Hill Laboratories
TRIED, TESTED AND TRUSTED

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
Private Bag 3205
Hamilton 3240 New Zealand

T 0508 HILL LAB (44 555 22)
T +64 7 858 2000
E mail@hill-labs.co.nz
W www.hill-laboratories.com

Certificate of Analysis

Client:	Rotorua District Council Lab	**Lab No:**	2481476 SPv1
Contact:	Chris Moody	**Date Received:**	26-Nov-2020
	C/- Rotorua District Council Lab	**Date Reported:**	16-Dec-2020
	Private Bag 3029	**Quote No:**	103324
	Rotorua Mail Centre	**Order No:**	RLP019853
	Rotorua 3046	**Client Reference:**	NZDWS Water Quality Standards
		Submitted By:	Chris Moody

Sample Type: Aqueous

Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Individual Tests						
Total Mercury	g/m³	< 0.00008	< 0.00008	-	-	-
Bromate	g/m³	< 0.005	< 0.005	-	-	-
Total Cyanide	g/m³	< 0.002	< 0.002	-	-	-
Chlorite	g/m³	< 0.005	< 0.005	-	-	-
Chlorate	g/m³	< 0.005	< 0.005	-	-	-
Fluoride	g/m³	< 0.05	0.12	-	-	-
Sulphate	g/m³	2.7	1.8	-	-	-
1080‡	g/m³	< 0.00010	< 0.00010	-	-	-
Epichlorohydrin‡	g/m³	< 0.00010	< 0.00010	-	-	-
Amine Acid Chelating Agents in Potable Water by GCMS						
Ethylenediaminetetraacetic acid (EDTA)	g/m³	< 0.05	< 0.05	-	-	-
Nitrilotriacetic acid (NTA)	g/m³	< 0.05	< 0.05	-	-	-
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS						
Acetochlor	g/m³	< 0.00004	< 0.00004	-	-	-
Alachlor	g/m³	< 0.00004	< 0.00004	-	-	-
Atrazine	g/m³	< 0.00004	< 0.00004	-	-	-
Atrazine-desethyl	g/m³	< 0.00004	< 0.00004	-	-	-
Atrazine-desisopropyl	g/m³	< 0.00008	< 0.00008	-	-	-
Azaconazole	g/m³	< 0.00002	< 0.00002	-	-	-
Azinphos-methyl	g/m³	< 0.00008	< 0.00008	-	-	-
Benalaxyl	g/m³	< 0.00002	< 0.00002	-	-	-
Bitertanol	g/m³	< 0.00008	< 0.00008	-	-	-
Bromacil	g/m³	< 0.00004	< 0.00004	-	-	-
Bromopropylate	g/m³	< 0.00004	< 0.00004	-	-	-
Butachlor	g/m³	< 0.00004	< 0.00004	-	-	-
Captan	g/m³	< 0.00008	< 0.00008	-	-	-
Carbaryl	g/m³	< 0.00004	< 0.00004	-	-	-
Carbofenothion	g/m³	< 0.00004	< 0.00004	-	-	-
Carbofuran	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorfluazuron	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorothalonil	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorpyrifos	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorpyrifos-methyl	g/m³	< 0.00004	< 0.00004	-	-	-
Chlortoluron	g/m³	< 0.00008	< 0.00008	-	-	-
Cyanazine	g/m³	< 0.00004	< 0.00004	-	-	-
Cyfluthrin	g/m³	< 0.00004	< 0.00004	-	-	-
Cyhalothrin	g/m³	< 0.00004	< 0.00004	-	-	-
Cypermethrin	g/m³	< 0.00008	< 0.00008	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS						
Deltamethrin (including Tralomethrin)	g/m³	< 0.00006	< 0.00006	-	-	-
Diazinon	g/m³	< 0.00002	< 0.00002	-	-	-
Dichlofluanid	g/m³	< 0.00004	< 0.00004	-	-	-
Dichloran	g/m³	< 0.0002	< 0.0002	-	-	-
Dichlorvos	g/m³	< 0.00008	< 0.00008	-	-	-
Difenoconazole	g/m³	< 0.00008	< 0.00008	-	-	-
Dimethoate	g/m³	< 0.00008	< 0.00008	-	-	-
Diphenylamine	g/m³	< 0.00008	< 0.00008	-	-	-
Diuron	g/m³	< 0.00004	< 0.00004	-	-	-
Fenpropimorph	g/m³	< 0.00004	< 0.00004	-	-	-
Fluazifop-butyl	g/m³	< 0.00004	< 0.00004	-	-	-
Fluometuron	g/m³	< 0.00004	< 0.00004	-	-	-
Flusilazole	g/m³	< 0.00004	< 0.00004	-	-	-
Fluvalinate	g/m³	< 0.00004	< 0.00004	-	-	-
Furalaxyl	g/m³	< 0.00002	< 0.00002	-	-	-
Haloxyfop-methyl	g/m³	< 0.00004	< 0.00004	-	-	-
Hexaconazole	g/m³	< 0.00004	< 0.00004	-	-	-
Hexazinone	g/m³	< 0.00002	< 0.00002	-	-	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	g/m³	< 0.0002	< 0.0002	-	-	-
Kresoxim-methyl	g/m³	< 0.00002	< 0.00002	-	-	-
Linuron	g/m³	< 0.00005	< 0.00005	-	-	-
Malathion	g/m³	< 0.00004	< 0.00004	-	-	-
Metalaxyl	g/m³	< 0.00004	< 0.00004	-	-	-
Metolachlor	g/m³	< 0.00004	< 0.00004	-	-	-
Metribuzin	g/m³	< 0.00004	< 0.00004	-	-	-
Molinate	g/m³	< 0.00008	< 0.00008	-	-	-
Myclobutanil	g/m³	< 0.00004	< 0.00004	-	-	-
Naled	g/m³	< 0.0002	< 0.0002	-	-	-
Norflurazon	g/m³	< 0.00008	< 0.00008	-	-	-
Oxadiazon	g/m³	< 0.00004	< 0.00004	-	-	-
Oxyfluorfen	g/m³	< 0.00002	< 0.00002	-	-	-
Paclobutrazol	g/m³	< 0.00004	< 0.00004	-	-	-
