

## Food & Water Testing

# ANALYTICAL REPORT

REPORT CODE **AR-23-NC-027317-01** REPORT DATE **13/10/2023**

**Attention** Veolia Water Services (ANZ) Pty Ltd  
 NZ Queenstown Lab Results  
 74 Glenda Drive  
 Frankton  
 9300 Queenstown  
 NEW ZEALAND

**Phone** 03 450 9240

**Email** nz.queenstown.lab-results.all.groups@veolia.com

**Contact for your orders:** James Thornton **Order code:** EUNZCH-00152341  
**Contract:** Drinking Water **Purchase Order Number:** 7300305158

**SAMPLE CODE** **817-2023-00107404**

**Product:** Raw water  
**Sampling Point code:** UWI\_2MILE\_RAW **Sampling Point name:** Two Mile Source, S94  
**Reception Date & Time:** 03/10/2023 12:53 **Reception temperature:** 5.5  
**Analysis Start Date & Time:** 03/10/2023 12:53 **Analysis Ending Date:** 12/10/2023  
**Sampled Date & Time** 03/10/2023 09:18 **Sampler(s)** Tomas Hais  
**Sampling Purpose** Monitoring **Sampled By Eurofins** Yes

### RESULTS (UNCERTAINTY) LOQ SPECIFICATIONS

<b>②NW007 Chloride</b> Chloride (Cl)	7.33	(± 0.73) mg/l	0.02		
<b>②NW011 Sulphate</b> Sulphate	4.71	(± 0.47) mg/l	0.02		
<b>②NW003 Total Alkalinity</b> Alkalinity total	15	(± 1) mg CaCO <sub>3</sub> /l	1		
<b>②NW148 Total Antimony</b> Antimony (Sb)	<0.002	mg/l	0.002	50% MAV 0.01 mg/l	✓ Client Specification
<b>②NW149 Total Arsenic</b> Arsenic (As)	<0.002	mg/l	0.002	50% MAV 0.005 mg/l	✓ Client Specification
<b>②NW150 Total Barium</b> Barium (Ba)	<0.005	mg/l	0.005	50% MAV 0.75 mg/l	✓ Client Specification
<b>②NW154 Total Cadmium</b> Cadmium (Cd)	<0.001	mg/l	0.001	50% MAV 0.002 mg/l	✓ Client Specification
<b>②NW156 Total Calcium</b> Calcium (Ca)	8.2	mg/l	0.1		
<b>②NW157 Total Chromium</b> Chromium (Cr)	0.002	mg/l	0.001	50% MAV 0.025 mg/l	✓ Client Specification
<b>②NW159 Total Copper</b> Copper (Cu)	0.017	mg/l	0.002	50% MAV 1.0 mg/l	✓ Client Specification
<b>②NW161 Total Lead</b> Lead (Pb)	0.002	mg/l	0.001	50% MAV 0.005 mg/l	✓ Client Specification
<b>②NW163 Total Magnesium</b> Magnesium (Mg)	0.6	mg/l	0.1		
<b>②NW165 Total Mercury</b> Mercury (Hg)	<0.001	mg/l	0.001	50% MAV 0.0035 mg/l	✓ Client Specification

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	RESULTS (UNCERTAINTY)	LOQ	SPECIFICATIONS
②NW167 <b>Total Nickel</b> Nickel (Ni)	0.002	mg/l	0.001
			50% MAV 0.04 mg/l ✓ Client Specification
②NW171 <b>Total Sodium</b> Sodium (Na)	1.3	mg/l	0.1

<b>SAMPLE CODE</b>	<b>817-2023-00107425</b>		
<b>Product:</b>	Raw water		
<b>Sampling Point code:</b>	NC0001572017	<b>Sampling Point name:</b>	Shotover Country Bore, G02144
<b>Reception Date &amp; Time:</b>	03/10/2023 13:01	<b>Reception temperature:</b>	5.5
<b>Analysis Start Date &amp; Time:</b>	03/10/2023 13:01	<b>Analysis Ending Date:</b>	12/10/2023
<b>Sampled Date &amp; Time</b>	03/10/2023 07:45	<b>Sampler(s)</b>	Tomas Hais
<b>Sampling Purpose</b>	Monitoring	<b>Sampled By Eurofins</b>	Yes

