

Certificate of Analysis

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Client:	Fulton Hogan Nelson - Laboratory	Lab No:	3615560	DWUPV1
Contact:	Andrew Maxwell	Date Received:	27-Jun-2024	
	C/- Fulton Hogan Nelson - Laboratory	Date Reported:	12-Jul-2024	
	Private Bag 1	Quote No:	55261	
	Nelson 7040	Order No:		
		Client Reference:	Annual Chemical Tests	
		Submitted By:	Andrew Maxwell	

Sample Type: Aqueous

Sample Name:		NWTP Clearwater 26-Jun-2024 7:45 am	Maitai South Branch 26-Jun-2024 9:20 am	Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:		3615560.1	3615560.2		
Individual Tests					
Total Alkalinity	g/m ³ as CaCO ₃	61.0 ± 2.6	63.3 ± 2.7	-	-
Total Hardness	g/m ³ as CaCO ₃	59.4 ± 2.8	68.9 ± 3.4	≤ 200	-
Dissolved Calcium	g/m ³	11.55 ± 0.73	10.27 ± 0.65	-	-
Dissolved Magnesium	g/m ³	7.43 ± 0.50	10.50 ± 0.71 #1	-	-
Total Cyanide	g/m ³	< 0.002 ± 0.0017	< 0.002 ± 0.0017	-	0.6
Fluoride	g/m ³	< 0.05 ± 0.041	< 0.05 ± 0.041	-	1.5
Total Ammoniacal-N	g/m ³	-	< 0.010 ± 0.0067	≤ 1.2	-
Nitrite-N	g/m ³	< 0.002 ± 0.0014	< 0.002 ± 0.0014	-	0.91
Nitrate-N	g/m ³	0.0454 ± 0.0058	0.0396 ± 0.0052	-	11.3
Nitrate-N + Nitrite-N	g/m ³	0.0454 ± 0.0056	0.0400 ± 0.0050	-	-
Dissolved Reactive Phosphorus	g/m ³	-	< 0.004 ± 0.0027	-	-
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
Acetochlor	g/m ³	-	< 0.00004 ± 0.00042	-	-
Alachlor	g/m ³	-	< 0.00004 ± 0.00018	-	0.02
Atrazine	g/m ³	-	< 0.00004 ± 0.000024	-	0.002
Atrazine-desethyl	g/m ³	-	< 0.00004 ± 0.00041	-	-
Atrazine-desisopropyl	g/m ³	-	< 0.00008 ± 0.00018	-	-
Azaconazole	g/m ³	-	< 0.00002 ± 0.0000071	-	-
Azinphos-methyl	g/m ³	-	< 0.00008 ± 0.000036	-	0.004
Benalaxyl	g/m ³	-	< 0.00002 ± 0.0000094	-	-
Bitertanol	g/m ³	-	< 0.00008 ± 0.000048	-	-
Bromacil	g/m ³	-	< 0.00004 ± 0.000025	-	0.4
Bromopropylate	g/m ³	-	< 0.00004 ± 0.000022	-	-
Butachlor	g/m ³	-	< 0.00004 ± 0.000021	-	-
Captan	g/m ³	-	< 0.00008 ± 0.000060	-	-
Carbaryl	g/m ³	-	< 0.00004 ± 0.000021	-	-
Carbofenthion	g/m ³	-	< 0.00004 ± 0.000022	-	-
Carbofuran	g/m ³	-	< 0.00004 ± 0.000022	-	0.008
Chlorfluazuron	g/m ³	-	< 0.00004 ± 0.000032	-	-
Chlorothalonil	g/m ³	-	< 0.00004 ± 0.000022	-	-
Chlorpyrifos	g/m ³	-	< 0.00004 ± 0.000022	-	0.04
Chlorpyrifos-methyl	g/m ³	-	< 0.00004 ± 0.000022	-	-
Chlortoluron	g/m ³	-	< 0.00008 ± 0.000062	-	0.04
Cyanazine	g/m ³	-	< 0.00004 ± 0.000021	-	0.0007
Cyfluthrin	g/m ³	-	< 0.00004 ± 0.000027	-	-
Cyhalothrin	g/m ³	-	< 0.00004 ± 0.000022	-	-
Cypermethrin	g/m ³	-	< 0.00008 ± 0.000043	-	-
Deltamethrin (including Tralomethrin)	g/m ³	-	< 0.00006 ± 0.000027	-	-



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Sample Type: Aqueous					
Sample Name:	NWTP Clearwater 26-Jun-2024 7:45 am	Maitai South Branch 26-Jun-2024 9:20 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.1	3615560.2			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
Diazinon	g/m ³	-	< 0.00002 ± 0.0000083	-	-
Dichlofluanid	g/m ³	-	< 0.00004 ± 0.00018	-	-
Dichloran	g/m ³	-	< 0.0002 ± 0.000089	-	-
Dichlorvos	g/m ³	-	< 0.00008 ± 0.00018	-	-
Difenoconazole	g/m ³	-	< 0.00008 ± 0.000043	-	-
Dimethoate	g/m ³	-	< 0.00008 ± 0.000057	-	0.008
Diphenylamine	g/m ³	-	< 0.00008 ± 0.00018	-	-
Diuron	g/m ³	-	< 0.00004 ± 0.000023	-	0.02
Fenpropimorph	g/m ³	-	< 0.00004 ± 0.000022	-	-
Fluazifop-butyl	g/m ³	-	< 0.00004 ± 0.000022	-	-
Fluometuron	g/m ³	-	< 0.00004 ± 0.000026	-	-
Flusilazole	g/m ³	-	< 0.00004 ± 0.000028	-	-
Fluvalinate	g/m ³	-	< 0.00004 ± 0.000011	-	-
Furalaxyl	g/m ³	-	< 0.00002 ± 0.0000079	-	-
Haloxifop-methyl	g/m ³	-	< 0.00004 ± 0.000027	-	-
Hexaconazole	g/m ³	-	< 0.00004 ± 0.000060	-	-
Hexazinone	g/m ³	-	< 0.00002 ± 0.000017	-	0.4
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	g/m ³	-	< 0.0002 ± 0.00011	-	-
Kresoxim-methyl	g/m ³	-	< 0.00002 ± 0.000019	-	-
Linuron	g/m ³	-	< 0.00005 ± 0.000021	-	-
Malathion	g/m ³	-	< 0.00004 ± 0.000022	-	-
Metalaxyl	g/m ³	-	< 0.00004 ± 0.000023	-	0.3
Metolachlor	g/m ³	-	< 0.00004 ± 0.000021	-	0.01
Metribuzin	g/m ³	-	< 0.00004 ± 0.000027	-	0.07
Molinate	g/m ³	-	< 0.00008 ± 0.000030	-	0.007
Myclobutanil	g/m ³	-	< 0.00004 ± 0.000033	-	-
Naled	g/m ³	-	< 0.0002 ± 0.000056	-	-
Norflurazon	g/m ³	-	< 0.00008 ± 0.000028	-	-
Oxadiazon	g/m ³	-	< 0.00004 ± 0.000022	-	0.2
Oxyfluorfen	g/m ³	-	< 0.00002 ± 0.000019	-	-
Paclobutrazol	g/m ³	-	< 0.00004 ± 0.000023	-	-
Parathion-ethyl	g/m ³	-	< 0.00004 ± 0.000022	-	-
Parathion-methyl	g/m ³	-	< 0.00004 ± 0.000022	-	-
Pendimethalin	g/m ³	-	< 0.00004 ± 0.000051	-	0.02
Permethrin	g/m ³	-	< 0.00002 ± 0.000020	-	-
Pirimicarb	g/m ³	-	< 0.00004 ± 0.000015	-	-
Pirimiphos-methyl	g/m ³	-	< 0.00004 ± 0.000024	-	0.1
Prochloraz	g/m ³	-	< 0.0002 ± 0.000059	-	-
Procymidone	g/m ³	-	< 0.00004 ± 0.000021	-	0.7
Prometryn	g/m ³	-	< 0.00002 ± 0.000020	-	-
Propachlor	g/m ³	-	< 0.00004 ± 0.000024	-	-
Propanil	g/m ³	-	< 0.0002 ± 0.000056	-	-
Propazine	g/m ³	-	< 0.00002 ± 0.000020	-	0.07
Propiconazole	g/m ³	-	< 0.00004 ± 0.000033	-	-
Pyriproxyfen	g/m ³	-	< 0.00004 ± 0.000033	-	0.4
Quizalofop-ethyl	g/m ³	-	< 0.00004 ± 0.000022	-	-
Simazine	g/m ³	-	< 0.00004 ± 0.000013	-	0.002
Simetryn	g/m ³	-	< 0.00004 ± 0.000022	-	-
Sulfentrazone	g/m ³	-	< 0.0002 ± 0.000056	-	-
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	g/m ³	-	< 0.00008 ± 0.000032	-	-
Tebuconazole	g/m ³	-	< 0.00004 ± 0.000059	-	-
Terbacil	g/m ³	-	< 0.00004 ± 0.000032	-	0.04
Terbumeton	g/m ³	-	< 0.00004 ± 0.000021	-	-
Terbuthylazine	g/m ³	-	< 0.00002 ± 0.0000079	-	0.008

