



## CERTIFICATE OF ANALYSIS

<p><b>Work Order</b> : <b>EW1403214</b></p> <p><b>Client</b> : <b>WINGECARRIBEE SHIRE COUNCIL</b></p> <p><b>Contact</b> : <b>MR ROBERT SAVERINO</b></p> <p><b>Address</b> : <b>PO BOX 141</b> <b>MOSSVALE NSW AUSTRALIA</b></p> <p><b>E-mail</b> : <b>robert.saverino@wsc.nsw.gov.au</b></p> <p><b>Telephone</b> : ----</p> <p><b>Facsimile</b> : ----</p> <p><b>Project</b> : <b>RRC Quarterly and Annual</b></p> <p><b>Order number</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : <b>Craig Wilson</b></p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : <b>WO/067/12</b></p>	<p><b>Page</b> : 1 of 15</p> <p><b>Laboratory</b> : Environmental Division NSW South Coast</p> <p><b>Contact</b> : Glenn Davies</p> <p><b>Address</b> : 99 Kenny Street, Wollongong 2500 Unit 4 / 13 Geary Place, PO Box 3105, North Nowra 2541 AUSTRALIA</p> <p><b>E-mail</b> : glenn.davies@alsglobal.com</p> <p><b>Telephone</b> : 02 4225 3125</p> <p><b>Facsimile</b> : 02 4225 3128</p> <p><b>QC Level</b> : NEPM 2013 Schedule B(3) and ALS QCS3 requirement</p> <p><b>Date Samples Received</b> : 29-OCT-2014</p> <p><b>Issue Date</b> : 07-NOV-2014</p> <p><b>No. of samples received</b> : 6</p> <p><b>No. of samples analysed</b> : 6</p>
--	--

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
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong
Pabi Subba	Senior Organic Chemist	Sydney Organics



## 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.**
- **EG050F: Spike failed for Dissolved Hexavalent Chromium analysis due to matrix interference(confirmed by re analysis)**
- **EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs**
- **Field tests completed on day of sampling/receipt.**
- **Ionic Balance out of acceptable limits for sample EPA 1 due to analytes not quantified in this report.**
- **Sampling and sample data supplied by ALS Wollongong.**
- **Sampling completed as per FWI-EN001 Groundwater Sampling.**
- **Sampling completed as per FWI-EN002 Surface Water Sampling.**



