

Hill Laboratories
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ANALYSIS REPORT Page 1 of 3

Client: Hawkes Bay Regional Council	Lab No: 1515468 SPV1
Contact: Jordan Ellmers	Date Registered: 15-Dec-2015
C/- Hawkes Bay Regional Council	Date Reported: 18-Dec-2015
Private Bag 6006	Quote No: 69615
NAPIER 4142	Order No: N45658
	Client Reference: 325 601 Re-Sample
	Submitted By: Jordan Ellmers

Sample Type: Aqueous

Sample Name:	54633 Bore 10496 WQ 1909 14-Dec-2015 2:15 pm
Lab Number:	1515468.1

Individual Tests

Electrical Conductivity (EC)	mS/m	55.2	-	-	-	-
Escherichia coli	cfu / 100mL	20 #1	-	-	-	-

HBRC GW SOE

Sum of Anions	meq/L	5.7	-	-	-	-
Sum of Cations	meq/L	5.9	-	-	-	-
% Difference in Ion Balance	%	1.53	-	-	-	-
pH	pH Units	6.8	-	-	-	-
Total Alkalinity	g/m ³ as CaCO ₃	198	-	-	-	-
Carbonate	g/m ³ at 25°C	< 1.0	-	-	-	-
Bicarbonate	g/m ³ at 25°C	240	-	-	-	-
Free Carbon Dioxide	g/m ³ at 25°C	59	-	-	-	-
Total Hardness	g/m ³ as CaCO ₃	230	-	-	-	-
Electrical Conductivity (EC)	µS/cm	552	-	-	-	-
Approx Total Dissolved Salts	g/m ³	370	-	-	-	-
Dissolved Calcium	g/m ³	77	-	-	-	-
Dissolved Iron	g/m ³	< 0.02	-	-	-	-
Dissolved Magnesium	g/m ³	8.7	-	-	-	-
Dissolved Manganese	g/m ³	0.022	-	-	-	-
Dissolved Potassium	g/m ³	3.1	-	-	-	-
Dissolved Sodium	g/m ³	28	-	-	-	-
Chloride	g/m ³	41	-	-	-	-
Total Ammoniacal-N	g/m ³	< 0.010	-	-	-	-
Nitrite-N	g/m ³	0.003	-	-	-	-
Nitrate-N	g/m ³	1.47	-	-	-	-
Nitrate-N + Nitrite-N	g/m ³	1.47	-	-	-	-
Dissolved Reactive Phosphorus	g/m ³	0.042	-	-	-	-
Reactive Silica	g/m ³ as SiO ₂	27	-	-	-	-
Sulphate	g/m ³	23	-	-	-	-

Analyst's Comments

#1 Statistically estimated count based on the theoretical countable range for the stated method.



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 ACCREDITED LABORATORY

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Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Sulphate	Filtered sample. Ion Chromatography. APHA 4110 B 22 nd ed. 2012.	0.5 g/m ³	1
Escherichia coli	Membrane filtration, Count on mFC agar, Incubated at 44.5°C for 22 hours, MUG Confirmation. Analysed at Hill Laboratories - Microbiology; 1 Clow Place, Hamilton. APHA 9222 G, 22 nd ed. 2012.	1 cfu / 100mL	1

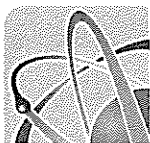
These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

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

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Ara Heron BSc (Tech)
Client Services Manager - Environmental Division



ANALYSIS REPORT

Client:	Hawkes Bay Regional Council	Lab No:	1509762	SPv1
Contact:	Jordan Ellmers C/- Hawkes Bay Regional Council Private Bag 6006 NAPIER 4142	Date Registered:	03-Dec-2015	
		Date Reported:	11-Dec-2015	
		Quote No:	69752	
		Order No:	N44499	
		Client Reference:		
		Add. Client Ref:	325 601	
		Submitted By:	Jordan Ellmers	

Sample Type: Aqueous						
Sample Name:	57273 - Bore 3301 - WQ215 02-Dec-2015 9:15 am	57275 - Bore 10496 - WQ1909 02-Dec-2015 10:45 am	57276 - Bore 8521 - WQ1270 02-Dec-2015 3:05 pm	57277 - Bore 1191 - WQ2238 02-Dec-2015 2:15 pm	57278 - Bore 15011 - WQ153 02-Dec-2015 12:20 pm	
Lab Number:	1509762.1	1509762.2	1509762.3	1509762.4	1509762.5	

Individual Tests						
Electrical Conductivity (EC)	mS/m	75.6	48.6	31.4	37.3	21.8
Escherichia coli	cfu / 100mL	1 #1	120 #1	< 1 #1	< 1 #1	< 1 #1
HBRC GW SOE						
Sum of Anions	meq/L	8.0	5.0	3.1	3.8	2.1
Sum of Cations	meq/L	8.1	5.1	3.1	3.8	2.2
% Difference in Ion Balance	%	0.39	0.64	0.51	0.97	1.38
pH	pH Units	7.2	6.8	7.1	7.0	7.6
Total Alkalinity	g/m ³ as CaCO ₃	310	175	99	124	69
Carbonate	g/m ³ at 25°C	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	g/m ³ at 25°C	380	210	120	152	84
Free Carbon Dioxide	g/m ³ at 25°C	43	50	15.6	28	3.1
Total Hardness	g/m ³ as CaCO ₃	310	196	110	142	79
Electrical Conductivity (EC)	µS/cm	756	486	314	373	218
Approx Total Dissolved Salts	g/m ³	510	330	210	250	146
Dissolved Calcium	g/m ³	115	66	35	42	25
Dissolved Iron	g/m ³	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Dissolved Magnesium	g/m ³	6.3	7.5	5.5	9.0	3.8
Dissolved Manganese	g/m ³	0.0016	0.0078	0.0013	< 0.0005	< 0.0005
Dissolved Potassium	g/m ³	3.0	2.7	1.87	2.4	1.22
Dissolved Sodium	g/m ³	40	25	21	22	13.2
Chloride	g/m ³	40	28	23	22	20
Total Ammoniacal-N	g/m ³	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Nitrite-N	g/m ³	< 0.002	< 0.002	0.003	< 0.002	< 0.002
Nitrate-N	g/m ³	5.4	2.3	2.8	4.5	0.147
Nitrate-N + Nitrite-N	g/m ³	5.4	2.3	2.8	4.5	0.147
Dissolved Reactive Phosphorus	g/m ³	0.106	0.021	0.008	0.021	0.020
Reactive Silica	g/m ³ as SiO ₂	46	22	21	25	17.6
Sulphate	g/m ³	15.1	26	14.2	16.7	7.5

Sample Name:	57279 - Bore 10340 - WQ2404 02-Dec-2015 4:00 pm	57262 - Bore 1674 - WQ205 02-Dec-2015 12:50 pm			
Lab Number:	1509762.6	1509762.7			

Individual Tests						
Electrical Conductivity (EC)	mS/m	10.4	17.4	-	-	-

