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Client: Deep Waters
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Laboratory No: 434044
Date Registered: 4/10/2006
Date Completed: 26/10/2006
Page Number: 1 of 10

Client's Reference: 4362-3038

The results for the analyses you requested are as follows:

Sample Type: Water, Potable

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Apparent Hazen Colour (Hazen units)	< 5
Total Dissolved Solids (g.m-3)	118
Total Nitrogen (g.m-3)	0.3
Total Kjeldahl Nitrogen (TKN) (g.m-3)	< 0.1
Nitrate-N + Nitrite-N (TON) (g.m-3)	0.319
Nitrite-N (g.m-3)	< 0.002
Bromide (g.m-3)	< 0.05
Bromate (g.m-3)	< 0.005
Chlorite (g.m-3)	< 0.005
Reactive Silica (g.m-3 as SiO ₂)	18.2
Total Cyanide (g.m-3)	< 0.001
Silver (g.m-3)	< 0.0001
Aluminium (g.m-3)	< 0.003
Arsenic (g.m-3)	< 0.001
Barium (g.m-3)	0.0087
Beryllium (g.m-3)	< 0.0001
Cadmium (g.m-3)	< 0.00005
Copper (g.m-3)	< 0.0005
Total Mercury (g.m-3)	< 0.00008
Nickel (g.m-3)	< 0.0005
Antimony (g.m-3)	0.0003
Selenium (g.m-3)	< 0.001
Thallium (g.m-3)	< 0.00005
Zinc (g.m-3)	0.019
Total Phenols (g.m-3)	< 0.002



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Polycyclic Aromatics in water by SIM

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Acenaphthene	< 0.000005
Acenaphthylene	< 0.000005
Anthracene	< 0.000005
Benzo[a]anthracene	< 0.000005
Benzo[a]pyrene [BAP]	< 0.000005
Benzo[b]fluoranthene	< 0.000005
Benzo[g,h,i]perylene	< 0.000005
Benzo[k]fluoranthene	< 0.000005
Chrysene	< 0.000005
Dibenzo[a,h]anthracene	< 0.000005
Fluoranthene	< 0.000005
Fluorene	< 0.000005
Indeno(1,2,3-c,d)pyrene	< 0.000005
Naphthalene	< 0.00003
Phenanthrene	< 0.000005
Pyrene	< 0.000005

Semivolatile organic compounds (SVOC, BNA)

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Bis(2-chloroethyl)ether	< 0.0002
1,3-Dichlorobenzene	< 0.0002
1,4-Dichlorobenzene	< 0.0002
1,2-Dichlorobenzene	< 0.0002
Bis(2-chloroisopropyl)ether	< 0.0002
N-nitrosodi-n-propyl amine	< 0.0002
Hexachloroethane	< 0.0002
Nitrobenzene	< 0.0002
Isophorone	< 0.0002
Bis(2-chloroethoxy)methane	< 0.0002
1,2,4-Trichlorobenzene	< 0.0002
Naphthalene	< 0.0002
Hexachlorobutadiene	< 0.0002
2-Methylnaphthalene	< 0.0001
2-Chloronaphthalene	< 0.0001
Acenaphthylene	< 0.0001
2,6-Dinitrotoluene	< 0.0004
Acenaphthene	< 0.0001
Dibenzofuran	< 0.0002
2,4-Dinitrotoluene	< 0.0004

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Fluorene	< 0.0001
4-Chlorophenylphenylether	< 0.0002
N-Nitrosodiphenylamine	< 0.0002
Hexachlorobenzene	< 0.0002
Phenanthrene	< 0.0001
Anthracene	< 0.0001
Carbazole	< 0.0002
Fluoranthene	< 0.0001
Pyrene	< 0.0001
Benzo[a]anthracene	< 0.0001
Chrysene	< 0.0001
Benzo[b]fluoranthene	< 0.0001
Benzo[k]fluoranthene	< 0.0001
Benzo[a]pyrene	< 0.0001
Indeno(1,2,3-c,d)pyrene	< 0.0001
Dibenzo[a,h]anthracene	< 0.0001
Benzo[g,h,i]perylene	< 0.0001
Dimethylphthalate	< 0.0004
Diethylphthalate	< 0.0004
Di-n-butylphthalate	< 0.0004
Bis(2-ethylhexyl)phthalate	< 0.003
Di-n-octylphthalate	< 0.0004
Butylbenzylphthalate	< 0.0004
Di-(2-ethylhexyl)adipate	< 0.0004
Alpha BHC	< 0.0002
Beta BHC	< 0.0002
Gamma BHC (Lindane)	< 0.0002
Delta BHC	< 0.0002
Heptachlor	< 0.0002
Aldrin	< 0.0002
Heptachlor epoxide	< 0.0002
Endosulfan I	< 0.0004
4,4'-DDE	< 0.0002
Dieldrin	< 0.0002
Endrin	< 0.0002
Endrin Aldehyde	< 0.0004
Endosulfan II	< 0.0004
4,4'-DDD	< 0.0002
Endosulfan sulphate	< 0.0004
4,4'-DDT	< 0.0004