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EA005FD: Field pH</b>								
pH	----	0.1	pH Unit	4.5	4.3	4.9	8.8	7.9
<b>EA010FD: Field Conductivity</b>								
Electrical Conductivity (Non Compensated)	----	1	µS/cm	3880	580	4060	1850	422
<b>EA015: Total Dissolved Solids</b>								
Total Dissolved Solids @180°C	----	10	mg/L	2520	354	2200	982	288
<b>ED037P: Alkalinity by PC Titrator</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	2	<1	8	----	----
Total Alkalinity as CaCO3	----	1	mg/L	2	<1	8	----	----
<b>ED041G: Sulfate (Turbidimetric) as SO4 2- by DA</b>								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	212	<1	<1	----	----
<b>ED045G: Chloride Discrete analyser</b>								
Chloride	16887-00-6	1	mg/L	686	181	1320	----	----
<b>ED093F: Dissolved Major Cations</b>								
Calcium	7440-70-2	1	mg/L	185	<1	26	----	----
Magnesium	7439-95-4	1	mg/L	101	10	77	----	----
Sodium	7440-23-5	1	mg/L	412	90	716	----	----
Potassium	7440-09-7	1	mg/L	40	1	3	----	----
<b>EG020F: Dissolved Metals by ICP-MS</b>								
Aluminium	7429-90-5	0.01	mg/L	10.5	1.28	8.43	----	----
Arsenic	7440-38-2	0.001	mg/L	0.004	<0.001	0.003	----	----
Barium	7440-39-3	0.001	mg/L	0.158	0.214	3.42	----	----
Cadmium	7440-43-9	0.0001	mg/L	0.0064	0.0001	0.0009	----	----
Cobalt	7440-48-4	0.001	mg/L	0.306	0.061	0.539	----	----
Chromium	7440-47-3	0.001	mg/L	0.002	<0.001	0.001	----	----
Copper	7440-50-8	0.001	mg/L	0.062	0.011	0.047	----	----
Manganese	7439-96-5	0.001	mg/L	3.58	0.081	2.94	----	----
Lead	7439-92-1	0.001	mg/L	0.019	0.006	0.028	----	----
Zinc	7440-66-6	0.005	mg/L	3.37	0.148	0.845	----	----
<b>EG035F: Dissolved Mercury by FIMS</b>								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EG050F: Dissolved 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	0.5	<0.1	0.8	----	----
<b>EK055G: Ammonia as N by Discrete Analyser</b>								
Ammonia as N	7664-41-7	0.01	mg/L	0.12	0.36	<0.01	<0.01	0.35
<b>EN055: Ionic Balance</b>								
Total Anions	----	0.01	meq/L	23.8	5.11	37.4	----	----
Total Cations	----	0.01	meq/L	36.5	----	38.9	----	----
Total Cations	----	0.01	meq/L	----	4.91	----	----	----
Ionic Balance	----	0.01	%	21.0	----	1.90	----	----
Ionic Balance	----	0.01	%	----	1.98	----	----	----
<b>EP005: Total Organic Carbon (TOC)</b>								
Total Organic Carbon	----	1	mg/L	29	7	7	31	26
<b>EP030: Biochemical Oxygen Demand (BOD)</b>								
Biochemical Oxygen Demand	----	2	mg/L	----	----	----	<2	<2
<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	----	----
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	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
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	----	----
^ Total Chlordane (sum)	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
^ Sum of DDD + DDE + DDT	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
<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	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>								
Styrene	100-42-5	5	µg/L	<5	<5	<5	----	----
Isopropylbenzene	98-82-8	5	µg/L	<5	<5	<5	----	----
n-Propylbenzene	103-65-1	5	µg/L	<5	<5	<5	----	----
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	<5	----	----
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	<5	----	----
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	<5	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>								
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	<5	----	----
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	<5	----	----
n-Butylbenzene	104-51-8	5	µg/L	<5	<5	<5	----	----
<b>EP074B: Oxygenated Compounds</b>								
Vinyl Acetate	108-05-4	50	µg/L	<50	<50	<50	----	----
2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	<50	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	<50	----	----
2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	<50	----	----
<b>EP074C: Sulfonated Compounds</b>								
Carbon disulfide	75-15-0	5	µg/L	<5	<5	<5	----	----
<b>EP074D: Fumigants</b>								
2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	----	----
1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	----	----
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	----	----
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	----	----
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	----	----
<b>EP074E: Halogenated Aliphatic Compounds</b>								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	----	----
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	----	----
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	----	----
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	----	----
1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	----	----
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	----	----
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	----	----
1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	----	----
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	<5	----	----
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	----	----
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	----	----
1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	----	----
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP074E: Halogenated Aliphatic Compounds - Continued</b>								
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	----	----
1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	----	----
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	<5	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	<5	----	----
Pentachloroethane	76-01-7	5	µg/L	<5	<5	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	<5	----	----
<b>EP074F: Halogenated Aromatic Compounds</b>								
Chlorobenzene	108-90-7	5	µg/L	<5	<5	<5	----	----
Bromobenzene	108-86-1	5	µg/L	<5	<5	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	<5	----	----
<b>EP074G: Trihalomethanes</b>								
Chloroform	67-66-3	5	µg/L	<5	<5	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L	<5	<5	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L	<5	<5	<5	----	----
Bromoform	75-25-2	5	µg/L	<5	<5	<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	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
<b>EP075A: Phenolic Compounds</b>								
Phenol	108-95-2	2	µg/L	<2	<2	<2	----	----
2-Chlorophenol	95-57-8	2	µg/L	<2	<2	<2	----	----
2-Methylphenol	95-48-7	2	µg/L	<2	<2	<2	----	----
3- & 4-Methylphenol	1319-77-3	4	µg/L	<4	<4	<4	----	----
2-Nitrophenol	88-75-5	2	µg/L	<2	<2	<2	----	----
2.4-Dimethylphenol	105-67-9	2	µg/L	<2	<2	<2	----	----
2.4-Dichlorophenol	120-83-2	2	µg/L	<2	<2	<2	----	----
2.6-Dichlorophenol	87-65-0	2	µg/L	<2	<2	<2	----	----
4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	<2	<2	----	----
2.4.6-Trichlorophenol	88-06-2	2	µg/L	<2	<2	<2	----	----
2.4.5-Trichlorophenol	95-95-4	2	µg/L	<2	<2	<2	----	----
Pentachlorophenol	87-86-5	4	µg/L	<4	<4	<4	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	2	µg/L	<2	<2	<2	----	----
2-Methylnaphthalene	91-57-6	2	µg/L	<2	<2	<2	----	----
2-Chloronaphthalene	91-58-7	2	µg/L	<2	<2	<2	----	----
Acenaphthylene	208-96-8	2	µg/L	<2	<2	<2	----	----
Acenaphthene	83-32-9	2	µg/L	<2	<2	<2	----	----
Fluorene	86-73-7	2	µg/L	<2	<2	<2	----	----
Phenanthrene	85-01-8	2	µg/L	<2	<2	<2	----	----
Anthracene	120-12-7	2	µg/L	<2	<2	<2	----	----
Fluoranthene	206-44-0	2	µg/L	<2	<2	<2	----	----
Pyrene	129-00-0	2	µg/L	<2	<2	<2	----	----
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	<2	<2	----	----
Benzo(a)anthracene	56-55-3	2	µg/L	<2	<2	<2	----	----





## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Chrysene	218-01-9	2	µg/L	<2	<2	<2	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	<4	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	<2	<2	----	----
Benzo(a)pyrene	50-32-8	2	µg/L	<2	<2	<2	----	----
3-Methylcholanthrene	56-49-5	2	µg/L	<2	<2	<2	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L	<2	<2	<2	----	----
Dibenz(a.h)anthracene	53-70-3	2	µg/L	<2	<2	<2	----	----
Benzo(g.h.i)perylene	191-24-2	2	µg/L	<2	<2	<2	----	----
^ Sum of PAHs	----	2	µg/L	<2	<2	<2	----	----
^ Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	<2	<2	----	----
<b>EP075C: Phthalate Esters</b>								
Dimethyl phthalate	131-11-3	2	µg/L	<2	<2	<2	----	----
Diethyl phthalate	84-66-2	2	µg/L	13	13	4	----	----
Di-n-butyl phthalate	84-74-2	2	µg/L	<2	<2	<2	----	----
Butyl benzyl phthalate	85-68-7	2	µg/L	<2	<2	<2	----	----
bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	<10	<10	----	----
Di-n-octylphthalate	117-84-0	2	µg/L	<2	<2	<2	----	----
<b>EP075D: Nitrosamines</b>								
N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	<2	<2	----	----
N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	<2	<2	----	----
N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	<4	<4	----	----
N-Nitrosomorpholine	59-89-2	2	µg/L	<2	<2	<2	----	----
N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	<2	<2	----	----
N-Nitrosopiperidine	100-75-4	2	µg/L	<2	<2	<2	----	----
N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	<2	<2	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	<4	<4	----	----
Methapyrilene	91-80-5	2	µg/L	<2	<2	<2	----	----
<b>EP075E: Nitroaromatics and Ketones</b>								
2-Picoline	109-06-8	2	µg/L	<2	<2	<2	----	----
Acetophenone	98-86-2	2	µg/L	<2	<2	<2	----	----
Nitrobenzene	98-95-3	2	µg/L	<2	<2	<2	----	----
Isophorone	78-59-1	2	µg/L	<2	<2	<2	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
				EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075E: Nitroaromatics and Ketones - Continued</b>								
2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	<4	<4	----	----
2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	<4	<4	----	----
1-Naphthylamine	134-32-7	2	µg/L	<2	<2	<2	----	----
4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	<2	<2	----	----
5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	<2	<2	----	----
Azobenzene	103-33-3	2	µg/L	<2	<2	<2	----	----
1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	<2	<2	----	----
Phenacetin	62-44-2	2	µg/L	<2	<2	<2	----	----
4-Aminobiphenyl	92-67-1	2	µg/L	<2	<2	<2	----	----
Pentachloronitrobenzene	82-68-8	2	µg/L	<2	<2	<2	----	----
Pronamide	23950-58-5	2	µg/L	<2	<2	<2	----	----
Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	<2	<2	----	----
Chlorobenzilate	510-15-6	2	µg/L	<2	<2	<2	----	----
<b>EP075F: Haloethers</b>								
Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	<2	<2	----	----
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	<2	<2	----	----
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	<2	<2	----	----
4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	<2	<2	----	----
<b>EP075G: Chlorinated Hydrocarbons</b>								
1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	<2	<2	----	----
1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	<2	<2	----	----
1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	<2	<2	----	----
Hexachloroethane	67-72-1	2	µg/L	<2	<2	<2	----	----
1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	<2	<2	----	----
Hexachloropropylene	1888-71-7	2	µg/L	<2	<2	<2	----	----
