

## Certificate of Analysis

Page 1 of 2

<b>Client:</b> Western BOP District Council	<b>Lab No:</b> 3677898	SPV1
<b>Contact:</b> Erika MacGregor	<b>Date Received:</b> 24-Sep-2024	
C/- Western BOP District Council	<b>Date Reported:</b> 27-Sep-2024	
Private Bag 12803	<b>Quote No:</b> 126524	
Tauranga Mail Centre	<b>Order No:</b> 67354	
Tauranga 3143	<b>Client Reference:</b> ESZ Annual Bore Testing	
	<b>Submitted By:</b> Erika MacGregor	

### Sample Type: Drinking Water for DWSNZ Compliance

	Sample Name:	G01667 - ESZ2 23-Sep-2024 10:50 am	G01668 - ESZ3 23-Sep-2024 10:40 am	G01669 - ESZ6 23-Sep-2024 10:30 am	G01693 - ESZ8 23-Sep-2024 9:30 am	G01670 - ESZ9 23-Sep-2024 10:10 am
	Lab Number:	3677898.1	3677898.2	3677898.3	3677898.4	3677898.5
Total Alkalinity	g/m <sup>3</sup> as CaCO <sub>3</sub>	33	67	37	84	36
Total Antimony	g/m <sup>3</sup>	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021
Total Arsenic	g/m <sup>3</sup>	< 0.0011	0.0031	0.0015	0.0059	< 0.0011
Total Barium	g/m <sup>3</sup>	0.042	0.022	0.036	0.054	0.039
Total Cadmium	g/m <sup>3</sup>	< 0.000053	< 0.000053	< 0.000053	< 0.000053	< 0.000053
Total Calcium	g/m <sup>3</sup>	2.7	3.3	3.1	8.0	2.9
Total Chromium	g/m <sup>3</sup>	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053
Total Copper	g/m <sup>3</sup>	< 0.00053	0.0125	0.00154	0.0031	0.00126
Total Lead	g/m <sup>3</sup>	0.00021	0.0141 #1	0.00034	0.00019	0.00037
Total Magnesium	g/m <sup>3</sup>	2.0	2.6	2.4	5.9	2.2
Total Mercury	g/m <sup>3</sup>	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Total Nickel	g/m <sup>3</sup>	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053
Total Sodium	g/m <sup>3</sup>	11.8	28	15.0	27	13.9
Chloride	g/m <sup>3</sup>	6.6	6.7	7.6	13.7	6.3
Sulphate	g/m <sup>3</sup>	1.8	1.5	1.7	4.2	1.6

	Sample Name:	G01855 - ESZ11 23-Sep-2024 10:00 am
	Lab Number:	3677898.6
Total Alkalinity	g/m <sup>3</sup> as CaCO <sub>3</sub>	39
Total Antimony	g/m <sup>3</sup>	< 0.00021
Total Arsenic	g/m <sup>3</sup>	0.0012
Total Barium	g/m <sup>3</sup>	0.065
Total Cadmium	g/m <sup>3</sup>	< 0.000053
Total Calcium	g/m <sup>3</sup>	3.0
Total Chromium	g/m <sup>3</sup>	< 0.00053
Total Copper	g/m <sup>3</sup>	0.094
Total Lead	g/m <sup>3</sup>	0.0074
Total Magnesium	g/m <sup>3</sup>	2.6
Total Mercury	g/m <sup>3</sup>	< 0.00008
Total Nickel	g/m <sup>3</sup>	< 0.00053
Total Sodium	g/m <sup>3</sup>	14.7
Chloride	g/m <sup>3</sup>	5.9
Sulphate	g/m <sup>3</sup>	1.8

### Analyst's Comments

#1 Please note that the exceedance of the Drinking Water MAV by this analyte may be due to insufficient flushing of the tap prior to sampling. The NZ Drinking Water Standards state that a water sample should be collected "after flushing the tap long enough to ensure the sample is representative of water from the distribution zone. Adequate flushing is especially important when monitoring heavy metals to avoid metals arising from the corrosion of plumbing contributing to the measurements." (Section 8.3.5).



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked \* or any comments and interpretations, which are not accredited.

## 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: Drinking Water for DWSNZ Compliance			
Test	Method Description	Default Detection Limit	Sample No
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1-6
Total Alkalinity	Titration to pH 4.5 (M-alkalinity), autotitrator. APHA 2320 B (modified for Alkalinity <20) : Online Edition.	1.0 g/m <sup>3</sup> as CaCO <sub>3</sub>	1-6
Total Antimony	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00021 g/m <sup>3</sup>	1-6
Total Arsenic	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0011 g/m <sup>3</sup>	1-6
Total Barium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.0053 g/m <sup>3</sup>	1-6
Total Cadmium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.000053 g/m <sup>3</sup>	1-6
Total Calcium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.053 g/m <sup>3</sup>	1-6
Total Chromium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m <sup>3</sup>	1-6
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m <sup>3</sup>	1-6
Total Lead	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00011 g/m <sup>3</sup>	1-6
Total Magnesium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m <sup>3</sup>	1-6
Total Mercury	Bromine Oxidation followed by Atomic Fluorescence. US EPA Method 245.7, Feb 2005.	0.00008 g/m <sup>3</sup>	1-6
Total Nickel	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m <sup>3</sup>	1-6
Total Sodium	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.021 g/m <sup>3</sup>	1-6
Chloride	Filtered sample. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m <sup>3</sup>	1-6
Sulphate	Filtered sample. Ion Chromatography. APHA 4110 B (modified) : Online Edition.	0.5 g/m <sup>3</sup>	1-6

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

Testing was completed between 25-Sep-2024 and 27-Sep-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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