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Lab Number:	3615560.1	3615560.2			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
Terbutylazine-desethyl	g/m ³	-	< 0.00004 ± 0.000038	-	-
Terbutryn	g/m ³	-	< 0.00004 ± 0.000023	-	-
Thiabendazole	g/m ³	-	< 0.0002 ± 0.000063	-	0.4
Thiobencarb	g/m ³	-	< 0.00004 ± 0.000022	-	-
Tolyfluanid	g/m ³	-	< 0.00002 ± 0.000019	-	-
Triazophos	g/m ³	-	< 0.00004 ± 0.000032	-	-
Trifluralin	g/m ³	-	< 0.00004 ± 0.000027	-	0.03
Vinclozolin	g/m ³	-	< 0.00004 ± 0.000048	-	-
Drinking water metals suite, totals, trace					
Total Aluminium	g/m ³	0.0080 ± 0.0024	0.0249 ± 0.0041	≤ 0.1	1
Total Antimony	g/m ³	< 0.00021 ± 0.00014	< 0.00021 ± 0.00014	-	0.02
Total Arsenic	g/m ³	< 0.0011 ± 0.00074	< 0.0011 ± 0.00074	-	0.01
Total Barium	g/m ³	< 0.0053 ± 0.00045	< 0.0053 ± 0.00045	-	1.5
Total Beryllium	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	-
Total Boron	g/m ³	0.0130 ± 0.0040	0.0103 ± 0.0038	-	2.4
Total Cadmium	g/m ³	< 0.000053 ± 0.000036	< 0.000053 ± 0.000036	-	0.004
Total Calcium	g/m ³	11.91 ± 0.48	10.50 ± 0.43	-	-
Total Chromium	g/m ³	0.00107 ± 0.00037	0.00142 ± 0.00037	-	0.05
Total Copper	g/m ³	< 0.00053 ± 0.00036	0.00414 ± 0.00055	≤ 1	2
Total Iron	g/m ³	< 0.021 ± 0.014	0.050 ± 0.016	≤ 0.3	-
Total Lead	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	0.01
Total Lithium	g/m ³	0.00167 ± 0.00035	0.00111 ± 0.00031	-	-
Total Magnesium	g/m ³	7.51 ± 0.61	9.83 ± 0.79 #1	-	-
Total Manganese	g/m ³	0.00114 ± 0.00037	0.00103 ± 0.00037	≤ 0.04 (Staining) ≤ 0.10 (Taste)	0.4
Total Mercury	g/m ³	< 0.00008 ± 0.00053	< 0.00008 ± 0.00053	-	0.007
Total Molybdenum	g/m ³	< 0.00021 ± 0.00015	< 0.00021 ± 0.00015	-	-
Total Nickel	g/m ³	0.00263 ± 0.00047	0.00548 ± 0.00075	-	0.08
Total Potassium	g/m ³	0.262 ± 0.039	0.236 ± 0.038	-	-
Total Selenium	g/m ³	< 0.0011 ± 0.00074	< 0.0011 ± 0.00074	-	0.04
Total Silver	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	-
Total Sodium	g/m ³	4.48 ± 0.27	3.48 ± 0.21	≤ 200	-
Total Tin	g/m ³	< 0.00053 ± 0.00036	< 0.00053 ± 0.00036	-	-
Total Uranium	g/m ³	< 0.000021 ± 0.000014	< 0.000021 ± 0.000014	-	0.03
Total Zinc	g/m ³	< 0.0011 ± 0.00074	< 0.0011 ± 0.00074	≤ 1.5	-
Acid Herbicides Screen in Water by LCMSMS					
Acifluorfen	g/m ³	-	< 0.0004 ± 0.00021	-	-
Bentazone	g/m ³	-	< 0.0004 ± 0.00021	-	-
Bromoxynil	g/m ³	-	< 0.0004 ± 0.00021	-	-
Clopyralid	g/m ³	-	< 0.0004 ± 0.00021	-	-
2,4-Dichlorophenoxyacetic acid (24D)	g/m ³	-	< 0.0004 ± 0.00021	-	0.04
2,4-Dichlorophenoxybutyric acid (24DB)	g/m ³	-	< 0.0006 ± 0.00025	-	0.1
Dicamba	g/m ³	-	< 0.0006 ± 0.00021	-	-
Dichlorprop	g/m ³	-	< 0.0004 ± 0.00021	-	0.1
Fluazifop	g/m ³	-	< 0.0004 ± 0.00021	-	-
Fluroxypyr	g/m ³	-	< 0.0004 ± 0.00021	-	-
Haloxypop	g/m ³	-	< 0.0004 ± 0.00021	-	-
2-methyl-4-chlorophenoxyacetic acid (MCPA)	g/m ³	-	< 0.0004 ± 0.00021	-	0.8
2-methyl-4-chlorophenoxybutanoic acid (MCPB)	g/m ³	-	< 0.0004 ± 0.00021	-	-
Mecoprop	g/m ³	-	< 0.0004 ± 0.00021	-	0.01
Oryzalin	g/m ³	-	< 0.0006 ± 0.00023	-	0.4
2,3,4,6-Tetrachlorophenol (TCP)	g/m ³	-	< 0.0004 ± 0.00021	-	-
2,4,5-Trichlorophenoxypropionic acid (245TP, Fenoprop, Silvex)	g/m ³	-	< 0.0004 ± 0.00021	-	0.01

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Acid Herbicides Screen in Water by LCMSMS					
2,4,5-Trichlorophenoxyacetic acid (245T)	g/m ³	-	< 0.0004 ± 0.00021	-	0.01
Pentachlorophenol (PCP)	g/m ³	-	< 0.0004 ± 0.00021	-	0.009
Picloram	g/m ³	-	< 0.0004 ± 0.00021	-	0.2
Quizalofop	g/m ³	-	< 0.0004 ± 0.00021	-	-
Triclopyr	g/m ³	-	< 0.0004 ± 0.00021	-	0.1
Haloethers Trace in SVOC Water Samples by GC-MS					
Bis(2-chloroethoxy) methane	g/m ³	-	< 0.0005 ± 0.00034	-	-
Bis(2-chloroethyl)ether	g/m ³	-	< 0.0005 ± 0.00034	-	-
Bis(2-chloroisopropyl)ether	g/m ³	-	< 0.0005 ± 0.00034	-	-
4-Bromophenyl phenyl ether	g/m ³	-	< 0.0003 ± 0.00021	-	-
4-Chlorophenyl phenyl ether	g/m ³	-	< 0.0005 ± 0.00034	-	-
Nitrogen containing compounds Trace in SVOC Water Samples, GC-MS					
2,4-Dinitrotoluene	g/m ³	-	< 0.0010 ± 0.00067	-	-
2,6-Dinitrotoluene	g/m ³	-	< 0.0010 ± 0.00067	-	-
Nitrobenzene	g/m ³	-	< 0.0005 ± 0.00034	-	-
N-Nitrosodi-n-propylamine	g/m ³	-	< 0.0010 ± 0.00067	-	-
N-Nitrosodiphenylamine + Diphenylamine	g/m ³	-	< 0.0010 ± 0.00067	-	-
Organochlorine Pesticides Trace in SVOC Water Samples by GC-MS					
Aldrin	g/m ³	-	< 0.0005 ± 0.00034	-	-
alpha-BHC	g/m ³	-	< 0.0005 ± 0.00034	-	-
beta-BHC	g/m ³	-	< 0.0005 ± 0.00034	-	-
delta-BHC	g/m ³	-	< 0.0005 ± 0.00034	-	-
gamma-BHC (Lindane)	g/m ³	-	< 0.0005 ± 0.00034	-	0.002
4,4'-DDD	g/m ³	-	< 0.0005 ± 0.00034	-	-
4,4'-DDE	g/m ³	-	< 0.0005 ± 0.00034	-	-
4,4'-DDT	g/m ³	-	< 0.0010 ± 0.00067	-	-
Dieldrin	g/m ³	-	< 0.0005 ± 0.00034	-	-
Endosulfan I	g/m ³	-	< 0.0010 ± 0.00067	-	-
Endosulfan II	g/m ³	-	< 0.0010 ± 0.00067	-	-
Endosulfan sulphate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Endrin	g/m ³	-	< 0.0005 ± 0.00034	-	0.001
Endrin ketone	g/m ³	-	< 0.0010 ± 0.00067	-	-
Heptachlor	g/m ³	-	< 0.0005 ± 0.00034	-	-
Heptachlor epoxide	g/m ³	-	< 0.0005 ± 0.00034	-	-
Hexachlorobenzene	g/m ³	-	< 0.0005 ± 0.00034	-	-
Polycyclic Aromatic Hydrocarbons Trace in SVOC Water Samples					
Acenaphthene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Acenaphthylene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Anthracene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Benzo[a]anthracene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Benzo[a]pyrene (BAP)	g/m ³	-	< 0.0003 ± 0.00020	-	0.0007
Benzo[b]fluoranthene + Benzo[j]fluoranthene	g/m ³	-	< 0.0003 ± 0.00020	-	-
Benzo[g,h,i]perylene	g/m ³	-	0.00032 ± 0.00022	-	-
Benzo[k]fluoranthene	g/m ³	-	< 0.0003 ± 0.00020	-	-
1&2-Chloronaphthalene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Chrysene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Dibenzo[a,h]anthracene	g/m ³	-	0.00042 ± 0.00026	-	-
Fluoranthene	g/m ³	-	< 0.0003 ± 0.00020	-	-
Fluorene	g/m ³	-	< 0.0003 ± 0.00020	-	-
Indeno(1,2,3-c,d)pyrene	g/m ³	-	0.00036 ± 0.00024	-	-
2-Methylnaphthalene	g/m ³	-	< 0.0003 ± 0.00020	-	-
Naphthalene	g/m ³	-	< 0.0003 ± 0.00020	-	-
Phenanthrene	g/m ³	-	< 0.0003 ± 0.00021	-	-
Pyrene	g/m ³	-	< 0.0003 ± 0.00021	-	-

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Phenols Trace (drinkingwater) in SVOC Water Samples by GC-MS					
2-Chlorophenol	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.0001 (Taste) ≤ 0.01 (Odour)	-
2,4-Dichlorophenol	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.0003 (Taste) ≤ 0.04 (Odour)	-
2,4,6-Trichlorophenol	g/m ³	-	< 0.0010 ± 0.00067	≤ 0.002 (Taste) ≤ 0.3 (Odour)	0.2
Phenols Trace (non-drinkingwater) in SVOC Water Samples by GC-MS					
4-Chloro-3-methylphenol	g/m ³	-	< 0.0010 ± 0.00067	-	-
2,4-Dimethylphenol	g/m ³	-	< 0.0005 ± 0.00034	-	-
3 & 4-Methylphenol (m- + p-cresol)	g/m ³	-	< 0.0010 ± 0.00067	-	-
2-Methylphenol (o-Cresol)	g/m ³	-	< 0.0005 ± 0.00034	-	-
2-Nitrophenol	g/m ³	-	< 0.0010 ± 0.00067	-	-
Pentachlorophenol (PCP)	g/m ³	-	< 0.010 ± 0.0067	-	0.009
Phenol	g/m ³	-	< 0.0010 ± 0.00067	-	-
2,4,5-Trichlorophenol	g/m ³	-	< 0.0010 ± 0.00067	-	-
Plasticisers Trace (non-drinkingwater) in SVOC Water by GCMS					
Butylbenzylphthalate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Diethylphthalate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Dimethylphthalate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Di-n-butylphthalate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Di-n-octylphthalate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Plasticisers Trace (drinkingwater) in SVOC Water Samples by GCMS					
Bis(2-ethylhexyl)phthalate	g/m ³	-	< 0.003 ± 0.0020	-	0.009
Di(2-ethylhexyl)adipate	g/m ³	-	< 0.0010 ± 0.00067	-	-
Other Halogenated compounds Trace (drinkingwater) in SVOC Water					
1,2-Dichlorobenzene	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5
1,3-Dichlorobenzene	g/m ³	-	< 0.0005 ± 0.00034	-	-
1,4-Dichlorobenzene	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4
Other Halogenated compounds Trace (non-drinkingwater) in SVOC					
Hexachlorobutadiene	g/m ³	-	< 0.0005 ± 0.00034	-	0.0007
Hexachloroethane	g/m ³	-	< 0.0005 ± 0.00034	-	-
1,2,4-Trichlorobenzene	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.005	-
Other SVOC Trace in SVOC Water Samples by GC-MS					
Benzyl alcohol	g/m ³	-	< 0.005 ± 0.0034	-	-
Carbazole	g/m ³	-	< 0.0005 ± 0.00034	-	-
Dibenzofuran	g/m ³	-	< 0.0005 ± 0.00034	-	-
Isophorone	g/m ³	-	< 0.0005 ± 0.00034	-	-
Tributyl Tin in Water samples by LC-MS/MS*					
Tributyltin (as Sn)*	g/m ³	-	< 0.00004	-	-
Triphenyltin (as Sn)*	g/m ³	-	< 0.00003	-	-
BTEX in VOC Water by Headspace GC-MS					
Benzene	g/m ³	-	< 0.0003 ± 0.00032	-	0.01
Ethylbenzene	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.002 (Odour) ≤ 0.08 (Taste)	0.3
Toluene	g/m ³	-	< 0.0003 ± 0.00060	≤ 0.03 (Odour) ≤ 0.04 (Taste)	0.8
m&p-Xylene	g/m ³	-	< 0.0005 ± 0.00034	-	-
o-Xylene	g/m ³	-	< 0.0003 ± 0.00031	-	-
Halogenated Aliphatics in VOC Water by Headspace GC-MS					
Bromomethane (Methyl Bromide)	g/m ³	-	< 0.0003 ± 0.00031	-	-
Carbon tetrachloride	g/m ³	-	< 0.0003 ± 0.00030	-	0.005
Chloroethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
Chloromethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,2-Dibromo-3-chloropropane	g/m ³	-	< 0.0003 ± 0.00026	-	0.001