Parathion-ethyl	g/m³	< 0.00004	< 0.00004	-	-	-
Parathion-methyl	g/m³	< 0.00004	< 0.00004	-	-	-
Pendimethalin	g/m³	< 0.00004	< 0.00004	-	-	-
Permethrin	g/m³	< 0.00002	< 0.00002	-	-	-
Pirimicarb	g/m³	< 0.00004	< 0.00004	-	-	-
Pirimiphos-methyl	g/m³	< 0.00004	< 0.00004	-	-	-
Prochloraz	g/m³	< 0.0002	< 0.0002	-	-	-
Procymidone	g/m³	< 0.00004	< 0.00004	-	-	-
Prometryn	g/m³	< 0.00002	< 0.00002	-	-	-
Propachlor	g/m³	< 0.00004	< 0.00004	-	-	-
Propanil	g/m³	< 0.0002	< 0.0002	-	-	-
Propazine	g/m³	< 0.00002	< 0.00002	-	-	-
Propiconazole	g/m³	< 0.00004	< 0.00004	-	-	-
Pyriproxyfen	g/m³	< 0.00004	< 0.00004	-	-	-
Quizalofop-ethyl	g/m³	< 0.00004	< 0.00004	-	-	-
Simazine	g/m³	< 0.00004	< 0.00004	-	-	-
Simetryn	g/m³	< 0.00004	< 0.00004	-	-	-
Sulfentrazone	g/m³	< 0.0002	< 0.0002	-	-	-
TCMTB [2-(thiocyanomethylthio) benzothiazole,Busan]	g/m³	< 0.00008	< 0.00008	-	-	-
Tebuconazole	g/m³	< 0.00004	< 0.00004	-	-	-
Terbacil	g/m³	< 0.00004	< 0.00004	-	-	-
Terbufos	g/m³	< 0.00004	< 0.00004	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
OrganoNitrogen & Phosphorus pesticides, trace, liq/liq GCMS						
Terbumeton	g/m³	< 0.00004	< 0.00004	-	-	-
Terbuthylazine	g/m³	< 0.00002	< 0.00002	-	-	-
Terbuthylazine-desethyl	g/m³	< 0.00004	< 0.00004	-	-	-
Terbutryn	g/m³	< 0.00004	< 0.00004	-	-	-
Thiabendazole	g/m³	< 0.0002	< 0.0002	-	-	-
Thiobencarb	g/m³	< 0.00004	< 0.00004	-	-	-
Tolylfluanid	g/m³	< 0.00002	< 0.00002	-	-	-
Triazophos	g/m³	< 0.00004	< 0.00004	-	-	-
Trifluralin	g/m³	< 0.00004	< 0.00004	-	-	-
Vinclozolin	g/m³	< 0.00004	< 0.00004	-	-	-
Extended metals suite, as received, trace						
Aluminium	g/m³	< 0.003	< 0.003	-	-	-
Antimony	g/m³	< 0.0002	< 0.0002	-	-	-
Arsenic	g/m³	0.0014	0.0019	-	-	-
Barium	g/m³	0.009	0.006	-	-	-
Boron	g/m³	0.012	0.038	-	-	-
Cadmium	g/m³	< 0.00005	< 0.00005	-	-	-
Caesium	g/m³	0.00088	0.00040	-	-	-
Calcium	g/m³	2.7	3.3	-	-	-
Chromium	g/m³	< 0.0005	0.0006	-	-	-
Cobalt	g/m³	< 0.0002	< 0.0002	-	-	-
Copper	g/m³	0.0024	0.0007	-	-	-
Iron	g/m³	< 0.02	< 0.02	-	-	-
Lanthanum	g/m³	< 0.00010	< 0.00010	-	-	-
Lead	g/m³	0.00012	0.00010	-	-	-
Lithium	g/m³	0.0103	0.0141	-	-	-
Magnesium	g/m³	1.03	1.92	-	-	-
Manganese	g/m³	< 0.0005	< 0.0005	-	-	-
Molybdenum	g/m³	< 0.0002	0.0002	-	-	-
Nickel	g/m³	< 0.0005	< 0.0005	-	-	-
Potassium	g/m³	2.5	2.4	-	-	-
Rubidium	g/m³	0.0157	0.0083	-	-	-
Selenium	g/m³	< 0.0010	< 0.0010	-	-	-
Silver	g/m³	< 0.00010	< 0.00010	-	-	-
Sodium	g/m³	9.2	9.2	-	-	-
Strontium	g/m³	0.0164	0.0185	-	-	-
Thallium	g/m³	< 0.00005	< 0.00005	-	-	-
Tin	g/m³	< 0.0005	< 0.0005	-	-	-
Uranium	g/m³	0.00007	< 0.00002	-	-	-
Vanadium	g/m³	< 0.0010	0.0018	-	-	-
Zinc	g/m³	0.0029	0.0016	-	-	-
Chloramines						
Monochloramine	g/m³	< 0.05	< 0.05	-	-	-
Dichloramine	g/m³	< 0.05	< 0.05	-	-	-
Trichloramine	g/m³	< 0.05	< 0.05	-	-	-
Acrylamide in drinking water by LCMSMS in Organics, trace level						
Acrylamide	g/m³	< 0.00005	< 0.00005	-	-	-
Acid Herbicides Screen in Water by LCMSMS						
Acifluorfen	g/m³	< 0.0004	< 0.0004	-	-	-
Bentazone	g/m³	< 0.0004	< 0.0004	-	-	-
Bromoxynil	g/m³	< 0.0004	< 0.0004	-	-	-
Clopyralid	g/m³	< 0.0004	< 0.0004	-	-	-
2,4-Dichlorophenoxyacetic acid (24D)	g/m³	< 0.0004	< 0.0004	-	-	-
2,4-Dichlorophenoxybutyric acid (24DB)	g/m³	< 0.0004	< 0.0004	-	-	-
Dicamba	g/m³	< 0.0004	< 0.0004	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Acid Herbicides Screen in Water by LCMSMS						
Dichlorprop	g/m³	< 0.0004	< 0.0004	-	-	-
Fluazifop	g/m³	< 0.0004	< 0.0004	-	-	-
Fluroxypyr	g/m³	< 0.0004	< 0.0004	-	-	-
Haloxyfop	g/m³	< 0.0004	< 0.0004	-	-	-
2-methyl-4-chlorophenoxyacetic acid (MCPA)	g/m³	< 0.0004	< 0.0004	-	-	-
2-methyl-4-chlorophenoxybutanoic acid (MCPB)	g/m³	< 0.0004	< 0.0004	-	-	-
Mecoprop	g/m³	< 0.0004	< 0.0004	-	-	-
Oryzalin	g/m³	< 0.0006	< 0.0006	-	-	-
2,3,4,6-Tetrachlorophenol (TCP)	g/m³	< 0.0004	< 0.0004	-	-	-
2,4,5-trichlorophenoxypropionic acid (245TP,Fenoprop, Silvex)	g/m³	< 0.0004	< 0.0004	-	-	-
2,4,5-Trichlorophenoxyacetic acid (245T)	g/m³	< 0.0004	< 0.0004	-	-	-