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Phenol	< 0.0004
2-Chlorophenol	< 0.0004
2-Methylphenol (o-cresol)	< 0.0004
3 & 4-Methylphenol (m- + p-cresol)	< 0.0004
2-Nitrophenol	< 0.0004
2,4-Dimethylphenol	< 0.0004
2,4-Dichlorophenol	< 0.0004
4-Chloro-3-methylphenol	< 0.0004
2,4,6-Trichlorophenol	< 0.0004
2,4,5-Trichlorophenol	< 0.0004

Volatile organic compounds (VOC)

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Dichlorodifluoromethane	< 0.0005
Chloromethane	< 0.0005
Vinyl chloride	< 0.0005
Bromomethane	< 0.0005
Chloroethane	< 0.0005
Trichlorofluoromethane	< 0.0005
1,1-Dichloroethene	< 0.0005
Carbon disulphide	< 0.005
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.005
Dichloromethane (Methylene chloride)	< 0.01
trans-1,2-Dichloroethene	< 0.0005
1,1-Dichloroethane	< 0.0005
2-Butanone (MEK)	< 0.005
cis-1,2-Dichloroethene	< 0.0005
2,2-Dichloropropane	< 0.0005
Chloroform (Trichloromethane)	< 0.0005
1,1,1-Trichloroethane	< 0.0005
1,2-Dichloroethane	< 0.0005
Carbon tetrachloride	< 0.0005
1,1-Dichloropropene	< 0.0005
Benzene	< 0.0005
Trichloroethene	< 0.0005
1,2-Dichloropropane	< 0.0005
Dibromomethane	< 0.0005
Bromodichloromethane	< 0.0005
cis-1,3-Dichloropropene	< 0.0005

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
4-Methylpentan-2-one (MIBK)	< 0.005
Toluene	< 0.0005
trans-1,3-Dichloropropene	< 0.0005
1,1,2-Trichloroethane	< 0.0005
1,3-Dichloropropane	< 0.0005
Dibromochloromethane	< 0.0005
Tetrachloroethene	< 0.0005
1,2-Dibromoethane	< 0.0004
Chlorobenzene	< 0.0005
1,1,1,2-Tetrachloroethane	< 0.0005
Ethylbenzene	< 0.0005
m & p-Xylene	< 0.0005
o-Xylene	< 0.0005
Styrene	< 0.0005
Bromoform (tribromomethane)	< 0.0005
Isopropylbenzene	< 0.0005
1,1,1,2-Tetrachloroethane	< 0.0005
1,2,3-Trichloropropane	< 0.0005
Bromobenzene	< 0.0005
2-Chlorotoluene	< 0.0005
n-Propylbenzene	< 0.0005
4-Chlorotoluene	< 0.0005
1,3,5-Trimethylbenzene	< 0.0005
tert-Butylbenzene	< 0.0005
1,2,4-Trimethylbenzene	< 0.0005
1,3-Dichlorobenzene	< 0.0005
sec-Butylbenzene	< 0.0005
1,4-Dichlorobenzene	< 0.0005
4-Isopropyltoluene	< 0.0005
1,2-Dichlorobenzene	< 0.0005
n-Butylbenzene	< 0.0005
1,2-Dibromo-3-chloropropane	< 0.0005
1,2,4-Trichlorobenzene	< 0.0005
Naphthalene	< 0.0005
1,2,3-Trichlorobenzene	< 0.0005
Hexachlorobutadiene	< 0.0005
MTBE (methyl-t-butylether)	< 0.005
Surrogates	-
Toluene-d8 (% Recovery)	102
4-Bromofluorobenzene (% Recovery)	98