Sample Type: Aqueous					
Sample Name:	NWTP Clearwater 26-Jun-2024 7:45 am	Maitai South Branch 26-Jun-2024 9:20 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.1	3615560.2			
Halogenated Aliphatics in VOC Water by Headspace GC-MS					
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m ³	-	< 0.0003 ± 0.00025	-	0.0004
Dibromomethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
Dichlorodifluoromethane	g/m ³	-	< 0.0003 ± 0.00030	-	-
1,1-Dichloroethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,2-Dichloroethane	g/m ³	-	< 0.0003 ± 0.00030	-	0.03
1,1-Dichloroethene	g/m ³	-	< 0.0003 ± 0.00032	-	-
cis-1,2-Dichloroethene	g/m ³	-	< 0.0003 ± 0.00031	-	-
trans-1,2-Dichloroethene	g/m ³	-	< 0.0003 ± 0.00030	-	-
Dichloromethane (methylene chloride)	g/m ³	-	< 0.010 ± 0.0067	-	0.02
1,2-Dichloropropane	g/m ³	-	< 0.0003 ± 0.00031	-	0.05
1,3-Dichloropropane	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,1-Dichloropropene	g/m ³	-	< 0.0003 ± 0.00031	-	-
cis-1,3-Dichloropropene	g/m ³	-	< 0.0005 ± 0.00034	-	-
trans-1,3-Dichloropropene	g/m ³	-	< 0.0005 ± 0.00034	-	-
Hexachlorobutadiene	g/m ³	-	< 0.0003 ± 0.00030	-	0.0007
1,1,1,2-Tetrachloroethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,1,1,2,2-Tetrachloroethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
Tetrachloroethene (tetrachloroethylene)	g/m ³	-	< 0.0003 ± 0.00032	-	0.05
1,1,1-Trichloroethane	g/m ³	-	< 0.0003 ± 0.00030	-	-
1,1,2-Trichloroethane	g/m ³	-	< 0.0003 ± 0.00031	-	-
Trichloroethene (trichloroethylene)	g/m ³	-	< 0.0003 ± 0.00031	-	0.03
Trichlorofluoromethane	g/m ³	-	< 0.0003 ± 0.00032	-	-
1,2,3-Trichloropropane	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,1,2-Trichlorotrifluoroethane (Freon 113)	g/m ³	-	< 0.0003 ± 0.00027	-	-
Vinyl chloride	g/m ³	-	< 0.0003 ± 0.00030	-	0.0003
Halogenated Aromatics in VOC Water by Headspace GC-MS					
Chlorobenzene (monochlorobenzene)	g/m ³	-	< 0.0003 ± 0.00031	≤ 0.01	-
1,2-Dichlorobenzene	g/m ³	-	< 0.0003 ± 0.00031	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5
1,3-Dichlorobenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,4-Dichlorobenzene	g/m ³	-	< 0.0003 ± 0.00031	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4
1,2,3-Trichlorobenzene	g/m ³	-	< 0.0003 ± 0.00029	≤ 0.01	-
1,2,4-Trichlorobenzene	g/m ³	-	< 0.0003 ± 0.00029	≤ 0.005	-
1,3,5-Trichlorobenzene	g/m ³	-	< 0.0003 ± 0.00031	≤ 0.05	-
Bromobenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
2-Chlorotoluene	g/m ³	-	< 0.0003 ± 0.00031	-	-
4-Chlorotoluene	g/m ³	-	< 0.0003 ± 0.00031	-	-
Monoaromatic Hydrocarbons in VOC Water by Headspace GC-MS					
n-Butylbenzene	g/m ³	-	< 0.0005 ± 0.00034	-	-
tert-Butylbenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
4-Isopropyltoluene (p-Cymene)	g/m ³	-	< 0.0005 ± 0.00034	-	-
Isopropylbenzene (Cumene)	g/m ³	-	< 0.0003 ± 0.00031	-	-
n-Propylbenzene	g/m ³	-	< 0.0005 ± 0.00034	-	-
sec-Butylbenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
Styrene	g/m ³	-	< 0.0005 ± 0.00034	≤ 0.004	0.03
1,2,4-Trimethylbenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
1,3,5-Trimethylbenzene	g/m ³	-	< 0.0003 ± 0.00031	-	-
Ketones in VOC Water by Headspace GC-MS					
Acetone	g/m ³	-	0.053 ± 0.034	-	-
2-Butanone (MEK)	g/m ³	-	< 0.05 ± 0.016	-	-
Methyl tert-butylether (MTBE)	g/m ³	-	< 0.0003 ± 0.00031	-	-
4-Methylpentan-2-one (MIBK)	g/m ³	-	< 0.010 ± 0.0045	-	-
Trihalomethanes in VOC Water by Headspace GC-MS					

Sample Type: Aqueous

Sample Name:		NWTP Clearwater 26-Jun-2024 7:45 am	Maitai South Branch 26-Jun-2024 9:20 am	Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:		3615560.1	3615560.2		
Trihalomethanes in VOC Water by Headspace GC-MS					
Bromodichloromethane	g/m ³	-	< 0.0003 ± 0.00030	-	0.06
Bromoform (tribromomethane)	g/m ³	-	< 0.0003 ± 0.00030	-	0.1
Chloroform (Trichloromethane)	g/m ³	-	< 0.0003 ± 0.00030	-	0.4
Dibromochloromethane	g/m ³	-	< 0.0003 ± 0.00030	-	0.15
Other VOC in Water by Headspace GC-MS					
Carbon disulphide	g/m ³	-	< 0.0005 ± 0.0031	-	-
Naphthalene	g/m ³	-	< 0.0005 ± 0.00034	-	-

Sample Type: Aqueous					
Sample Name:		Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:		3615560.3	3615560.4		
Individual Tests					
Total Alkalinity	g/m ³ as CaCO ₃	58.1 ± 2.5	61.0 ± 2.6	-	-
Total Hardness	g/m ³ as CaCO ₃	62.9 ± 3.1	63.9 ± 3.0	≤ 200	-
Dissolved Calcium	g/m ³	17.7 ± 1.2 #1	12.98 ± 0.82 #1	-	-
Dissolved Magnesium	g/m ³	4.56 ± 0.31 #1	7.64 ± 0.52 #1	-	-
Total Cyanide	g/m ³	< 0.002 ± 0.0017	< 0.002 ± 0.0017	-	0.6
Fluoride	g/m ³	< 0.05 ± 0.041	< 0.05 ± 0.041	-	1.5
Total Ammoniacal-N	g/m ³	< 0.010 ± 0.0067	< 0.010 ± 0.0067	≤ 1.2	-
Nitrite-N	g/m ³	0.0066 ± 0.0017	< 0.002 ± 0.0014	-	0.91
Nitrate-N	g/m ³	0.0526 ± 0.0074	0.0520 ± 0.0066	-	11.3
Nitrate-N + Nitrite-N	g/m ³	0.0591 ± 0.0073	0.0522 ± 0.0064	-	-
Dissolved Reactive Phosphorus	g/m ³	< 0.004 ± 0.0027	< 0.004 ± 0.0027	-	-
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
Acetochlor	g/m ³	< 0.00004 ± 0.00042	< 0.00004 ± 0.00042	-	-
Alachlor	g/m ³	< 0.00004 ± 0.00018	< 0.00004 ± 0.00018	-	0.02
Atrazine	g/m ³	< 0.00004 ± 0.000024	< 0.00004 ± 0.000024	-	0.002
Atrazine-desethyl	g/m ³	< 0.00004 ± 0.00041	< 0.00004 ± 0.00041	-	-
Atrazine-desisopropyl	g/m ³	< 0.00008 ± 0.00018	< 0.00008 ± 0.00018	-	-
Azaconazole	g/m ³	< 0.00002 ± 0.0000071	< 0.00002 ± 0.0000071	-	-
Azinphos-methyl	g/m ³	< 0.00008 ± 0.000036	< 0.00008 ± 0.000036	-	0.004
Benalaxyl	g/m ³	< 0.00002 ± 0.0000094	< 0.00002 ± 0.0000094	-	-
Bitertanol	g/m ³	< 0.00008 ± 0.000048	< 0.00008 ± 0.000048	-	-
Bromacil	g/m ³	< 0.00004 ± 0.000025	< 0.00004 ± 0.000025	-	0.4
Bromopropylate	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Butachlor	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	-
Captan	g/m ³	< 0.00008 ± 0.000060	< 0.00008 ± 0.000060	-	-
Carbaryl	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	-
Carbofenthion	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Carbofuran	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	0.008
Chlorfluazuron	g/m ³	< 0.00004 ± 0.000032	< 0.00004 ± 0.000032	-	-
Chlorothalonil	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Chlorpyrifos	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	0.04
Chlorpyrifos-methyl	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Chlortoluron	g/m ³	< 0.00008 ± 0.000062	< 0.00008 ± 0.000062	-	0.04
Cyanazine	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	0.0007
Cyfluthrin	g/m ³	< 0.00004 ± 0.000027	< 0.00004 ± 0.000027	-	-
Cyhalothrin	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Cypermethrin	g/m ³	< 0.00008 ± 0.000043	< 0.00008 ± 0.000043	-	-
Deltamethrin (including Tralomethrin)	g/m ³	< 0.00006 ± 0.000027	< 0.00006 ± 0.000027	-	-
Diazinon	g/m ³	< 0.00002 ± 0.0000083	< 0.00002 ± 0.0000083	-	-
Dichlofluanid	g/m ³	< 0.00004 ± 0.00018	< 0.00004 ± 0.00018	-	-
Dichloran	g/m ³	< 0.0002 ± 0.000089	< 0.0002 ± 0.000089	-	-
Dichlorvos	g/m ³	< 0.00008 ± 0.00018	< 0.00008 ± 0.00018	-	-
Difenoconazole	g/m ³	< 0.00008 ± 0.000043	< 0.00008 ± 0.000043	-	-
Dimethoate	g/m ³	< 0.00008 ± 0.000057	< 0.00008 ± 0.000057	-	0.008
Diphenylamine	g/m ³	< 0.00008 ± 0.00018	< 0.00008 ± 0.00018	-	-
Diuron	g/m ³	< 0.00004 ± 0.000023	< 0.00004 ± 0.000023	-	0.02
Fenpropimorph	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Fluazifop-butyl	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Fluometuron	g/m ³	< 0.00004 ± 0.000026	< 0.00004 ± 0.000026	-	-
Flusilazole	g/m ³	< 0.00004 ± 0.000028	< 0.00004 ± 0.000028	-	-
Fluvalinate	g/m ³	< 0.00004 ± 0.000011	< 0.00004 ± 0.000011	-	-
Furalaxyl	g/m ³	< 0.00002 ± 0.0000079	< 0.00002 ± 0.0000079	-	-
Haloxypop-methyl	g/m ³	< 0.00004 ± 0.000027	< 0.00004 ± 0.000027	-	-
Hexaconazole	g/m ³	< 0.00004 ± 0.000060	< 0.00004 ± 0.000060	-	-
Hexazinone	g/m ³	< 0.00002 ± 0.000017	< 0.00002 ± 0.000017	-	0.4