Pentachlorophenol (PCP)	g/m³	< 0.0004	< 0.0004	-	-	-
Picloram	g/m³	< 0.0004	< 0.0004	-	-	-
Quizalofop	g/m³	< 0.0004	< 0.0004	-	-	-
Triclopyr	g/m³	< 0.0004	< 0.0004	-	-	-
Halogenated Acetic Acids in Water by GC-MS						
Bromochloroacetic acid	g/m³	< 0.004	< 0.004	-	-	-
Dibromoacetic acid	g/m³	< 0.004	< 0.004	-	-	-
Dichloroacetic acid	g/m³	< 0.004	< 0.004	-	-	-
Monobromoacetic acid	g/m³	< 0.004	< 0.004	-	-	-
Monochloroacetic acid	g/m³	< 0.005	< 0.005	-	-	-
Trichloroacetic acid	g/m³	< 0.004	< 0.004	-	-	-
Total HAA	g/m³	< 0.03	< 0.03	-	-	-
Sum of HAA DWSNZ MAV ratios		< 0.3	< 0.3	-	-	-
Halogenated Volatile Disinfection By-Products in Water by GCMS						
Bromochloroacetonitrile	g/m³	< 0.0004	< 0.0004	-	-	-
Bromodichloromethane	g/m³	< 0.0004	< 0.0004	-	-	-
Bromoform (tribromomethane)	g/m³	< 0.0004	< 0.0004	-	-	-
Carbon tetrachloride	g/m³	< 0.0007	< 0.0007	-	-	-
Chloroform (Trichloromethane)	g/m³	< 0.007	< 0.007	-	-	-
Chloropicrin	g/m³	< 0.0004	< 0.0004	-	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0004	< 0.0004	-	-	-
Dibromoacetonitrile	g/m³	< 0.0004	< 0.0004	-	-	-
Dibromochloromethane	g/m³	< 0.0004	< 0.0004	-	-	-
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003	< 0.0003	-	-	-
1,1-Dichloro-2-propanone	g/m³	< 0.0004	< 0.0004	-	-	-
Dichloroacetonitrile	g/m³	< 0.0004	< 0.0004	-	-	-
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0004	< 0.0004	-	-	-
1,1,1-Trichloro-2-propanone	g/m³	< 0.0004	< 0.0004	-	-	-
Trichloroacetonitrile	g/m³	< 0.0004	< 0.0004	-	-	-
1,1,1-Trichloroethane	g/m³	< 0.0004	< 0.0004	-	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0004	< 0.0004	-	-	-
Total Trihalomethanes (THM)	g/m³	< 0.007	< 0.007	-	-	-
Chloroform MAV ratio		< 0.018	< 0.018	-	-	-
Bromodichloromethane MAV ratio		< 0.007	< 0.007	-	-	-
Dibromochloromethane MAV ratio		< 0.003	< 0.003	-	-	-
Bromoform MAV ratio		< 0.004	< 0.004	-	-	-
Sum of THM MAV ratios (NZ DW Stds)		< 0.02	< 0.02	-	-	-
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)		< 0.03	< 0.03	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Org LCMS, trace level						
Aldicarb	g/m³	< 0.006	< 0.006	-	-	-
Aldicarb sulfone	g/m³	< 0.003	< 0.003	-	-	-
Aldicarb sulfoxide	g/m³	< 0.007	< 0.007	-	-	-
Oryzalin	g/m³	< 0.004	< 0.004	-	-	-
Carbendazim	g/m³	< 0.003	< 0.003	-	-	-
Isoproturon	g/m³	< 0.003	< 0.003	-	-	-
Oxamyl	g/m³	< 0.0011	< 0.0011	-	-	-
Primisulfuron-methyl	g/m³	< 0.003	< 0.003	-	-	-
Thiabendazole	g/m³	< 0.0011	< 0.0011	-	-	-
Microcystins in Water by LCMSMS						
Microcystin-LR	g/m³	< 0.00002	< 0.00002	-	-	-
Microcystin-RR	g/m³	< 0.00002	< 0.00002	-	-	-
Microcystin-YR	g/m³	< 0.00003	< 0.00003	-	-	-
Nodularin	g/m³	< 0.00002	< 0.00002	-	-	-
Multiresidue Extra Pesticides Trace in Water samples by Liq/liq						
Bendiocarb	g/m³	< 0.00004	< 0.00004	-	-	-
Benodanil	g/m³	< 0.00008	< 0.00008	-	-	-
Bifenthrin	g/m³	< 0.00002	< 0.00002	-	-	-
Bromophos-ethyl	g/m³	< 0.00004	< 0.00004	-	-	-
Bupirimate	g/m³	< 0.00004	< 0.00004	-	-	-
Buprofezin	g/m³	< 0.00004	< 0.00004	-	-	-
Captafol	g/m³	< 0.0002	< 0.0002	-	-	-
Carbofenothion	g/m³	< 0.00004	< 0.00004	-	-	-
Carboxin	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorfenvinphos	g/m³	< 0.00004	< 0.00004	-	-	-
Chlorpropham	g/m³	< 0.00008	< 0.00008	-	-	-
Chlozolinate	g/m³	< 0.00004	< 0.00004	-	-	-
Coumaphos	g/m³	< 0.00008	< 0.00008	-	-	-
Cyproconazole	g/m³	< 0.00004	< 0.00004	-	-	-
Cyprodinil	g/m³	< 0.00004	< 0.00004	-	-	-
Demeton-S-methyl	g/m³	< 0.00008	< 0.00008	-	-	-
Dichlobenil	g/m³	< 0.00004	< 0.00004	-	-	-
Dichlofenthion	g/m³	< 0.00004	< 0.00004	-	-	-
Dicofol	g/m³	< 0.0002	< 0.0002	-	-	-
Dicrotophos	g/m³	< 0.00004	< 0.00004	-	-	-
Dinocap	g/m³	< 0.0003	< 0.0003	-	-	-
Disulfoton	g/m³	< 0.00004	< 0.00004	-	-	-
EPN	g/m³	< 0.00004	< 0.00004	-	-	-
Esfenvalerate	g/m³	< 0.00004	< 0.00004	-	-	-
Ethion	g/m³	< 0.00004	< 0.00004	-	-	-
Etrimfos	g/m³	< 0.00004	< 0.00004	-	-	-
Famphur	g/m³	< 0.00004	< 0.00004	-	-	-
Fenamiphos	g/m³	< 0.00004	< 0.00004	-	-	-