	RESULTS (UNCERTAINTY)	LOQ	
②NW007 <b>Chloride</b> Chloride (Cl)	0.71	(± 0.14) mg/l	0.02
②NW011 <b>Sulphate</b> Sulphate	7.55	(± 0.76) mg/l	0.02
②NW003 <b>Total Alkalinity</b> Alkalinity total	67	(± 7) mg CaCO <sub>3</sub> /l	1
②NW148 <b>Total Antimony</b> Antimony (Sb)	<0.002	mg/l	0.002
②NW149 <b>Total Arsenic</b> Arsenic (As)	<0.002	mg/l	0.002
②NW150 <b>Total Barium</b> Barium (Ba)	<0.005	mg/l	0.005
②NW154 <b>Total Cadmium</b> Cadmium (Cd)	<0.001	mg/l	0.001
②NW156 <b>Total Calcium</b> Calcium (Ca)	28.3	mg/l	0.1
②NW157 <b>Total Chromium</b> Chromium (Cr)	<0.001	mg/l	0.001
②NW159 <b>Total Copper</b> Copper (Cu)	<0.002	mg/l	0.002
②NW161 <b>Total Lead</b> Lead (Pb)	0.001	mg/l	0.001
②NW163 <b>Total Magnesium</b> Magnesium (Mg)	1.3	mg/l	0.1
②NW165 <b>Total Mercury</b> Mercury (Hg)	<0.001	mg/l	0.001
②NW167 <b>Total Nickel</b> Nickel (Ni)	<0.001	mg/l	0.001
②NW171 <b>Total Sodium</b> Sodium (Na)	1.6	mg/l	0.1

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**SAMPLE CODE**      **817-2023-00107426**

<b>Product:</b>	Raw water	<b>Sampling Point name:</b>	Lake Hayes Water Bore, G00312
<b>Sampling Point code:</b>	NC0001572008	<b>Reception temperature:</b>	5.5
<b>Reception Date &amp; Time:</b>	03/10/2023 13:01	<b>Analysis Ending Date:</b>	12/10/2023
<b>Analysis Start Date &amp; Time:</b>	03/10/2023 13:01	<b>Sampler(s)</b>	Tomas Hais
<b>Sampled Date &amp; Time</b>	03/10/2023 07:16	<b>Sampled By Eurofins</b>	Yes
<b>Sampling Purpose</b>	Monitoring		

	RESULTS (UNCERTAINTY)	LOQ	SPECIFICATIONS
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②NW007 <b>Chloride</b> Chloride (Cl)	2.84	(± 0.28) mg/l	0.02	
②NW011 <b>Sulphate</b> Sulphate	10.1	(± 0.50) mg/l	0.02	
②NW003 <b>Total Alkalinity</b> Alkalinity total	84	(± 8) mg CaCO <sub>3</sub> /l	1	
②NW148 <b>Total Antimony</b> Antimony (Sb)	<0.002	mg/l	0.002	50% MAV 0.01 mg/l ✓ Client Specification
②NW149 <b>Total Arsenic</b> Arsenic (As)	<0.002	mg/l	0.002	50% MAV 0.005 mg/l ✓ Client Specification
②NW150 <b>Total Barium</b> Barium (Ba)	<0.005	mg/l	0.005	50% MAV 0.75 mg/l ✓ Client Specification
②NW154 <b>Total Cadmium</b> Cadmium (Cd)	<0.001	mg/l	0.001	50% MAV 0.002 mg/l ✓ Client Specification
②NW156 <b>Total Calcium</b> Calcium (Ca)	31.1	mg/l	0.1	
②NW157 <b>Total Chromium</b> Chromium (Cr)	<0.001	mg/l	0.001	50% MAV 0.025 mg/l ✓ Client Specification
②NW159 <b>Total Copper</b> Copper (Cu)	0.002	mg/l	0.002	50% MAV 1.0 mg/l ✓ Client Specification
②NW161 <b>Total Lead</b> Lead (Pb)	0.002	mg/l	0.001	50% MAV 0.005 mg/l ✓ Client Specification
②NW163 <b>Total Magnesium</b> Magnesium (Mg)	3.0	mg/l	0.1	
②NW165 <b>Total Mercury</b> Mercury (Hg)	<0.001	mg/l	0.001	50% MAV 0.0035 mg/l ✓ Client Specification
②NW167 <b>Total Nickel</b> Nickel (Ni)	<0.001	mg/l	0.001	50% MAV 0.04 mg/l ✓ Client Specification
②NW171 <b>Total Sodium</b> Sodium (Na)	3.9	mg/l	0.1	