Sample Type: Aqueous					
Sample Name:	Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.3	3615560.4			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	g/m ³	< 0.0002 ± 0.00011	< 0.0002 ± 0.00011	-	-
Kresoxim-methyl	g/m ³	< 0.00002 ± 0.000019	< 0.00002 ± 0.000019	-	-
Linuron	g/m ³	< 0.00005 ± 0.000021	< 0.00005 ± 0.000021	-	-
Malathion	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Metalaxyl	g/m ³	< 0.00004 ± 0.000023	< 0.00004 ± 0.000023	-	0.3
Metolachlor	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	0.01
Metribuzin	g/m ³	< 0.00004 ± 0.000027	< 0.00004 ± 0.000027	-	0.07
Molinate	g/m ³	< 0.00008 ± 0.000030	< 0.00008 ± 0.000030	-	0.007
Myclobutanil	g/m ³	< 0.00004 ± 0.000033	< 0.00004 ± 0.000033	-	-
Naled	g/m ³	< 0.0002 ± 0.000056	< 0.0002 ± 0.000056	-	-
Norflurazon	g/m ³	< 0.00008 ± 0.000028	< 0.00008 ± 0.000028	-	-
Oxadiazon	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	0.2
Oxyfluorfen	g/m ³	< 0.00002 ± 0.000019	< 0.00002 ± 0.000019	-	-
Paclobutrazol	g/m ³	< 0.00004 ± 0.000023	< 0.00004 ± 0.000023	-	-
Parathion-ethyl	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Parathion-methyl	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Pendimethalin	g/m ³	< 0.00004 ± 0.000051	< 0.00004 ± 0.000051	-	0.02
Permethrin	g/m ³	< 0.00002 ± 0.000020	< 0.00002 ± 0.000020	-	-
Pirimicarb	g/m ³	< 0.00004 ± 0.000015	< 0.00004 ± 0.000015	-	-
Pirimiphos-methyl	g/m ³	< 0.00004 ± 0.000024	< 0.00004 ± 0.000024	-	0.1
Prochloraz	g/m ³	< 0.0002 ± 0.000059	< 0.0002 ± 0.000059	-	-
Procymidone	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	0.7
Prometryn	g/m ³	< 0.00002 ± 0.000020	< 0.00002 ± 0.000020	-	-
Propachlor	g/m ³	< 0.00004 ± 0.000024	< 0.00004 ± 0.000024	-	-
Propanil	g/m ³	< 0.0002 ± 0.000056	< 0.0002 ± 0.000056	-	-
Propazine	g/m ³	< 0.00002 ± 0.000020	< 0.00002 ± 0.000020	-	0.07
Propiconazole	g/m ³	< 0.00004 ± 0.000033	< 0.00004 ± 0.000033	-	-
Pyriproxyfen	g/m ³	< 0.00004 ± 0.000033	< 0.00004 ± 0.000033	-	0.4
Quizalofop-ethyl	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Simazine	g/m ³	< 0.00004 ± 0.000013	< 0.00004 ± 0.000013	-	0.002
Simetryn	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Sulfentrazone	g/m ³	< 0.0002 ± 0.000056	< 0.0002 ± 0.000056	-	-
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	g/m ³	< 0.00008 ± 0.000032	< 0.00008 ± 0.000032	-	-
Tebuconazole	g/m ³	< 0.00004 ± 0.000059	< 0.00004 ± 0.000059	-	-
Terbacil	g/m ³	< 0.00004 ± 0.000032	< 0.00004 ± 0.000032	-	0.04
Terbumeton	g/m ³	< 0.00004 ± 0.000021	< 0.00004 ± 0.000021	-	-
Terbutylazine	g/m ³	< 0.00002 ± 0.000079	< 0.00002 ± 0.000079	-	0.008
Terbutylazine-desethyl	g/m ³	< 0.00004 ± 0.000038	< 0.00004 ± 0.000038	-	-
Terbutryn	g/m ³	< 0.00004 ± 0.000023	< 0.00004 ± 0.000023	-	-
Thiabendazole	g/m ³	< 0.0002 ± 0.000063	< 0.0002 ± 0.000063	-	0.4
Thiobencarb	g/m ³	< 0.00004 ± 0.000022	< 0.00004 ± 0.000022	-	-
Tolyfluanid	g/m ³	< 0.00002 ± 0.000019	< 0.00002 ± 0.000019	-	-
Triazophos	g/m ³	< 0.00004 ± 0.000032	< 0.00004 ± 0.000032	-	-
Trifluralin	g/m ³	< 0.00004 ± 0.000027	< 0.00004 ± 0.000027	-	0.03
Vinclozolin	g/m ³	< 0.00004 ± 0.000048	< 0.00004 ± 0.000048	-	-
Drinking water metals suite, totals, trace					
Total Aluminium	g/m ³	0.115 ± 0.017	0.0243 ± 0.0040	≤ 0.1	1
Total Antimony	g/m ³	< 0.00021 ± 0.00014	< 0.00021 ± 0.00014	-	0.02
Total Arsenic	g/m ³	< 0.0011 ± 0.00074	< 0.0011 ± 0.00074	-	0.01
Total Barium	g/m ³	< 0.0053 ± 0.00045	< 0.0053 ± 0.00045	-	1.5
Total Beryllium	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	-
Total Boron	g/m ³	0.0130 ± 0.0040	0.0167 ± 0.0042	-	2.4
Total Cadmium	g/m ³	< 0.000053 ± 0.000036	< 0.000053 ± 0.000036	-	0.004

Sample Type: Aqueous					
Sample Name:	Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.3	3615560.4			
Drinking water metals suite, totals, trace					
Total Calcium	g/m ³	17.57 ± 0.71 #1	12.79 ± 0.52 #1	-	-
Total Chromium	g/m ³	0.00309 ± 0.00043	0.00133 ± 0.00037	-	0.05
Total Copper	g/m ³	0.00233 ± 0.00042	0.00097 ± 0.00037	≤ 1	2
Total Iron	g/m ³	0.202 ± 0.032	0.040 ± 0.015	≤ 0.3	-
Total Lead	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	0.01
Total Lithium	g/m ³	0.00041 ± 0.00028	0.00278 ± 0.00044	-	-
Total Magnesium	g/m ³	4.35 ± 0.35 #1	7.31 ± 0.59 #1	-	-
Total Manganese	g/m ³	0.0262 ± 0.0027	0.00121 ± 0.00037	≤ 0.04 (Staining) ≤ 0.10 (Taste)	0.4
Total Mercury	g/m ³	< 0.00008 ± 0.00053	< 0.00008 ± 0.00053	-	0.007
Total Molybdenum	g/m ³	< 0.00021 ± 0.00015	< 0.00021 ± 0.00015	-	-
Total Nickel	g/m ³	0.00718 ± 0.00093	0.00339 ± 0.00054	-	0.08
Total Potassium	g/m ³	0.310 ± 0.040	0.281 ± 0.040	-	-
Total Selenium	g/m ³	< 0.0011 ± 0.00074	< 0.0011 ± 0.00074	-	0.04
Total Silver	g/m ³	< 0.00011 ± 0.000074	< 0.00011 ± 0.000074	-	-
Total Sodium	g/m ³	3.15 ± 0.19	3.81 ± 0.23	≤ 200	-
Total Tin	g/m ³	< 0.00053 ± 0.00036	< 0.00053 ± 0.00036	-	-
Total Uranium	g/m ³	< 0.000021 ± 0.000014	< 0.000021 ± 0.000014	-	0.03
Total Zinc	g/m ³	0.00182 ± 0.00075	0.00148 ± 0.00074	≤ 1.5	-
Acid Herbicides Screen in Water by LCMSMS					
Acifluorfen	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Bentazone	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Bromoxynil	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Clopyralid	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
2,4-Dichlorophenoxyacetic acid (24D)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.04
2,4-Dichlorophenoxybutyric acid (24DB)	g/m ³	< 0.0006 ± 0.00025	< 0.0006 ± 0.00025	-	0.1
Dicamba	g/m ³	< 0.0006 ± 0.00021	< 0.0006 ± 0.00021	-	-
Dichlorprop	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.1
Fluazifop	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Fluroxypyr	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Haloxypop	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
2-methyl-4-chlorophenoxyacetic acid (MCPA)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.8
2-methyl-4-chlorophenoxybutanoic acid (MCPB)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Mecoprop	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.01
Oryzalin	g/m ³	< 0.0006 ± 0.00023	< 0.0006 ± 0.00023	-	0.4
2,3,4,6-Tetrachlorophenol (TCP)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
2,4,5-Trichlorophenoxypropionic acid (245TP, Fenoprop, Silvex)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.01
2,4,5-Trichlorophenoxyacetic acid (245T)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.01
Pentachlorophenol (PCP)	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.009
Picloram	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.2
Quizalofop	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	-
Triclopyr	g/m ³	< 0.0004 ± 0.00021	< 0.0004 ± 0.00021	-	0.1
Haloethers Trace in SVOC Water Samples by GC-MS					
Bis(2-chloroethoxy) methane	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Bis(2-chloroethyl)ether	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Bis(2-chloroisopropyl)ether	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
4-Bromophenyl phenyl ether	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
4-Chlorophenyl phenyl ether	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Nitrogen containing compounds Trace in SVOC Water Samples, GC-MS					
2,4-Dinitrotoluene	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
2,6-Dinitrotoluene	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Nitrobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
N-Nitrosodi-n-propylamine	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-