Fenarimol	g/m³	< 0.00004	< 0.00004	-	-	-
Fenitrothion	g/m³	< 0.00004	< 0.00004	-	-	-
Fenpropathrin	g/m³	< 0.00004	< 0.00004	-	-	-
Fensulfothion	g/m³	< 0.00004	< 0.00004	-	-	-
Fenthion	g/m³	< 0.00004	< 0.00004	-	-	-
Fenvalerate	g/m³	< 0.00004	< 0.00004	-	-	-
Folpet	g/m³	< 0.00008	< 0.00008	-	-	-
Hexythiazox	g/m³	< 0.0002	< 0.0002	-	-	-
Imazalil	g/m³	< 0.0002	< 0.0002	-	-	-
Indoxacarb	g/m³	< 0.00004	< 0.00004	-	-	-
Iodofenphos	g/m³	< 0.00004	< 0.00004	-	-	-
Isazophos	g/m³	< 0.00004	< 0.00004	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Multiresidue Extra Pesticides Trace in Water samples by Liq/liq						
Isofenphos	g/m³	< 0.00002	< 0.00002	-	-	-
Leptophos	g/m³	< 0.00004	< 0.00004	-	-	-
Methacrifos	g/m³	< 0.00004	< 0.00004	-	-	-
Methidathion	g/m³	< 0.00004	< 0.00004	-	-	-
Methiocarb	g/m³	< 0.00004	< 0.00004	-	-	-
Mevinphos	g/m³	< 0.00008	< 0.00008	-	-	-
Nitrofen	g/m³	< 0.00008	< 0.00008	-	-	-
Nitrothal-Isopropyl	g/m³	< 0.00004	< 0.00004	-	-	-
Oxychlordane	g/m³	< 0.00002	< 0.00002	-	-	-
Penconazole	g/m³	< 0.00004	< 0.00004	-	-	-
Phorate	g/m³	< 0.00008	< 0.00008	-	-	-
Phosmet	g/m³	< 0.00004	< 0.00004	-	-	-
Phosphamidon	g/m³	< 0.00004	< 0.00004	-	-	-
Propetamphos	g/m³	< 0.00006	< 0.00006	-	-	-
Propham	g/m³	< 0.00004	< 0.00004	-	-	-
Prothiofos	g/m³	< 0.00004	< 0.00004	-	-	-
Pyrazophos	g/m³	< 0.00004	< 0.00004	-	-	-
Pyrifenox	g/m³	< 0.00004	< 0.00004	-	-	-
Pyrimethanil	g/m³	< 0.00004	< 0.00004	-	-	-
Quintozene	g/m³	< 0.00008	< 0.00008	-	-	-
Sulfotep	g/m³	< 0.00004	< 0.00004	-	-	-
Tebufenpyrad	g/m³	< 0.00002	< 0.00002	-	-	-
Tetrachlorvinphos	g/m³	< 0.00004	< 0.00004	-	-	-
Thiometon	g/m³	< 0.00008	< 0.00008	-	-	-
Triadimefon	g/m³	< 0.00004	< 0.00004	-	-	-
Organochlorine Pesticides Trace in water, By Liq/Liq						
Aldrin	g/m³	< 0.000005	< 0.000005	-	-	-
alpha-BHC	g/m³	< 0.000010	< 0.000010	-	-	-
beta-BHC	g/m³	< 0.000010	< 0.000010	-	-	-
delta-BHC	g/m³	< 0.000010	< 0.000010	-	-	-
gamma-BHC (Lindane)	g/m³	< 0.000010	< 0.000010	-	-	-
cis-Chlordane	g/m³	< 0.000005	< 0.000005	-	-	-
trans-Chlordane	g/m³	< 0.000005	< 0.000005	-	-	-
2,4'-DDD	g/m³	< 0.000010	< 0.000010	-	-	-
4,4'-DDD	g/m³	< 0.000010	< 0.000010	-	-	-
2,4'-DDE	g/m³	< 0.000010	< 0.000010	-	-	-
4,4'-DDE	g/m³	< 0.000010	< 0.000010	-	-	-
2,4'-DDT	g/m³	< 0.000010	< 0.000010	-	-	-
4,4'-DDT	g/m³	< 0.000010	< 0.000010	-	-	-
Total DDT Isomers	g/m³	< 0.00006	< 0.00006	-	-	-
Dieldrin	g/m³	< 0.000005	< 0.000005	-	-	-
Endosulfan I	g/m³	< 0.000010	< 0.000010	-	-	-
Endosulfan II	g/m³	< 0.000010	< 0.000010	-	-	-
Endosulfan sulfate	g/m³	< 0.000010	< 0.000010	-	-	-
Endrin	g/m³	< 0.000005	< 0.000005	-	-	-
Endrin aldehyde	g/m³	< 0.000005	< 0.000005	-	-	-
Endrin ketone	g/m³	< 0.000010	< 0.000010	-	-	-
Heptachlor	g/m³	< 0.000005	< 0.000005	-	-	-
Heptachlor epoxide	g/m³	< 0.000005	< 0.000005	-	-	-
Hexachlorobenzene	g/m³	< 0.00004	< 0.00004	-	-	-
Methoxychlor	g/m³	< 0.000005	< 0.000005	-	-	-
Polycyclic Aromatic Hydrocarbons Trace in Water, By Liq/Liq						
Acenaphthene	g/m³	< 0.000005	< 0.000005	-	-	-
Acenaphthylene	g/m³	< 0.000005	< 0.000005	-	-	-
Anthracene	g/m³	< 0.000005	< 0.000005	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Polycyclic Aromatic Hydrocarbons Trace in Water, By Liq/Liq						
Benzo[a]anthracene	g/m³	< 0.000005	< 0.000005	-	-	-
Benzo[a]pyrene (BAP)	g/m³	< 0.000005	< 0.000005	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	g/m³	< 0.000005	< 0.000005	-	-	-
Benzo[g,h,i]perylene	g/m³	< 0.000005	< 0.000005	-	-	-
Benzo[k]fluoranthene	g/m³	< 0.000005	< 0.000005	-	-	-
Chrysene	g/m³	< 0.000005	< 0.000005	-	-	-
Dibenzo[a,h]anthracene	g/m³	< 0.000005	< 0.000005	-	-	-
Fluoranthene	g/m³	< 0.000005	< 0.000005	-	-	-
Fluorene	g/m³	< 0.000005	< 0.000005	-	-	-
Indeno(1,2,3-c,d)pyrene	g/m³	< 0.000005	< 0.000005	-	-	-
Naphthalene	g/m³	< 0.00002	< 0.00002	-	-	-
Phenanthrene	g/m³	< 0.000005	< 0.000005	-	-	-
Pyrene	g/m³	< 0.000005	< 0.000005	-	-	-
Haloethers Trace in SVOC Water Samples by GC-MS						
Bis(2-chloroethoxy) methane	g/m³	< 0.0005	< 0.0005	-	-	-