Hexachlorobutadiene	87-68-3	2	µg/L	<2	<2	<2	----	----
Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	<10	<10	----	----
Pentachlorobenzene	608-93-5	2	µg/L	<2	<2	<2	----	----
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	<4	----	----
<b>EP075H: Anilines and Benzidines</b>								
Aniline	62-53-3	2	µg/L	<2	<2	<2	----	----
4-Chloroaniline	106-47-8	2	µg/L	<2	<2	<2	----	----
2-Nitroaniline	88-74-4	4	µg/L	<4	<4	<4	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075H: Anilines and Benzidines - Continued</b>								
3-Nitroaniline	99-09-2	4	µg/L	<4	<4	<4	----	----
Dibenzofuran	132-64-9	2	µg/L	<2	<2	<2	----	----
4-Nitroaniline	100-01-6	2	µg/L	<2	<2	<2	----	----
Carbazole	86-74-8	2	µg/L	<2	<2	<2	----	----
3,3'-Dichlorobenzidine	91-94-1	2	µg/L	<2	<2	<2	----	----
<b>EP075I: Organochlorine Pesticides</b>								
alpha-BHC	319-84-6	2	µg/L	<2	<2	<2	----	----
beta-BHC	319-85-7	2	µg/L	<2	<2	<2	----	----
gamma-BHC	58-89-9	2	µg/L	<2	<2	<2	----	----
delta-BHC	319-86-8	2	µg/L	<2	<2	<2	----	----
Heptachlor	76-44-8	2	µg/L	<2	<2	<2	----	----
Aldrin	309-00-2	2	µg/L	<2	<2	<2	----	----
Heptachlor epoxide	1024-57-3	2	µg/L	<2	<2	<2	----	----
alpha-Endosulfan	959-98-8	2	µg/L	<2	<2	<2	----	----
4,4'-DDE	72-55-9	2	µg/L	<2	<2	<2	----	----
Dieldrin	60-57-1	2	µg/L	<2	<2	<2	----	----
Endrin	72-20-8	2	µg/L	<2	<2	<2	----	----
beta-Endosulfan	33213-65-9	2	µg/L	<2	<2	<2	----	----
4,4'-DDD	72-54-8	2	µg/L	<2	<2	<2	----	----
Endosulfan sulfate	1031-07-8	2	µg/L	<2	<2	<2	----	----
4,4'-DDT	50-29-3	4	µg/L	<4	<4	<4	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	4	µg/L	<4	<4	<4	----	----
^ Sum of DDD + DDE + DDT	----	4	µg/L	<4	<4	<4	----	----
<b>EP075J: Organophosphorus Pesticides</b>								
Dichlorvos	62-73-7	2	µg/L	<2	<2	<2	----	----
Dimethoate	60-51-5	2	µg/L	<2	<2	<2	----	----
Diazinon	333-41-5	2	µg/L	<2	<2	<2	----	----
Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	<2	<2	----	----
Malathion	121-75-5	2	µg/L	<2	<2	<2	----	----
Fenthion	55-38-9	2	µg/L	<2	<2	<2	----	----
Chlorpyrifos	2921-88-2	2	µg/L	<2	<2	<2	----	----
Pirimphos-ethyl	23505-41-1	2	µg/L	<2	<2	<2	----	----
Chlorfenvinphos	470-90-6	2	µg/L	<2	<2	<2	----	----
Prothiofos	34643-46-4	2	µg/L	<2	<2	<2	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075J: Organophosphorus Pesticides - Continued</b>								
Ethion	563-12-2	2	µg/L	<2	<2	<2	----	----
<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>FWI-EN/001: Groundwater Sampling - Depth</b>								
Depth	----	0.01	m	3.30	2.05	2.39	----	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.1	%	88.8	93.2	76.6	----	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.1	%	96.3	96.6	78.5	----	----
<b>EP074S: VOC Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	114	117	112	----	----
Toluene-D8	2037-26-5	0.1	%	113	114	98.1	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	111	113	101	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.1	%	30.0	27.8	32.4	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	66.3	54.6	61.1	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%	92.3	96.1	90.6	----	----
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.1	%	74.8	91.5	65.7	----	----
Anthracene-d10	1719-06-8	0.1	%	80.0	77.4	69.7	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	52.5	83.1	59.6	----	----
<b>EP075S: Acid Extractable Surrogates</b>								
2-Fluorophenol	367-12-4	0.1	%	51.7	54.4	45.2	----	----
Phenol-d6	13127-88-3	0.1	%	25.4	26.0	24.7	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	56.8	59.4	49.7	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%	75.2	56.9	48.0	----	----



## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				EPA 1	EPA 2	EPA 3	EPA 5	EPA 6
				29-OCT-2014 11:20	29-OCT-2014 11:10	29-OCT-2014 10:55	29-OCT-2014 11:05	29-OCT-2014 10:50
Compound	CAS Number	LOR	Unit	EW1403214-001	EW1403214-002	EW1403214-003	EW1403214-004	EW1403214-005
<b>EP075T: Base/Neutral Extractable Surrogates</b>								
Nitrobenzene-D5	4165-60-0	0.1	%	63.1	75.4	54.1	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	57.2	54.1	45.6	----	----
2-Fluorobiphenyl	321-60-8	0.1	%	104	99.9	87.0	----	----
Anthracene-d10	1719-06-8	0.1	%	81.3	81.0	83.2	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	81.3	81.8	73.6	----	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	118	120	115	----	----
Toluene-D8	2037-26-5	0.1	%	111	112	96.6	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	110	112	100	----	----



## Analytical Results

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

Client sample ID

				EPA 7	---	---	---	---
				29-OCT-2014 10:40	---	---	---	---
				EW1403214-006	---	---	---	---
Compound	CAS Number	LOR	Unit					
<b>EA005FD: Field pH</b>								
pH	---	0.1	pH Unit	7.8	---	---	---	---
<b>EA010FD: Field Conductivity</b>								
Electrical Conductivity (Non Compensated)	---	1	µS/cm	1500	---	---	---	---
<b>EA015: Total Dissolved Solids</b>								
Total Dissolved Solids @180°C	---	10	mg/L	856	---	---	---	---
<b>EK055G: Ammonia as N by Discrete Analyser</b>								
Ammonia as N	7664-41-7	0.01	mg/L	3.65	---	---	---	---
<b>EP005: Total Organic Carbon (TOC)</b>								
Total Organic Carbon	---	1	mg/L	37	---	---	---	---
<b>EP030: Biochemical Oxygen Demand (BOD)</b>								
Biochemical Oxygen Demand	---	2	mg/L	<2	---	---	---	---



## 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>EP074S: VOC Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	78.3	133.2
Toluene-D8	2037-26-5	79.1	128.9
4-Bromofluorobenzene	460-00-4	80.8	123.7
<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>EP075S: Acid Extractable Surrogates</b>			
2-Fluorophenol	367-12-4	10.0	116.6
Phenol-d6	13127-88-3	10.0	69.0
2-Chlorophenol-D4	93951-73-6	20.9	129.7
2,4,6-Tribromophenol	118-79-6	10.0	150.7
<b>EP075T: Base/Neutral Extractable Surrogates</b>			
Nitrobenzene-D5	4165-60-0	29.4	141.7
1,2-Dichlorobenzene-D4	2199-69-1	23.6	120.7
2-Fluorobiphenyl	321-60-8	27.2	134.9
Anthracene-d10	1719-06-8	26.6	113
4-Terphenyl-d14	1718-51-0	21.4	123
<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