Sample Type: Aqueous					
Sample Name:	Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.3	3615560.4			
Nitrogen containing compounds Trace in SVOC Water Samples, GC-MS					
N-Nitrosodiphenylamine + Diphenylamine	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Organochlorine Pesticides Trace in SVOC Water Samples by GC-MS					
Aldrin	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
alpha-BHC	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
beta-BHC	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
delta-BHC	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
gamma-BHC (Lindane)	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	0.002
4,4'-DDD	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
4,4'-DDE	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
4,4'-DDT	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Dieldrin	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Endosulfan I	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Endosulfan II	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Endosulfan sulphate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Endrin	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	0.001
Endrin ketone	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Heptachlor	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Heptachlor epoxide	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Hexachlorobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Polycyclic Aromatic Hydrocarbons Trace in SVOC Water Samples					
Acenaphthene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Acenaphthylene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Anthracene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Benzo[a]anthracene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Benzo[a]pyrene (BAP)	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	0.0007
Benzo[b]fluoranthene + Benzo[j]fluoranthene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Benzo[g,h,i]perylene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Benzo[k]fluoranthene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
1&2-Chloronaphthalene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Chrysene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Dibenzo[a,h]anthracene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Fluoranthene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Fluorene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Indeno(1,2,3-c,d)pyrene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
2-Methylnaphthalene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Naphthalene	g/m ³	< 0.0003 ± 0.00020	< 0.0003 ± 0.00020	-	-
Phenanthrene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Pyrene	g/m ³	< 0.0003 ± 0.00021	< 0.0003 ± 0.00021	-	-
Phenols Trace (drinkingwater) in SVOC Water Samples by GC-MS					
2-Chlorophenol	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.0001 (Taste) ≤ 0.01 (Odour)	-
2,4-Dichlorophenol	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.0003 (Taste) ≤ 0.04 (Odour)	-
2,4,6-Trichlorophenol	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	≤ 0.002 (Taste) ≤ 0.3 (Odour)	0.2
Phenols Trace (non-drinkingwater) in SVOC Water Samples by GC-MS					
4-Chloro-3-methylphenol	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
2,4-Dimethylphenol	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
3 & 4-Methylphenol (m- + p-cresol)	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
2-Methylphenol (o-Cresol)	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
2-Nitrophenol	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Pentachlorophenol (PCP)	g/m ³	< 0.010 ± 0.0067	< 0.010 ± 0.0067	-	0.009
Phenol	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
2,4,5-Trichlorophenol	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-

Sample Type: Aqueous					
Sample Name:	Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.3	3615560.4			
Plasticisers Trace (non-drinkingwater) in SVOC Water by GCMS					
Butylbenzylphthalate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Diethylphthalate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Dimethylphthalate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Di-n-butylphthalate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Di-n-octylphthalate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Plasticisers Trace (drinkingwater) in SVOC Water Samples by GCMS					
Bis(2-ethylhexyl)phthalate	g/m ³	< 0.003 ± 0.0020	< 0.003 ± 0.0020	-	0.009
Di(2-ethylhexyl)adipate	g/m ³	< 0.0010 ± 0.00067	< 0.0010 ± 0.00067	-	-
Other Halogenated compounds Trace (drinkingwater) in SVOC Water					
1,2-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5
1,3-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
1,4-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4
Other Halogenated compounds Trace (non-drinkingwater) in SVOC					
Hexachlorobutadiene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	0.0007
Hexachloroethane	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
1,2,4-Trichlorobenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.005	-
Other SVOC Trace in SVOC Water Samples by GC-MS					
Benzyl alcohol	g/m ³	< 0.005 ± 0.0034	< 0.005 ± 0.0034	-	-
Carbazole	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Dibenzofuran	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Isophorone	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Tributyl Tin in Water samples by LC-MS/MS*					
Tributyltin (as Sn)*	g/m ³	< 0.00004	< 0.00004	-	-
Triphenyltin (as Sn)*	g/m ³	< 0.00003	< 0.00003	-	-
BTEX in VOC Water by Headspace GC-MS					
Benzene	g/m ³	< 0.0003 ± 0.00032	< 0.0003 ± 0.00032	-	0.01
Ethylbenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.002 (Odour) ≤ 0.08 (Taste)	0.3
Toluene	g/m ³	< 0.0003 ± 0.00060	< 0.0003 ± 0.00060	≤ 0.03 (Odour) ≤ 0.04 (Taste)	0.8
m&p-Xylene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
o-Xylene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Halogenated Aliphatics in VOC Water by Headspace GC-MS					
Bromomethane (Methyl Bromide)	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Carbon tetrachloride	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.005
Chloroethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Chloromethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,2-Dibromo-3-chloropropane	g/m ³	< 0.0003 ± 0.00026	< 0.0003 ± 0.00026	-	0.001
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m ³	< 0.0003 ± 0.00025	< 0.0003 ± 0.00025	-	0.0004
Dibromomethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Dichlorodifluoromethane	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	-
1,1-Dichloroethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,2-Dichloroethane	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.03
1,1-Dichloroethene	g/m ³	< 0.0003 ± 0.00032	< 0.0003 ± 0.00032	-	-
cis-1,2-Dichloroethene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
trans-1,2-Dichloroethene	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	-
Dichloromethane (methylene chloride)	g/m ³	< 0.010 ± 0.0067	< 0.010 ± 0.0067	-	0.02
1,2-Dichloropropane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	0.05
1,3-Dichloropropane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,1-Dichloropropene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
cis-1,3-Dichloropropene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
trans-1,3-Dichloropropene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-

Sample Type: Aqueous					
Sample Name:	Maitai Dam 26-Jun-2024 9:40 am	Roding Dam 26-Jun-2024 7:30 am	Aesthetic Values	Maximum Acceptable Values (MAV)	
Lab Number:	3615560.3	3615560.4			
Halogenated Aliphatics in VOC Water by Headspace GC-MS					
Hexachlorobutadiene	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.0007
1,1,1,2-Tetrachloroethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,1,2,2-Tetrachloroethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Tetrachloroethene (tetrachloroethylene)	g/m ³	< 0.0003 ± 0.00032	< 0.0003 ± 0.00032	-	0.05
1,1,1-Trichloroethane	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	-
1,1,2-Trichloroethane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Trichloroethene (trichloroethylene)	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	0.03
Trichlorofluoromethane	g/m ³	< 0.0003 ± 0.00032	< 0.0003 ± 0.00032	-	-
1,2,3-Trichloropropane	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,1,2-Trichlorotrifluoroethane (Freon 113)	g/m ³	< 0.0003 ± 0.00027	< 0.0003 ± 0.00027	-	-
Vinyl chloride	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.0003
Halogenated Aromatics in VOC Water by Headspace GC-MS					
Chlorobenzene (monochlorobenzene)	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	≤ 0.01	-
1,2-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5
1,3-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,4-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4
1,2,3-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00029	< 0.0003 ± 0.00029	≤ 0.01	-
1,2,4-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00029	< 0.0003 ± 0.00029	≤ 0.005	-
1,3,5-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	≤ 0.05	-
Bromobenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
2-Chlorotoluene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
4-Chlorotoluene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Monoaromatic Hydrocarbons in VOC Water by Headspace GC-MS					
n-Butylbenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
tert-Butylbenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
4-Isopropyltoluene (p-Cymene)	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
Isopropylbenzene (Cumene)	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
n-Propylbenzene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-
sec-Butylbenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Styrene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	≤ 0.004	0.03
1,2,4-Trimethylbenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
1,3,5-Trimethylbenzene	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
Ketones in VOC Water by Headspace GC-MS					
Acetone	g/m ³	< 0.05 ± 0.034	< 0.05 ± 0.034	-	-
2-Butanone (MEK)	g/m ³	< 0.05 ± 0.016	< 0.05 ± 0.016	-	-
Methyl tert-butylether (MTBE)	g/m ³	< 0.0003 ± 0.00031	< 0.0003 ± 0.00031	-	-
4-Methylpentan-2-one (MIBK)	g/m ³	< 0.010 ± 0.0045	< 0.010 ± 0.0045	-	-
Trihalomethanes in VOC Water by Headspace GC-MS					
Bromodichloromethane	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.06
Bromoform (tribromomethane)	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.1
Chloroform (Trichloromethane)	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.4
Dibromochloromethane	g/m ³	< 0.0003 ± 0.00030	< 0.0003 ± 0.00030	-	0.15
Other VOC in Water by Headspace GC-MS					
Carbon disulphide	g/m ³	< 0.0005 ± 0.00031	< 0.0005 ± 0.00031	-	-
Naphthalene	g/m ³	< 0.0005 ± 0.00034	< 0.0005 ± 0.00034	-	-