Organonitrogen & Organophosphorus Pesticides

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Acephate	< 0.0001
Acetochlor	< 0.0001
Alachlor	< 0.00005
Atrazine	< 0.00003
Atrazine-desethyl	< 0.00003
Atrazine-desisopropyl	< 0.00003
Azinphos-methyl	< 0.00005
Benalaxyl	< 0.0001
Bitertanol	< 0.00005
Bromacil	< 0.00003
Bromopropylate	< 0.00003
Captan	< 0.00003
Carbaryl	< 0.0001
Carbofuran	< 0.00003
Chlorfluazuron	< 0.00003
Chlorothalonil	< 0.00003
Chlortoluron	< 0.00008
Chlorpyrifos	< 0.00003
Chlorpyrifos-methyl	< 0.00003
Cyanazine	< 0.00003
Cyfluthrin	< 0.00005
Cyhalothrin	< 0.00005
Cypermethrin	< 0.00005
Deltamethrin	< 0.00003
Diazinon	< 0.00003
Diuron	< 0.0001
Dichlofluanid	< 0.00003
Dicloran	< 0.00008
Dichlorvos	< 0.00005
Difenoconazole	< 0.00003
Diphenylamine	< 0.0001
Fenpropimorph	< 0.00005
Fluometuron	< 0.00003
Furalaxyl	< 0.0001
Flusilazole	< 0.0001
Fluazifop-p-butyl	< 0.0001
Haloxifop-r-methyl	< 0.0001
Hexazinone	< 0.00003
Iprodione	< 0.00003
Kresoxim-methyl	< 0.00003
Linuron	< 0.0001
Malathion	< 0.00003
Metalaxyl	< 0.0001

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Metolachlor	< 0.00003
Metribuzin	< 0.00005
Myclobutanil	< 0.00003
Naled	< 0.00005
Norflurazon	< 0.00005
Oxadiazon	< 0.00003
Oxyfluorfen	< 0.00003
Paclobutrazol	< 0.0001
Parathion-ethyl	< 0.00003
Parathion-methyl	< 0.00003
Pendimethalin	< 0.00003
Permethrin	< 0.00005
Pirimicarb	< 0.00008
Pirimiphos methyl	< 0.00003
Prochloraz	< 0.00003
Procymidone	< 0.00003
Prometryne	< 0.00005
Propachlor	< 0.00003
Propanil	< 0.00005
Propazine	< 0.00003
Propiconazole	< 0.00005
Quizalofop-p-ethyl	< 0.0001
Simazine	< 0.00003
Sulfentrazone	< 0.00005
Tebuconazole	< 0.00003
Terbacil	< 0.00005
Terbumeton	< 0.00005
Terbutylazine	< 0.00003
Terbutylazine desethyl	< 0.00003
Tolyfluanid	< 0.00003
Triazophos	< 0.00005
Trifluralin	< 0.00003
Vinclozolin	< 0.00003

Organochlorine pesticides, trace level

Sample Name	4362-3038 29/09/06
Lab No	434044/1
Units	(g.m-3)
Hexachlorobenzene	< 0.000003
Alpha-BHC	< 0.000003
Beta-BHC	< 0.000003
Gamma-BHC (Lindane)	< 0.000003
Delta-BHC	< 0.000003
Heptachlor	< 0.000003
Heptachlor epoxide	< 0.000003
Aldrin	< 0.000003
Dieldrin	< 0.000003
Endrin	< 0.000003
Endrin aldehyde	< 0.000003
Endosulfan I	< 0.000003
Endosulfan II	< 0.000003
Endosulfan sulphate	< 0.000003
2,4'-DDE	< 0.000003
2,4'-DDD	< 0.000003
2,4'-DDT	< 0.000003
4,4'-DDE	< 0.000003
4,4'-DDD	< 0.000003
4,4'-DDT	< 0.000003
Total Chlordane ((cis+trans)*100/42)	< 0.00001
cis-Chlordane	< 0.000003
trans-Chlordane	< 0.000003
Methoxychlor	< 0.000003

Sample Containers

The following table shows the sample containers that were associated with this job.

Container Description	Container Size (mL)	Number of Containers
Brown glass for organics (500 mL)	500	3
Brown Glass for VOC (120 mL)	120	2
Sulphuric Preserved Pottle	100	1
Sodium hydroxide preserved pottle for cyanide	100	1
Ethylene diamine (EDA) preserved	100	1

Details of sample bottle preparation procedures are available upon request.