Bis(2-chloroethyl)ether	g/m³	< 0.0005	< 0.0005	-	-	-
Bis(2-chloroisopropyl)ether	g/m³	< 0.0005	< 0.0005	-	-	-
4-Bromophenyl phenyl ether	g/m³	< 0.0003	< 0.0003	-	-	-
4-Chlorophenyl phenyl ether	g/m³	< 0.0005	< 0.0005	-	-	-
Nitrogen containing compounds Trace in SVOC Water Samples, GC-MS						
2,4-Dinitrotoluene	g/m³	< 0.0010	< 0.0010	-	-	-
2,6-Dinitrotoluene	g/m³	< 0.0010	< 0.0010	-	-	-
Nitrobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
N-Nitrosodi-n-propylamine	g/m³	< 0.0010	< 0.0010	-	-	-
N-Nitrosodiphenylamine + Diphenylamine	g/m3	< 0.0010	< 0.0010	-	-	-
Organochlorine Pesticides Trace in SVOC Water Samples by GC-MS						
Aldrin	g/m³	< 0.0005	< 0.0005	-	-	-
alpha-BHC	g/m³	< 0.0005	< 0.0005	-	-	-
beta-BHC	g/m³	< 0.0005	< 0.0005	-	-	-
delta-BHC	g/m³	< 0.0005	< 0.0005	-	-	-
gamma-BHC (Lindane)	g/m³	< 0.0005	< 0.0005	-	-	-
4,4'-DDD	g/m³	< 0.0005	< 0.0005	-	-	-
4,4'-DDE	g/m³	< 0.0005	< 0.0005	-	-	-
4,4'-DDT	g/m³	< 0.0010	< 0.0010	-	-	-
Dieldrin	g/m³	< 0.0005	< 0.0005	-	-	-
Endosulfan I	g/m³	< 0.0010	< 0.0010	-	-	-
Endosulfan II	g/m³	< 0.0010	< 0.0010	-	-	-
Endosulfan sulfate	g/m³	< 0.0010	< 0.0010	-	-	-
Endrin	g/m³	< 0.0005	< 0.0005	-	-	-
Endrin ketone	g/m³	< 0.0010	< 0.0010	-	-	-
Heptachlor	g/m³	< 0.0005	< 0.0005	-	-	-
Heptachlor epoxide	g/m³	< 0.0005	< 0.0005	-	-	-
Hexachlorobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
Polycyclic Aromatic Hydrocarbons Trace in SVOC Water Samples*						
Acenaphthene	g/m³	< 0.0003	< 0.0003	-	-	-
Acenaphthylene	g/m³	< 0.0003	< 0.0003	-	-	-
Anthracene	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[a]anthracene	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[a]pyrene (BAP)	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[g,h,i]perylene	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[k]fluoranthene	g/m³	< 0.0003	< 0.0003	-	-	-
1&2-Chloronaphthalene	g/m³	< 0.0003	< 0.0003	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Polycyclic Aromatic Hydrocarbons Trace in SVOC Water Samples*						
Chrysene	g/m³	< 0.0003	< 0.0003	-	-	-
Dibenzo[a,h]anthracene	g/m³	< 0.0003	< 0.0003	-	-	-
Fluoranthene	g/m³	< 0.0003	< 0.0003	-	-	-
Fluorene	g/m³	< 0.0003	< 0.0003	-	-	-
Indeno(1,2,3-c,d)pyrene	g/m³	< 0.0003	< 0.0003	-	-	-
2-Methylnaphthalene	g/m³	< 0.0003	< 0.0003	-	-	-
Naphthalene	g/m³	< 0.0003	< 0.0003	-	-	-
Phenanthrene	g/m³	< 0.0003	< 0.0003	-	-	-
Pyrene	g/m³	< 0.0003	< 0.0003	-	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	g/m³	< 0.00005	< 0.00005	-	-	-
Phenols Trace (drinkingwater) in SVOC Water Samples by GC-MS						
2-Chlorophenol	g/m³	< 0.0005	< 0.0005	-	-	-
2,4-Dichlorophenol	g/m³	< 0.0005	< 0.0005	-	-	-
2,4,6-Trichlorophenol	g/m³	< 0.0010	< 0.0010	-	-	-
Phenols Trace (non-drinkingwater) in SVOC Water Samples by GC-MS						
4-Chloro-3-methylphenol	g/m³	< 0.0010	< 0.0010	-	-	-
2,4-Dimethylphenol	g/m³	< 0.0005	< 0.0005	-	-	-
3 & 4-Methylphenol (m- + p-cresol)	g/m³	< 0.0010	< 0.0010	-	-	-
2-Methylphenol (o-Cresol)	g/m³	< 0.0005	< 0.0005	-	-	-
2-Nitrophenol	g/m³	< 0.0010	< 0.0010	-	-	-
Pentachlorophenol (PCP)	g/m³	< 0.010	< 0.010	-	-	-
Phenol	g/m³	< 0.0010	< 0.0010	-	-	-
2,4,5-Trichlorophenol	g/m³	< 0.0010	< 0.0010	-	-	-
Plasticisers Trace (non-drinkingwater) in SVOC Water by GCMS						
Butylbenzylphthalate	g/m³	< 0.0010	< 0.0010	-	-	-
Diethylphthalate	g/m³	< 0.0010	< 0.0010	-	-	-
Dimethylphthalate	g/m³	< 0.0010	< 0.0010	-	-	-
Di-n-butylphthalate	g/m³	< 0.0010	< 0.0010	-	-	-
Di-n-octylphthalate	g/m³	< 0.0010	< 0.0010	-	-	-
Plasticisers Trace (drinkingwater) in SVOC Water Samples by GCMS						
Bis(2-ethylhexyl)phthalate	g/m³	< 0.003	< 0.003	-	-	-
Di(2-ethylhexyl)adipate	g/m³	< 0.0010	< 0.0010	-	-	-
Other Halogenated compounds Trace (drinkingwater) in SVOC Water						
1,2-Dichlorobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
1,3-Dichlorobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
1,4-Dichlorobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