Sample Type: Aqueous					
Sample Name:		Supernatant Pond 4 26-Jun-2024 8:20 am		Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:		3615560.5			
Individual Tests					
Total Alkalinity	g/m ³ as CaCO ₃	59.2 ± 2.5		-	-
Total Hardness	g/m ³ as CaCO ₃	67.8 ± 3.2		≤ 200	-
Dissolved Calcium	g/m ³	14.79 ± 0.93 #1		-	-
Dissolved Magnesium	g/m ³	7.50 ± 0.51 #1		-	-
Total Cyanide	g/m ³	< 0.002 ± 0.0017		-	0.6
Fluoride	g/m ³	< 0.05 ± 0.041		-	1.5
Total Ammoniacal-N	g/m ³	< 0.010 ± 0.0067		≤ 1.2	-
Nitrite-N	g/m ³	< 0.002 ± 0.0014		-	0.91
Nitrate-N	g/m ³	0.0398 ± 0.0053		-	11.3
Nitrate-N + Nitrite-N	g/m ³	0.0413 ± 0.0052		-	-
Dissolved Reactive Phosphorus	g/m ³	< 0.004 ± 0.0027		-	-
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS					
Acetochlor	g/m ³	< 0.00004 ± 0.00042		-	-
Alachlor	g/m ³	< 0.00004 ± 0.00018		-	0.02
Atrazine	g/m ³	< 0.00004 ± 0.000024		-	0.002
Atrazine-desethyl	g/m ³	< 0.00004 ± 0.00041		-	-
Atrazine-desisopropyl	g/m ³	< 0.00008 ± 0.00018		-	-
Azaconazole	g/m ³	< 0.00002 ± 0.0000071		-	-
Azinphos-methyl	g/m ³	< 0.00008 ± 0.000036		-	0.004
Benalaxyl	g/m ³	< 0.00002 ± 0.0000094		-	-
Bitertanol	g/m ³	< 0.00008 ± 0.000048		-	-
Bromacil	g/m ³	< 0.00004 ± 0.000025		-	0.4
Bromopropylate	g/m ³	< 0.00004 ± 0.000022		-	-
Butachlor	g/m ³	< 0.00004 ± 0.000021		-	-
Captan	g/m ³	< 0.00008 ± 0.000060		-	-
Carbaryl	g/m ³	< 0.00004 ± 0.000021		-	-
Carbofenthion	g/m ³	< 0.00004 ± 0.000022		-	-
Carbofuran	g/m ³	< 0.00004 ± 0.000022		-	0.008
Chlorfluazuron	g/m ³	< 0.00004 ± 0.000032		-	-
Chlorothalonil	g/m ³	< 0.00004 ± 0.000022		-	-
Chlorpyrifos	g/m ³	< 0.00004 ± 0.000022		-	0.04
Chlorpyrifos-methyl	g/m ³	< 0.00004 ± 0.000022		-	-
Chlortoluron	g/m ³	< 0.00008 ± 0.000062		-	0.04
Cyanazine	g/m ³	< 0.00004 ± 0.000021		-	0.0007
Cyfluthrin	g/m ³	< 0.00004 ± 0.000027		-	-
Cyhalothrin	g/m ³	< 0.00004 ± 0.000022		-	-
Cypermethrin	g/m ³	< 0.00008 ± 0.000043		-	-
Deltamethrin (including Tralomethrin)	g/m ³	< 0.00006 ± 0.000027		-	-
Diazinon	g/m ³	< 0.00002 ± 0.0000083		-	-
Dichlofluanid	g/m ³	< 0.00004 ± 0.00018		-	-
Dichloran	g/m ³	< 0.0002 ± 0.000089		-	-
Dichlorvos	g/m ³	< 0.00008 ± 0.00018		-	-
Difenoconazole	g/m ³	< 0.00008 ± 0.000043		-	-
Dimethoate	g/m ³	< 0.00008 ± 0.000057		-	0.008
Diphenylamine	g/m ³	< 0.00008 ± 0.00018		-	-
Diuron	g/m ³	< 0.00004 ± 0.000023		-	0.02
Fenpropimorph	g/m ³	< 0.00004 ± 0.000022		-	-
Fluazifop-butyl	g/m ³	< 0.00004 ± 0.000022		-	-
Fluometuron	g/m ³	< 0.00004 ± 0.000026		-	-
Flusilazole	g/m ³	< 0.00004 ± 0.000028		-	-
Fluvalinate	g/m ³	< 0.00004 ± 0.000011		-	-
Furalaxyl	g/m ³	< 0.00002 ± 0.0000079		-	-
Haloxifop-methyl	g/m ³	< 0.00004 ± 0.000027		-	-
Hexaconazole	g/m ³	< 0.00004 ± 0.000060		-	-
Hexazinone	g/m ³	< 0.00002 ± 0.000017		-	0.4

Sample Type: Aqueous				
Sample Name:	Supernatant Pond 4 26-Jun-2024 8:20 am		Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:	3615560.5			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS				
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	g/m ³	< 0.0002 ± 0.00011	-	-
Kresoxim-methyl	g/m ³	< 0.00002 ± 0.000019	-	-
Linuron	g/m ³	< 0.00005 ± 0.000021	-	-
Malathion	g/m ³	< 0.00004 ± 0.000022	-	-
Metalaxyl	g/m ³	< 0.00004 ± 0.000023	-	0.3
Metolachlor	g/m ³	< 0.00004 ± 0.000021	-	0.01
Metribuzin	g/m ³	< 0.00004 ± 0.000027	-	0.07
Molinate	g/m ³	< 0.00008 ± 0.000030	-	0.007
Myclobutanil	g/m ³	< 0.00004 ± 0.000033	-	-
Naled	g/m ³	< 0.0002 ± 0.000056	-	-
Norflurazon	g/m ³	< 0.00008 ± 0.000028	-	-
Oxadiazon	g/m ³	< 0.00004 ± 0.000022	-	0.2
Oxyfluorfen	g/m ³	< 0.00002 ± 0.000019	-	-
Paclobutrazol	g/m ³	< 0.00004 ± 0.000023	-	-
Parathion-ethyl	g/m ³	< 0.00004 ± 0.000022	-	-
Parathion-methyl	g/m ³	< 0.00004 ± 0.000022	-	-
Pendimethalin	g/m ³	< 0.00004 ± 0.000051	-	0.02
Permethrin	g/m ³	< 0.00002 ± 0.000020	-	-
Pirimicarb	g/m ³	< 0.00004 ± 0.000015	-	-
Pirimiphos-methyl	g/m ³	< 0.00004 ± 0.000024	-	0.1
Prochloraz	g/m ³	< 0.0002 ± 0.000059	-	-
Procymidone	g/m ³	< 0.00004 ± 0.000021	-	0.7
Prometryn	g/m ³	< 0.00002 ± 0.000020	-	-
Propachlor	g/m ³	< 0.00004 ± 0.000024	-	-
Propanil	g/m ³	< 0.0002 ± 0.000056	-	-
Propazine	g/m ³	< 0.00002 ± 0.000020	-	0.07
Propiconazole	g/m ³	< 0.00004 ± 0.000033	-	-
Pyriproxyfen	g/m ³	< 0.00004 ± 0.000033	-	0.4
Quizalofop-ethyl	g/m ³	< 0.00004 ± 0.000022	-	-
Simazine	g/m ³	< 0.00004 ± 0.000013	-	0.002
Simetryn	g/m ³	< 0.00004 ± 0.000022	-	-
Sulfentrazone	g/m ³	< 0.0002 ± 0.000056	-	-
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	g/m ³	< 0.00008 ± 0.000032	-	-
Tebuconazole	g/m ³	< 0.00004 ± 0.000059	-	-
Terbacil	g/m ³	< 0.00004 ± 0.000032	-	0.04
Terbumeton	g/m ³	< 0.00004 ± 0.000021	-	-
Terbutylazine	g/m ³	< 0.00002 ± 0.0000079	-	0.008
Terbutylazine-desethyl	g/m ³	< 0.00004 ± 0.000038	-	-
Terbutryn	g/m ³	< 0.00004 ± 0.000023	-	-
Thiabendazole	g/m ³	< 0.0002 ± 0.000063	-	0.4
Thiobencarb	g/m ³	< 0.00004 ± 0.000022	-	-
Tolyfluanid	g/m ³	< 0.00002 ± 0.000019	-	-
Triazophos	g/m ³	< 0.00004 ± 0.000032	-	-
Trifluralin	g/m ³	< 0.00004 ± 0.000027	-	0.03
Vinclozolin	g/m ³	< 0.00004 ± 0.000048	-	-
Drinking water metals suite, totals, trace				
Total Aluminium	g/m ³	0.301 ± 0.043	≤ 0.1	1
Total Antimony	g/m ³	< 0.00021 ± 0.00014	-	0.02
Total Arsenic	g/m ³	< 0.0011 ± 0.00074	-	0.01
Total Barium	g/m ³	< 0.0053 ± 0.00045	-	1.5
Total Beryllium	g/m ³	< 0.00011 ± 0.000074	-	-
Total Boron	g/m ³	0.0131 ± 0.0040	-	2.4
Total Cadmium	g/m ³	< 0.000053 ± 0.000036	-	0.004
Total Calcium	g/m ³	14.65 ± 0.59 #1	-	-

