
Dieldrin	60-57-1	0.5	µg/L	<0.5	---	---	---	---
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	---	---	---	---
Endrin	72-20-8	0.5	µg/L	<0.5	---	---	---	---
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	---	---	---	---
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	---	---	---	---
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	---	---	---	---



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

				Blank - Rinsate	---	---	---	---
				25-SEP-2013 10:00	---	---	---	---
				EW1302797-016	---	---	---	---
Compound	CAS Number	LOR	Unit					
EP068A: Organochlorine Pesticides (OC) - Continued								
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	---	---	---	---
4,4'-DDT	50-29-3	2.0	µg/L	<2.0	---	---	---	---
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	---	---	---	---
Methoxychlor	72-43-5	2.0	µg/L	<2.0	---	---	---	---
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	---	---	---	---
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	---	---	---	---
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	---	---	---	---
Dimethoate	60-51-5	0.5	µg/L	<0.5	---	---	---	---
Diazinon	333-41-5	0.5	µg/L	<0.5	---	---	---	---
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	---	---	---	---
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	---	---	---	---
Malathion	121-75-5	0.5	µg/L	<0.5	---	---	---	---
Fenthion	55-38-9	0.5	µg/L	<0.5	---	---	---	---
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	---	---	---	---
Parathion	56-38-2	2.0	µg/L	<2.0	---	---	---	---
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	---	---	---	---
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	---	---	---	---
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	---	---	---	---
Prothiofos	34643-46-4	0.5	µg/L	<0.5	---	---	---	---
Ethion	563-12-2	0.5	µg/L	<0.5	---	---	---	---
Carbophenothion	786-19-6	0.5	µg/L	<0.5	---	---	---	---
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	---	---	---	---
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	---	---	---	---
Acenaphthene	83-32-9	1.0	µg/L	<1.0	---	---	---	---
Fluorene	86-73-7	1.0	µg/L	<1.0	---	---	---	---
Phenanthrene	85-01-8	1.0	µg/L	<1.0	---	---	---	---
Anthracene	120-12-7	1.0	µg/L	<1.0	---	---	---	---
Fluoranthene	206-44-0	1.0	µg/L	<1.0	---	---	---	---
Pyrene	129-00-0	1.0	µg/L	<1.0	---	---	---	---
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	---	---	---	---
Chrysene	218-01-9	1.0	µg/L	<1.0	---	---	---	---



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

				Blank - Rinsate	---	---	---	---
				25-SEP-2013 10:00	---	---	---	---
				EW1302797-016	---	---	---	---
Compound	CAS Number	LOR	Unit					
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	---	---	---	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	---	---	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	---	---	---	---
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	---	---	---	---
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	---	---	---	---
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	---	---	---	---
C10 - C14 Fraction	----	50	µg/L	<50	---	---	---	---
C15 - C28 Fraction	----	100	µg/L	<100	---	---	---	---
C29 - C36 Fraction	----	50	µg/L	<50	---	---	---	---
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	>C10_C16	100	µg/L	<100	---	---	---	---
>C16 - C34 Fraction	----	100	µg/L	<100	---	---	---	---
>C34 - C40 Fraction	----	100	µg/L	<100	---	---	---	---
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	---	---	---	---
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	---	---	---	---
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	---	---	---	---
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	---	---	---	---
Toluene	108-88-3	2	µg/L	<2	---	---	---	---
Ethylbenzene	100-41-4	2	µg/L	<2	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	---	---	---	---
ortho-Xylene	95-47-6	2	µg/L	<2	---	---	---	---
^ Total Xylenes	1330-20-7	2	µg/L	<2	---	---	---	---
^ Sum of BTEX	----	1	µg/L	<1	---	---	---	---
Naphthalene	91-20-3	5	µg/L	<5	---	---	---	---



Analytical Results

Sub-Matrix: **WATER** (Matrix: **WATER**)

Client sample ID

				Blank - Rinsate	----	----	----	----
				25-SEP-2013 10:00	----	----	----	----
				EW1302797-016	----	----	----	----
Compound	CAS Number	LOR	Unit					
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	81.1	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	82.3	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	30.6	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	67.5	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%	94.0	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	66.3	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	67.1	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	72.3	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	108	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	120	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	101	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	30	120
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	26.8	129
EP075(SIM)S: Phenolic Compound Surrogates			
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
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27.4	113
4-Terphenyl-d14	1718-51-0	32	112
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