Other Halogenated compounds Trace (non-drinkingwater) in SVOC						
Hexachlorobutadiene	g/m³	< 0.0005	< 0.0005	-	-	-
Hexachloroethane	g/m³	< 0.0005	< 0.0005	-	-	-
1,2,4-Trichlorobenzene	g/m³	< 0.0005	< 0.0005	-	-	-
Other SVOC Trace in SVOC Water Samples by GC-MS						
Benzyl alcohol	g/m³	< 0.005	< 0.005	-	-	-
Carbazole	g/m³	< 0.0005	< 0.0005	-	-	-
Dibenzofuran	g/m³	< 0.0005	< 0.0005	-	-	-
Isophorone	g/m³	< 0.0005	< 0.0005	-	-	-
BTEX in VOC Water by Headspace GC-MS						
Benzene	g/m³	< 0.0003	< 0.0003	-	-	-
Ethylbenzene	g/m³	< 0.0005	< 0.0005	-	-	-
Toluene	g/m³	< 0.0003	< 0.0003	-	-	-
m&p-Xylene	g/m³	< 0.0005	< 0.0005	-	-	-
o-Xylene	g/m³	< 0.0003	< 0.0003	-	-	-
Halogenated Aliphatics in VOC Water by Headspace GC-MS						
Bromomethane (Methyl Bromide)	g/m³	< 0.0003	< 0.0003	-	-	-
Carbon tetrachloride	g/m³	< 0.0003	< 0.0003	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Halogenated Aliphatics in VOC Water by Headspace GC-MS						
Chloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
Chloromethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,2-Dibromo-3-chloropropane	g/m³	< 0.0003	< 0.0003	-	-	-
1,2-Dibromoethane (ethylene dibromide, EDB)	g/m³	< 0.0003	< 0.0003	-	-	-
Dibromomethane	g/m³	< 0.0003	< 0.0003	-	-	-
Dichlorodifluoromethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1-Dichloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,2-Dichloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1-Dichloroethene	g/m³	< 0.0003	< 0.0003	-	-	-
cis-1,2-Dichloroethene	g/m³	< 0.0003	< 0.0003	-	-	-
trans-1,2-Dichloroethene	g/m³	< 0.0003	< 0.0003	-	-	-
Dichloromethane (methylene chloride)	g/m³	< 0.010	< 0.010	-	-	-
1,2-Dichloropropane	g/m³	< 0.0003	< 0.0003	-	-	-
1,3-Dichloropropane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1-Dichloropropene	g/m³	< 0.0003	< 0.0003	-	-	-
cis-1,3-Dichloropropene	g/m³	< 0.0005	< 0.0005	-	-	-
trans-1,3-Dichloropropene	g/m³	< 0.0005	< 0.0005	-	-	-
Hexachlorobutadiene	g/m³	< 0.0003	< 0.0003	-	-	-
1,1,1,2-Tetrachloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1,2,2-Tetrachloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
Tetrachloroethene (tetrachloroethylene)	g/m³	< 0.0003	< 0.0003	-	-	-
1,1,1-Trichloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1,2-Trichloroethane	g/m³	< 0.0003	< 0.0003	-	-	-
Trichloroethene (trichloroethylene)	g/m³	< 0.0003	< 0.0003	-	-	-
Trichlorofluoromethane	g/m³	< 0.0003	< 0.0003	-	-	-
1,2,3-Trichloropropane	g/m³	< 0.0003	< 0.0003	-	-	-
1,1,2-Trichlorotrifluoroethane (Freon 113)	g/m³	< 0.0003	< 0.0003	-	-	-
Vinyl chloride	g/m³	< 0.0003	< 0.0003	-	-	-
Halogenated Aromatics in VOC Water by Headspace GC-MS						
Chlorobenzene (monochlorobenzene)	g/m³	< 0.0003	< 0.0003	-	-	-
1,2-Dichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,3-Dichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,4-Dichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,2,3-Trichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,2,4-Trichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,3,5-Trichlorobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
Bromobenzene	g/m³	< 0.0003	< 0.0003	-	-	-
2-Chlorotoluene	g/m³	< 0.0003	< 0.0003	-	-	-
4-Chlorotoluene	g/m³	< 0.0003	< 0.0003	-	-	-
Monoaromatic Hydrocarbons in VOC Water by Headspace GC-MS						
n-Butylbenzene	g/m³	< 0.0005	< 0.0005	-	-	-
tert-Butylbenzene	g/m³	< 0.0003	< 0.0003	-	-	-
4-Isopropyltoluene (p-Cymene)	g/m³	< 0.0005	< 0.0005	-	-	-
Isopropylbenzene (Cumene)	g/m³	< 0.0003	< 0.0003	-	-	-
n-Propylbenzene	g/m³	< 0.0005	< 0.0005	-	-	-
sec-Butylbenzene	g/m³	< 0.0003	< 0.0003	-	-	-
Styrene	g/m³	0.0006	< 0.0005	-	-	-
1,2,4-Trimethylbenzene	g/m³	< 0.0003	< 0.0003	-	-	-
1,3,5-Trimethylbenzene	g/m³	< 0.0003	< 0.0003	-	-	-
Ketones in VOC Water by Headspace GC-MS						
Acetone	g/m³	< 0.05	< 0.05	-	-	-
2-Butanone (MEK)	g/m³	< 0.05	< 0.05	-	-	-
Methyl tert-butylether (MTBE)	g/m³	< 0.0003	< 0.0003	-	-	-
4-Methylpentan-2-one (MIBK)	g/m³	< 0.010	< 0.010	-	-	-