Sample Type: Aqueous					
Sample Name:	Supernatant Pond 4 26-Jun-2024 8:20 am			Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:	3615560.5				
Drinking water metals suite, totals, trace					
Total Chromium	g/m ³	0.00060 ± 0.00036	-	0.05	
Total Copper	g/m ³	< 0.00053 ± 0.00036	≤ 1	2	
Total Iron	g/m ³	0.032 ± 0.015	≤ 0.3	-	
Total Lead	g/m ³	< 0.00011 ± 0.000074	-	0.01	
Total Lithium	g/m ³	0.00115 ± 0.00031	-	-	
Total Magnesium	g/m ³	6.92 ± 0.56 #1	-	-	
Total Manganese	g/m ³	0.00743 ± 0.00083	≤ 0.04 (Staining) ≤ 0.10 (Taste)	0.4	
Total Mercury	g/m ³	< 0.00008 ± 0.00053	-	0.007	
Total Molybdenum	g/m ³	< 0.00021 ± 0.00015	-	-	
Total Nickel	g/m ³	0.00307 ± 0.00051	-	0.08	
Total Potassium	g/m ³	0.285 ± 0.040	-	-	
Total Selenium	g/m ³	< 0.0011 ± 0.00074	-	0.04	
Total Silver	g/m ³	< 0.00011 ± 0.000074	-	-	
Total Sodium	g/m ³	3.72 ± 0.23	≤ 200	-	
Total Tin	g/m ³	< 0.00053 ± 0.00036	-	-	
Total Uranium	g/m ³	< 0.000021 ± 0.000014	-	0.03	
Total Zinc	g/m ³	< 0.0011 ± 0.00074	≤ 1.5	-	
Acid Herbicides Screen in Water by LCMSMS					
Acifluorfen	g/m ³	< 0.0004 ± 0.00021	-	-	
Bentazone	g/m ³	< 0.0004 ± 0.00021	-	-	
Bromoxynil	g/m ³	< 0.0004 ± 0.00021	-	-	
Clopyralid	g/m ³	< 0.0004 ± 0.00021	-	-	
2,4-Dichlorophenoxyacetic acid (24D)	g/m ³	< 0.0004 ± 0.00021	-	0.04	
2,4-Dichlorophenoxybutyric acid (24DB)	g/m ³	< 0.0006 ± 0.00025	-	0.1	
Dicamba	g/m ³	< 0.0006 ± 0.00021	-	-	
Dichlorprop	g/m ³	< 0.0004 ± 0.00021	-	0.1	
Fluazifop	g/m ³	< 0.0004 ± 0.00021	-	-	
Fluroxypyr	g/m ³	< 0.0004 ± 0.00021	-	-	
Haloxypop	g/m ³	< 0.0004 ± 0.00021	-	-	
2-methyl-4-chlorophenoxyacetic acid (MCPA)	g/m ³	< 0.0004 ± 0.00021	-	0.8	
2-methyl-4-chlorophenoxybutanoic acid (MCPB)	g/m ³	< 0.0004 ± 0.00021	-	-	
Mecoprop	g/m ³	< 0.0004 ± 0.00021	-	0.01	
Oryzalin	g/m ³	< 0.0006 ± 0.00023	-	0.4	
2,3,4,6-Tetrachlorophenol (TCP)	g/m ³	< 0.0004 ± 0.00021	-	-	
2,4,5-Trichlorophenoxypropionic acid (245TP, Fenoprop, Silvex)	g/m ³	< 0.0004 ± 0.00021	-	0.01	
2,4,5-Trichlorophenoxyacetic acid (245T)	g/m ³	< 0.0004 ± 0.00021	-	0.01	
Pentachlorophenol (PCP)	g/m ³	< 0.0004 ± 0.00021	-	0.009	
Picloram	g/m ³	< 0.0004 ± 0.00021	-	0.2	
Quizalofop	g/m ³	< 0.0004 ± 0.00021	-	-	
Triclopyr	g/m ³	< 0.0004 ± 0.00021	-	0.1	
Haloethers Trace in SVOC Water Samples by GC-MS					
Bis(2-chloroethoxy) methane	g/m ³	< 0.0005 ± 0.00034	-	-	
Bis(2-chloroethyl)ether	g/m ³	< 0.0005 ± 0.00034	-	-	
Bis(2-chloroisopropyl)ether	g/m ³	< 0.0005 ± 0.00034	-	-	
4-Bromophenyl phenyl ether	g/m ³	< 0.0003 ± 0.00021	-	-	
4-Chlorophenyl phenyl ether	g/m ³	< 0.0005 ± 0.00034	-	-	
Nitrogen containing compounds Trace in SVOC Water Samples, GC-MS					
2,4-Dinitrotoluene	g/m ³	< 0.0010 ± 0.00067	-	-	
2,6-Dinitrotoluene	g/m ³	< 0.0010 ± 0.00067	-	-	
Nitrobenzene	g/m ³	< 0.0005 ± 0.00034	-	-	
N-Nitrosodi-n-propylamine	g/m ³	< 0.0010 ± 0.00067	-	-	
N-Nitrosodiphenylamine + Diphenylamine	g/m ³	< 0.0010 ± 0.00067	-	-	

Sample Type: Aqueous					
Sample Name:	Supernatant Pond 4 26-Jun-2024 8:20 am			Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:	3615560.5				
Organochlorine Pesticides Trace in SVOC Water Samples by GC-MS					
Aldrin	g/m ³	< 0.0005 ± 0.00034	-	-	
alpha-BHC	g/m ³	< 0.0005 ± 0.00034	-	-	
beta-BHC	g/m ³	< 0.0005 ± 0.00034	-	-	
delta-BHC	g/m ³	< 0.0005 ± 0.00034	-	-	
gamma-BHC (Lindane)	g/m ³	< 0.0005 ± 0.00034	-	0.002	
4,4'-DDD	g/m ³	< 0.0005 ± 0.00034	-	-	
4,4'-DDE	g/m ³	< 0.0005 ± 0.00034	-	-	
4,4'-DDT	g/m ³	< 0.0010 ± 0.00067	-	-	
Dieldrin	g/m ³	< 0.0005 ± 0.00034	-	-	
Endosulfan I	g/m ³	< 0.0010 ± 0.00067	-	-	
Endosulfan II	g/m ³	< 0.0010 ± 0.00067	-	-	
Endosulfan sulphate	g/m ³	< 0.0010 ± 0.00067	-	-	
Endrin	g/m ³	< 0.0005 ± 0.00034	-	0.001	
Endrin ketone	g/m ³	< 0.0010 ± 0.00067	-	-	
Heptachlor	g/m ³	< 0.0005 ± 0.00034	-	-	
Heptachlor epoxide	g/m ³	< 0.0005 ± 0.00034	-	-	
Hexachlorobenzene	g/m ³	< 0.0005 ± 0.00034	-	-	
Polycyclic Aromatic Hydrocarbons Trace in SVOC Water Samples					
Acenaphthene	g/m ³	< 0.0003 ± 0.00021	-	-	
Acenaphthylene	g/m ³	< 0.0003 ± 0.00021	-	-	
Anthracene	g/m ³	< 0.0003 ± 0.00021	-	-	
Benzo[a]anthracene	g/m ³	< 0.0003 ± 0.00021	-	-	
Benzo[a]pyrene (BAP)	g/m ³	< 0.0003 ± 0.00020	-	0.0007	
Benzo[b]fluoranthene + Benzo[j]fluoranthene	g/m ³	< 0.0003 ± 0.00020	-	-	
Benzo[g,h,i]perylene	g/m ³	< 0.0003 ± 0.00020	-	-	
Benzo[k]fluoranthene	g/m ³	< 0.0003 ± 0.00020	-	-	
1&2-Chloronaphthalene	g/m ³	< 0.0003 ± 0.00021	-	-	
Chrysene	g/m ³	< 0.0003 ± 0.00021	-	-	
Dibenzo[a,h]anthracene	g/m ³	< 0.0003 ± 0.00020	-	-	
Fluoranthene	g/m ³	< 0.0003 ± 0.00020	-	-	
Fluorene	g/m ³	< 0.0003 ± 0.00020	-	-	
Indeno(1,2,3-c,d)pyrene	g/m ³	< 0.0003 ± 0.00020	-	-	
2-Methylnaphthalene	g/m ³	< 0.0003 ± 0.00020	-	-	
Naphthalene	g/m ³	< 0.0003 ± 0.00020	-	-	
Phenanthrene	g/m ³	< 0.0003 ± 0.00021	-	-	
Pyrene	g/m ³	< 0.0003 ± 0.00021	-	-	
Phenols Trace (drinkingwater) in SVOC Water Samples by GC-MS					
2-Chlorophenol	g/m ³	< 0.0005 ± 0.00034	≤ 0.0001 (Taste) ≤ 0.01 (Odour)	-	
2,4-Dichlorophenol	g/m ³	< 0.0005 ± 0.00034	≤ 0.0003 (Taste) ≤ 0.04 (Odour)	-	
2,4,6-Trichlorophenol	g/m ³	< 0.0010 ± 0.00067	≤ 0.002 (Taste) ≤ 0.3 (Odour)	0.2	
Phenols Trace (non-drinkingwater) in SVOC Water Samples by GC-MS					
4-Chloro-3-methylphenol	g/m ³	< 0.0010 ± 0.00067	-	-	
2,4-Dimethylphenol	g/m ³	< 0.0005 ± 0.00034	-	-	
3 & 4-Methylphenol (m- + p-cresol)	g/m ³	< 0.0010 ± 0.00067	-	-	
2-Methylphenol (o-Cresol)	g/m ³	< 0.0005 ± 0.00034	-	-	
2-Nitrophenol	g/m ³	< 0.0010 ± 0.00067	-	-	
Pentachlorophenol (PCP)	g/m ³	< 0.010 ± 0.0067	-	0.009	
Phenol	g/m ³	< 0.0010 ± 0.00067	-	-	
2,4,5-Trichlorophenol	g/m ³	< 0.0010 ± 0.00067	-	-	
Plasticisers Trace (non-drinkingwater) in SVOC Water by GCMS					
Butylbenzylphthalate	g/m ³	< 0.0010 ± 0.00067	-	-	
Diethylphthalate	g/m ³	< 0.0010 ± 0.00067	-	-	

Sample Type: Aqueous				
Sample Name:	Supernatant Pond 4 26-Jun-2024 8:20 am		Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:	3615560.5			
Plasticisers Trace (non-drinkingwater) in SVOC Water by GCMS				
Dimethylphthalate	g/m ³	< 0.0010 ± 0.00067	-	-
Di-n-butylphthalate	g/m ³	< 0.0010 ± 0.00067	-	-
Di-n-octylphthalate	g/m ³	< 0.0010 ± 0.00067	-	-
Plasticisers Trace (drinkingwater) in SVOC Water Samples by GCMS				
Bis(2-ethylhexyl)phthalate	g/m ³	< 0.003 ± 0.0020	-	0.009
Di(2-ethylhexyl)adipate	g/m ³	< 0.0010 ± 0.00067	-	-
Other Halogenated compounds Trace (drinkingwater) in SVOC Water				
1,2-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5
1,3-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	-	-
1,4-Dichlorobenzene	g/m ³	< 0.0005 ± 0.00034	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4
Other Halogenated compounds Trace (non-drinkingwater) in SVOC				
Hexachlorobutadiene	g/m ³	< 0.0005 ± 0.00034	-	0.0007
Hexachloroethane	g/m ³	< 0.0005 ± 0.00034	-	-
1,2,4-Trichlorobenzene	g/m ³	< 0.0005 ± 0.00034	≤ 0.005	-
Other SVOC Trace in SVOC Water Samples by GC-MS				
Benzyl alcohol	g/m ³	< 0.005 ± 0.0034	-	-
Carbazole	g/m ³	< 0.0005 ± 0.00034	-	-
Dibenzofuran	g/m ³	< 0.0005 ± 0.00034	-	-
Isophorone	g/m ³	< 0.0005 ± 0.00034	-	-
Tributyl Tin in Water samples by LC-MS/MS*				
Tributyltin (as Sn)*	g/m ³	< 0.00004	-	-
Triphenyltin (as Sn)*	g/m ³	< 0.00003	-	-
BTEX in VOC Water by Headspace GC-MS				
Benzene	g/m ³	< 0.0003 ± 0.00032	-	0.01
Ethylbenzene	g/m ³	< 0.0005 ± 0.00034	≤ 0.002 (Odour) ≤ 0.08 (Taste)	0.3
Toluene	g/m ³	0.00092 ± 0.00066	≤ 0.03 (Odour) ≤ 0.04 (Taste)	0.8
m&p-Xylene	g/m ³	< 0.0005 ± 0.00034	-	-
o-Xylene	g/m ³	< 0.0003 ± 0.00031	-	-
Halogenated Aliphatics in VOC Water by Headspace GC-MS				
Bromomethane (Methyl Bromide)	g/m ³	< 0.0003 ± 0.00031	-	-
Carbon tetrachloride	g/m ³	< 0.0003 ± 0.00030	-	0.005
Chloroethane	g/m ³	< 0.0003 ± 0.00031	-	-
Chloromethane	g/m ³	< 0.0003 ± 0.00031	-	-
1,2-Dibromo-3-chloropropane	g/m ³	< 0.0003 ± 0.00026	-	0.001
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m ³	< 0.0003 ± 0.00025	-	0.0004
Dibromomethane	g/m ³	< 0.0003 ± 0.00031	-	-
Dichlorodifluoromethane	g/m ³	< 0.0003 ± 0.00030	-	-
1,1-Dichloroethane	g/m ³	< 0.0003 ± 0.00031	-	-
1,2-Dichloroethane	g/m ³	< 0.0003 ± 0.00030	-	0.03
1,1-Dichloroethene	g/m ³	< 0.0003 ± 0.00032	-	-
cis-1,2-Dichloroethene	g/m ³	< 0.0003 ± 0.00031	-	-
trans-1,2-Dichloroethene	g/m ³	< 0.0003 ± 0.00030	-	-
Dichloromethane (methylene chloride)	g/m ³	< 0.010 ± 0.0067	-	0.02
1,2-Dichloropropane	g/m ³	< 0.0003 ± 0.00031	-	0.05
1,3-Dichloropropane	g/m ³	< 0.0003 ± 0.00031	-	-
1,1-Dichloropropene	g/m ³	< 0.0003 ± 0.00031	-	-
cis-1,3-Dichloropropene	g/m ³	< 0.0005 ± 0.00034	-	-
trans-1,3-Dichloropropene	g/m ³	< 0.0005 ± 0.00034	-	-
Hexachlorobutadiene	g/m ³	< 0.0003 ± 0.00030	-	0.0007
1,1,1,2-Tetrachloroethane	g/m ³	< 0.0003 ± 0.00031	-	-
1,1,2,2-Tetrachloroethane	g/m ³	< 0.0003 ± 0.00031	-	-