Summary of Methods Used and Detection Limits

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Substance Type: Water

Parameter	Method Used	Detection Limit
Sample filtration for general testing	Sample filtration through 0.45µm membrane filter.	N/A
Apparent Hazen Colour	Determined on original sample without filtration or centrifugation. Determination by Lovibond colorimeter. APHA 2120 B 21 st ed. 2005.	5 Hazen units
Total Dissolved Solids	Filtration (GF/C, 1.2 µm), filtrate dried at 103 - 105 °C, Gravimetric. APHA 2540 C (modified from 180 °C) 21 st ed. 2005.	10 g.m-3
Total Nitrogen	Calculation: TKN + Nitrate-N + Nitrite-N	0.1 g.m-3
Total Kjeldahl digestion	Sulphuric acid digestion with copper sulphate catalyst. APHA 4500-N _{org} D. (modified) 21 st ed. 2005.	N/A
Total Kjeldahl Nitrogen (TKN)	Kjeldahl digestion, phenol/hypochlorite colorimetry (Discrete Analysis). APHA 4500-N _{org} B. (modified) 4500-NH ₃ F (modified) 21 st ed. 2005.	0.1 g.m-3
Nitrate-N + Nitrite-N (TON)	Total oxidised nitrogen. Automated cadmium reduction, Flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) 21 st ed. 2005.	0.002 g.m-3
Nitrite-N	Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₂ ⁻ I (modified) 21 st ed. 2005.	0.002 g.m-3
Bromide	Filtered sample. Ion Chromatography. APHA 4110 B 21 st ed. 2005.	0.05 g.m-3
Bromate	Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B	0.005 g.m-3
Chlorite	Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B	0.005 g.m-3
Reactive Silica	Filtered sample. Heteropoly blue colorimetry. Discrete Analyser. APHA 4500-SiO ₂ F (modified from flow injection analysis) 21 st ed. 2005.	0.1 g.m-3 as SiO ₂
Total Cyanide	Distillation following the addition of sulphuric acid (H ₂ SO ₄), alkaline trapping solution. Colorimetry. Flow injection analyser. APHA 4500-CN ⁻ C & N (modified) 21 st ed. 2005.	0.001 g.m-3
Silver	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0001 g.m-3
Aluminium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.003 g.m-3
Arsenic	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.001 g.m-3
Barium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0001 g.m-3
Beryllium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0001 g.m-3
Cadmium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.00005 g.m-3
Copper	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0005 g.m-3
Total Mercury	Permanganate / Persulphate digestion. Analysis by FIMS. US EPA 245.2	0.00008 g.m-3
Nickel	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0005 g.m-3
Antimony	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.0002 g.m-3
Selenium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.001 g.m-3
Thallium	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.00005 g.m-3

Parameter	Method Used	Detection Limit
Zinc	Analysed as received (after acid preservation, if required). ICP-MS. APHA 3125 B 21 st ed. 2005.	0.001 g.m-3
Total Phenols	Distillation, Segmented Flow colorimetry. NB: Does not detect 4-methylphenol. Bran + Luebbe Method No. 127-71W, APHA 5530 D (modified) 21 st ed. 2005.	0.002 g.m-3
Organochlorine pesticides, trace level	Solid phase or liquid/liquid extraction, GC-ECD/ECD In-house	N/A
Organonitrogen & Organophosphorus Pesticides	ONOP trace method, water: Solid phase or liquid/liquid extraction, GC-ECD/NPD, GC-MS. In-house	N/A
Volatile organic compounds (VOC)	Purge and Trap GC-MS US EPA Method 524.2	N/A
Semivolatile organic compounds (SVOC, BNA)	GC-MS, full scan (BNA = Base-neutral and Acid Extractables) US EPA CLP Method	N/A
Polycyclic Aromatics in water by SIM	Continuous liquid/liquid extraction (US-EPA CLP), GC-MS selected ion monitoring quantitation. US EPA CLP Method (Modified)	N/A

Analyst's Comments:

These samples were collected by yourselves and analysed as received at the laboratory.

Samples are held at the laboratory after reporting for a length of time depending on the preservation used and the stability of the analytes being tested. Once the storage period is completed the samples are discarded unless otherwise advised by the submitter.

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