Sample Type: Aqueous						
Sample Name:		REP - SCE 25-Nov-2020	DC - SCE 25-Nov-2020			
Lab Number:		2481476.1	2481476.2			
Trihalomethanes in VOC Water by Headspace GC-MS						
Bromodichloromethane	g/m³	< 0.0003	< 0.0003	-	-	-
Bromoform (tribromomethane)	g/m³	< 0.0003	< 0.0003	-	-	-
Chloroform (Trichloromethane)	g/m³	< 0.0003	< 0.0003	-	-	-
Dibromochloromethane	g/m³	< 0.0003	< 0.0003	-	-	-
Other VOC in Water by Headspace GC-MS						
Carbon disulphide	g/m³	< 0.0005	< 0.0005	-	-	-
Naphthalene	g/m³	< 0.0005	< 0.0005	-	-	-

Analyst's Comments

The matrix in samples 2481476.1 and .2 has affected some of the System Monitoring Compounds in the SVOC analysis, whereby 2-fluorophenol was 23% & 19% and Phenol-d5 was 25% & 26% respectively. Therefore the phenolic compounds may be underestimated.

‡ Analysis subcontracted to an external provider. Refer to the Summary of Methods section for more details.

Appendix No.1 - Eurofins ELS report

Appendix No.2 - Landcare report

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 Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
EDTA & NTA in water by liq/liq extraction	Derivitisation, liquid / liquid extraction, GC-MS analysis. In-house.	-	1-2
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m³	1-2
Bromate	Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).	0.005 g/m³	1-2
Total Cyanide Trace	On-line distillation, colorimetry, trace level. ISO 14403:2012(E) (modified).	0.002 g/m³	1-2
Chlorite	Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).	0.005 g/m³	1-2
Chlorate	Sample analysed as received, filtered if required. Ion Chromatography. US EPA Method 300.1 Part B (modified).	0.005 g/m³	1-2
Fluoride	Direct measurement, ion selective electrode. APHA 4500-F⁻ C 23rd ed. 2017.	0.05 g/m³	1-2
Sulphate	Filtered sample. Ion Chromatography. APHA 4110 B (modified) 23rd ed. 2017.	0.5 g/m³	1-2
1080 (Subcontracted)	Acidification with HCl acid, derivatisation with N,N'-dicyclohexylcarbodiimide and 2,4-dichloroaniline using ethyl acetate as the extraction solvent. The derivative is cleaned on a silica solid phase extraction cartridge to remove excess derivatising agent, eluted with toluene, and quantified by gas chromatography on a BP-5 capillary column with electron capture detection. Subcontracted to Landcare Research Toxicology Laboratories, Christchurch. Ozawa H, Tsukioka T 1987. Gas chromatographic determination of sodium monofluoroacetate in water by derivatization with dicyclohexylcarbodiimide. Analytical Chemistry 59: 29142917.	0.00010 g/m³	1-2
Epichlorohydrin (Subcontracted)	Method based on USEPA 8260. Sub-contracted to Eurofins ELS Limited, Lower Hutt.	0.00010 g/m³	1-2
Sum of HAA DWSNZ MAV ratios	Calculated as the sum of the individual haloacetic acids specified in DWSNZ (monochloroacetic acid, dichloroacetic acid and trichloroacetic acid) to their respective Maximum Allowable Values (MAVs). Drinking-water Standards for New Zealand 2005 (Revised 2008), Section 8.2.1.1.	0.001	1-2
Sum of Haloacetonitriles MAV ratios (NZ DW Stds)	Calculated as the sum of the individual haloacetonitriles specified in DWSNZ (dibromoacetonitrile & dichloroacetonitrile) to their respective Maximum Allowable Values (MAVs). Drinking-water Standards for New Zealand 2005 (Revised 2018).	-	1-2