Sample Type: Aqueous					
Sample Name:	Supernatant Pond 4 26-Jun-2024 8:20 am			Aesthetic Values	Maximum Acceptable Values (MAV)
Lab Number:	3615560.5				
Halogenated Aliphatics in VOC Water by Headspace GC-MS					
Tetrachloroethene (tetrachloroethylene)	g/m ³	< 0.0003 ± 0.00032	-	0.05	
1,1,1-Trichloroethane	g/m ³	< 0.0003 ± 0.00030	-	-	
1,1,2-Trichloroethane	g/m ³	< 0.0003 ± 0.00031	-	-	
Trichloroethene (trichloroethylene)	g/m ³	< 0.0003 ± 0.00031	-	0.03	
Trichlorofluoromethane	g/m ³	< 0.0003 ± 0.00032	-	-	
1,2,3-Trichloropropane	g/m ³	< 0.0003 ± 0.00031	-	-	
1,1,2-Trichlorotrifluoroethane (Freon 113)	g/m ³	< 0.0003 ± 0.00027	-	-	
Vinyl chloride	g/m ³	< 0.0003 ± 0.00030	-	0.0003	
Halogenated Aromatics in VOC Water by Headspace GC-MS					
Chlorobenzene (monochlorobenzene)	g/m ³	< 0.0003 ± 0.00031	≤ 0.01	-	
1,2-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	≤ 0.001 (Taste) ≤ 0.002 (Odour)	1.5	
1,3-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
1,4-Dichlorobenzene	g/m ³	< 0.0003 ± 0.00031	≤ 0.0003 (Odour) ≤ 0.006 (Taste)	0.4	
1,2,3-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00029	≤ 0.01	-	
1,2,4-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00029	≤ 0.005	-	
1,3,5-Trichlorobenzene	g/m ³	< 0.0003 ± 0.00031	≤ 0.05	-	
Bromobenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
2-Chlorotoluene	g/m ³	< 0.0003 ± 0.00031	-	-	
4-Chlorotoluene	g/m ³	< 0.0003 ± 0.00031	-	-	
Monoaromatic Hydrocarbons in VOC Water by Headspace GC-MS					
n-Butylbenzene	g/m ³	< 0.0005 ± 0.00034	-	-	
tert-Butylbenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
4-Isopropyltoluene (p-Cymene)	g/m ³	< 0.0005 ± 0.00034	-	-	
Isopropylbenzene (Cumene)	g/m ³	< 0.0003 ± 0.00031	-	-	
n-Propylbenzene	g/m ³	< 0.0005 ± 0.00034	-	-	
sec-Butylbenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
Styrene	g/m ³	< 0.0005 ± 0.00034	≤ 0.004	0.03	
1,2,4-Trimethylbenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
1,3,5-Trimethylbenzene	g/m ³	< 0.0003 ± 0.00031	-	-	
Ketones in VOC Water by Headspace GC-MS					
Acetone	g/m ³	< 0.05 ± 0.034	-	-	
2-Butanone (MEK)	g/m ³	< 0.05 ± 0.016	-	-	
Methyl tert-butylether (MTBE)	g/m ³	< 0.0003 ± 0.00031	-	-	
4-Methylpentan-2-one (MIBK)	g/m ³	< 0.010 ± 0.0045	-	-	
Trihalomethanes in VOC Water by Headspace GC-MS					
Bromodichloromethane	g/m ³	0.00049 ± 0.00034	-	0.06	
Bromoform (tribromomethane)	g/m ³	< 0.0003 ± 0.00030	-	0.1	
Chloroform (Trichloromethane)	g/m ³	0.0039 ± 0.0014	-	0.4	
Dibromochloromethane	g/m ³	< 0.0003 ± 0.00030	-	0.15	
Other VOC in Water by Headspace GC-MS					
Carbon disulphide	g/m ³	< 0.0005 ± 0.00031	-	-	
Naphthalene	g/m ³	< 0.0005 ± 0.00034	-	-	

Note: The Maximum Acceptable Values (MAV) are taken from the 'Water Services (Drinking Water Standards for New Zealand) Regulations 2022', published under the authority of the New Zealand Government-2022. Copies of this publication are available from: <https://www.legislation.govt.nz/regulation/public/2022/0168/latest/whole.html>

The standards set limits for the concentration of determinands in drinking water. The Maximum Acceptable Values (MAVs) for any determinand must not be exceeded at any time.

Under Section 73 (2) of the Water Services Act 2021, the laboratory is required to report the results of any analysis or test carried out (for the purposes of testing for compliance with the Drinking Water Standards for New Zealand 2022) that indicates any non-compliance (transgression) with the Maximum Acceptable Values (MAVs) to Taumata Arowai, the water services regulator for Aotearoa.

The Aesthetic Values are taken the publication, 'Aesthetic Values for Drinking Water Notice 2022' issued by the Water Services Regulator ("Taumata Arowai"). Aesthetic values specify or provide minimum or maximum values for substances and other characteristics that relate to the acceptability of drinking water to consumers (such as appearance, taste or odour).

The reported uncertainty is an expanded uncertainty with a level of confidence of approximately 95 percent (i.e. two standard deviations, calculated using a coverage factor of 2). Reported uncertainties are calculated from the performance of typical matrices, and do not include variation due to sampling. For further information on uncertainty of measurement at Hill Laboratories, refer to the technical note on our website: www.hill-laboratories.com/files/Intro_To_UOM.pdf, or contact the laboratory.

Note that the units: g/m³ are the same as mg/L and ppm.

Analyst's Comments
#1 It has been noted that the result for the dissolved fraction was greater than that for the total fraction, but within analytical variation of the methods.

Summary of Methods

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 simple 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. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Filtration, Unpreserved	Sample filtration through 0.45 µm membrane filter. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1-5
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1-5
Total acid digest for Silver analysis	Boiling nitric / hydrochloric acid digestion (5:1 ratio). APHA 3030 F (modified) : Online Edition.	-	1-5
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. Analysed at Hill Laboratories - Chemistry; Unit 1, 17 Print Place, Middleton, Christchurch. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m ³ as CaCO ₃	1-5
Total Hardness	Calculation from Calcium and Magnesium. APHA 2340 B : Online Edition.	1.0 g/m ³ as CaCO ₃	1-5
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B : Online Edition.	-	1-5
Dissolved Calcium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.05 g/m ³	1-5
Dissolved Magnesium	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.02 g/m ³	1-5
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m ³	1-5
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F- C : Online Edition.	0.05 g/m ³	1-5
Total Ammoniacal-N	Filtered Sample from Christchurch. Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) : Online Edition.	0.010 g/m ³	2-5
Nitrite-N	Filtered sample from Christchurch. Automated Azo dye colorimetry, Flow injection analyser. APHA 4500-NO ₂ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1-5
Nitrate-N	Calculation: (Nitrate-N + Nitrite-N) - Nitrite-N. In-House.	0.0010 g/m ³	1-5
Nitrate-N + Nitrite-N	Filtered sample from Christchurch. Total oxidised nitrogen. Automated cadmium reduction, flow injection analyser. APHA 4500-NO ₃ ⁻ I (modified) : Online Edition.	0.002 g/m ³	1-5
Dissolved Reactive Phosphorus	Filtered sample from Christchurch. Molybdenum blue colourimetry. Flow injection analyser. APHA 4500-P G (modified) : Online Edition.	0.004 g/m ³	2-5
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00002 - 0.0002 g/m ³	2-5

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Acid Herbicides Screen in Water by LCMSMS	LC-MS/MS analysis. In-house.	0.0003 - 0.0006 g/m ³	2-5
Semivolatile Organic Compounds Trace in Water by GC-MS	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0003 - 0.010 g/m ³	2-5
Tributyl Tin in Water samples by LC-MS/MS*	LC-MS/MS analysis. In-house.	0.00003 - 0.00004 g/m ³	2-5
Volatile Organic Compounds Trace in Water by Headspace GC-MS	Headspace GC-MS analysis. In-house based on US EPA 8260 and 5021.	0.0003 - 0.05 g/m ³	2-5
Drinking water metals suite, totals, trace			
Total Aluminium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0032 g/m ³	1-5
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1-5
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1-5
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m ³	1-5
Total Beryllium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1-5
Total Boron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0053 g/m ³	1-5
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m ³	1-5
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1-5
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1-5
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1-5
Total Iron	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1-5
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m ³	1-5
Total Lithium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00021 g/m ³	1-5
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1-5
Total Manganese	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1-5
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m ³	1-5
Total Molybdenum	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m ³	1-5
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1-5
Total Potassium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m ³	1-5
Total Selenium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1-5
Total Silver	Boiling nitric / hydrochloric acid digestion (5:1 ratio), ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00011 g/m ³	1-5
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m ³	1-5
Total Tin	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.00053 g/m ³	1-5
Total Uranium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000021 g/m ³	1-5
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m ³	1-5

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 01-Jul-2024 and 11-Jul-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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