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Amine Acid Chelating Agents in Potable Water by GCMS	Derivitisation, liquid / liquid extraction, GC-MS analysis. In-house.	0.05 g/m³	1-2
Extended metals suite, as received, trace	Analysed as received (after acid preservation, if required), ICP-MS, trace level. APHA 3125 B 23rd ed. 2017.	0.00002 - 0.05 g/m³	1-2
Acrylamide in drinking water by LCMSMS in Organics, trace level	LC-MS/MS analysis. In-house.	0.00005 g/m³	1-2
Acid Herbicides Screen in Water by LCMSMS	LC-MS/MS analysis. In-house.	0.0003 - 0.0006 g/m³	1-2
Halogenated Acetic Acids in Water by GC-MS	Solvent extraction, derivitisation, GC-MS analysis. In-house based on US EPA 552.	-	1-2
Halogenated Volatile Disinfection By-Products in Water by GCMS	Solvent extraction, GC-MS analysis. In-house based on US EPA 551.	-	1-2
Org LCMS, trace level	LC-MS/MS analysis. In-house.	0.0004 - 0.006 g/m³	1-2
Microcystins in Water by LCMSMS	SPE extraction, LC-MS/MS analysis. In-house.	0.00002 - 0.00003 g/m³	1-2
Multiresidue Pesticides Trace in Water by Liq/liq GCMS	Liquid / liquid extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	-	1-2
Polycyclic Aromatic Hydrocarbons Trace in Water, By Liq/Liq	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.000005 g/m³	1-2
Semivolatile Organic Compounds Trace in Water by GC-MS	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	-	1-2
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/m³	1-2
Chloramines			
Monochloramine	Colorimetric. APHA 4500-Cl G 23rd ed. 2017.	0.05 g/m³	1-2
Dichloramine	Colorimetric. APHA 4500-Cl G 23rd ed. 2017.	0.05 g/m³	1-2
Trichloramine	Colorimetric. APHA 4500-Cl G 23rd ed. 2017.	0.05 g/m³	1-2
Multiresidue Extra Pesticides Trace in Water samples by Liq/liq			
Bendiocarb	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Benodanil	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Bifenthrin	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00002 g/m³	1-2
Bromophos-ethyl	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Bupirimate	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Buprofezin	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Captafol	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0002 g/m³	1-2
Carboxin	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Chlorfenvinphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Chlorpropham	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Chlozolinate	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Coumaphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Cyproconazole	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Cyprodinil	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Demeton-S-methyl	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Dichlobenil	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Dichlofenthion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Dicofol	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0002 g/m³	1-2
Dicrotophos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2

Document Set ID: 19982757
Version: 1, Version Date: 15/09/2023

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Dinocap	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0003 g/m³	1-2
Disulfoton	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
EPN	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Esfenvalerate	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Ethion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Etrimfos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Famphur	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenamiphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenarimol	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenitrothion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenpropathrin	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fensulfothion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenthion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Fenvalerate	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Folpet	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Hexythiazox	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0002 g/m³	1-2
Imazalil	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.0002 g/m³	1-2
Indoxacarb	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Iodofenphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Isazophos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Isofenphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00002 g/m³	1-2
Leptophos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Methacrifos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Methidathion	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Methiocarb	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Mevinphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Nitrofen	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Nitrothal-isopropyl	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Oxychlordane	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00002 g/m³	1-2
Penconazole	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Phorate	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Phosmet	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Phosphamidon	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Propetamphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00006 g/m³	1-2

Document Set ID: 19982757
Version: 1, Version Date: 15/09/2023

Sample Type: Aqueous			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Propham	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Prothiofos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Pyrazophos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Pyrifenox	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Pyrimethanil	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Quintozene	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Sulfotep	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Tebufenpyrad	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00002 g/m³	1-2
Tetrachlorvinphos	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2
Thiometon	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00008 g/m³	1-2
Triadimefon	Liquid / liquid extraction, GC-MS analysis. In-house based on US EPA 8270.	0.00004 g/m³	1-2

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

Testing was completed between 27-Nov-2020 and 16-Dec-2020. 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.

Ara Heron BSc (Tech)
Client Services Manager - Environmental

eurofins | ELS

Eurofins ELS Limited

Analytical Report

Hill Laboratories Ltd - Hamilton
28 Duke St
Private Bag 3205
Hamilton 3240
Attention: Customer Services

Report Number: 20/63864
Issue: 1
01 December 2020

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/63864-01	Hill Laboratories - Epichlorohydrin		26/11/2020 00:00	27/11/2020 07:00	154990

Notes: EnvSubEurofinsELS 834, 2481476.1, Potable Water.

	Test	Result	Units	Test Date	Signatory
VOC-067	Epichlorohydrin	<0.0001	mg/L	30/11/2020	Joanna Yang KTP

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
20/63864-02	Hill Laboratories - Epichlorohydrin		26/11/2020 00:00	27/11/2020 07:00	154990

Notes: EnvSubEurofinsELS 834, 2481476.2, Potable Water.

	Test	Result	Units	Test Date	Signatory
VOC-067	Epichlorohydrin	<0.0001	mg/L	30/11/2020	Joanna Yang KTP

Comments:

Sampled by customer using ELS approved containers.

All samples analysed as we receive them. Delivery was within the correct time and temperature conditions.

Test Methodology:

Test	Methodology	Detection Limit
Epichlorohydrin	Analysed by GCMS/MS using an in house method.	0.0001 mg/L

Unless otherwise stated, all tests are performed in Wellington.
The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.
"<" means that no analyte was found in the sample at the level of detection shown. Detection limits are based on a clean matrix and may vary according to individual sample.
For liquid samples g/m3 is the equivalent to mg/L and ppm, solid samples are reported as mg/kg which is equivalent to ppm.
Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

Report Released By
Rob Deacon

This laboratory is accredited by International Accreditation New Zealand and its reports are recognised in all countries affiliated to the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC-MRA). The tests reported have been performed in accordance with our terms of accreditation, with the exception of tests marked "not an accredited test", which are outside the scope of this laboratory's accreditation.

Manaaki Whenua
Landcare Research

Toxicology Laboratory Analysis Report

54 Gerald Street
P.O.Box 69040
Lincoln, 7640
Ph: +64 3 321 9999
Fax: +64 3 321 9998

Report No: T7570

CLIENT: Sample Reception, Hill Laboratories, Private Bag 3205, Hamilton .

CLIENT REFERENCE No.: 154989 **Telephone No:** 07 858 2820

SAMPLES: Two water samples

REQUIREMENT: Examine for fluoroacetate

RECEIVED: 27 November 2020

Sample/s were received for analysis. The details were entered into the laboratory sample system and the sample/s given a reference number. The sample details and results are as follows:

No. samples: 2

LabNo.	Description	Fluoroacetate, µg/mL
24079	Water sample, 2481476.1	<MDL
24080	Water sample, 2481476.2	<MDL

All results are reported to two significant figures.

The determination was carried out using TLM005, the assay of fluoroacetate in water, soil and biological materials by GLC. The method detection limit (MDL) is 0.0001µg/mL and the uncertainty (95% c.i.) is ± 12%.

TESTED BY: amg **WORKBOOK REF:** 17/8

TEST PERIOD: 1-2/12/20

AUTHORISED BY:

L.H.Booth, A.M.Gibbs

Date: 4/12/2020