**SAMPLE CODE**      **817-2023-00107542**

<b>Product:</b>	Raw water	<b>Sampling Point name:</b>	Beacon Point Source, S2906
<b>Sampling Point code:</b>	Q_UWI_BEACON_RAW	<b>Reception temperature:</b>	5.5
<b>Reception Date &amp; Time:</b>	03/10/2023 14:56	<b>Analysis Ending Date:</b>	12/10/2023
<b>Analysis Start Date &amp; Time:</b>	03/10/2023 14:56	<b>Sampler(s)</b>	Francisco Cabanas Francisco
<b>Sampled Date &amp; Time</b>	03/10/2023 11:04	<b>Sampled By Eurofins</b>	Yes
<b>Sampling Purpose</b>	Monitoring		

	RESULTS (UNCERTAINTY)	LOQ	SPECIFICATIONS
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 ②NW007 **Chloride**

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	RESULTS (UNCERTAINTY)		LOQ	SPECIFICATIONS	
②NW007 <b>Chloride</b>					
Chloride (Cl)	0.66	(± 0.13) mg/l	0.02		
②NW011 <b>Sulphate</b>					
Sulphate	3.56	(± 0.36) mg/l	0.02		
②NW003 <b>Total Alkalinity</b>					
Alkalinity total	30	(± 3) mg CaCO <sub>3</sub> /l	1		
②NW148 <b>Total Antimony</b>					
Antimony (Sb)	<0.002	mg/l	0.002	50% MAV 0.01 mg/l	✓ Client Specification
②NW149 <b>Total Arsenic</b>					
Arsenic (As)	<0.002	mg/l	0.002	50% MAV 0.005 mg/l	✓ Client Specification
②NW150 <b>Total Barium</b>					
Barium (Ba)	<0.005	mg/l	0.005	50% MAV 0.75 mg/l	✓ Client Specification
②NW154 <b>Total Cadmium</b>					
Cadmium (Cd)	<0.001	mg/l	0.001	50% MAV 0.002 mg/l	✓ Client Specification
②NW156 <b>Total Calcium</b>					
Calcium (Ca)	11.5	mg/l	0.1		
②NW157 <b>Total Chromium</b>					
Chromium (Cr)	<0.001	mg/l	0.001	50% MAV 0.025 mg/l	✓ Client Specification
②NW159 <b>Total Copper</b>					
Copper (Cu)	<0.002	mg/l	0.002	50% MAV 1.0 mg/l	✓ Client Specification
②NW161 <b>Total Lead</b>					
Lead (Pb)	<0.001	mg/l	0.001	50% MAV 0.005 mg/l	✓ Client Specification
②NW163 <b>Total Magnesium</b>					
Magnesium (Mg)	0.5	mg/l	0.1		
②NW165 <b>Total Mercury</b>					
Mercury (Hg)	<0.001	mg/l	0.001	50% MAV 0.0035 mg/l	✓ Client Specification
②NW167 <b>Total Nickel</b>					
Nickel (Ni)	0.002	mg/l	0.001	50% MAV 0.04 mg/l	✓ Client Specification
②NW171 <b>Total Sodium</b>					
Sodium (Na)	0.7	mg/l	0.1		

**SAMPLE CODE**      **817-2023-00107544**

<b>Product:</b>	Raw water	<b>Sampling Point name:</b>	Western Source, S2905
<b>Sampling Point code:</b>	UWI_WESTERN_RAW	<b>Reception temperature:</b>	5.5
<b>Reception Date &amp; Time:</b>	03/10/2023 14:56	<b>Analysis Ending Date:</b>	12/10/2023
<b>Analysis Start Date &amp; Time:</b>	03/10/2023 14:56	<b>Sampler(s)</b>	Francisco Cabanas Francisco
<b>Sampled Date &amp; Time</b>	03/10/2023 11:30	<b>Sampled By Eurofins</b>	Yes
<b>Sampling Purpose</b>	Monitoring		

	RESULTS (UNCERTAINTY)		LOQ	SPECIFICATIONS	
②NW007 <b>Chloride</b>					
Chloride (Cl)	0.67	(± 0.13) mg/l	0.02		
②NW011 <b>Sulphate</b>					
Sulphate	3.52	(± 0.35) mg/l	0.02		
②NW003 <b>Total Alkalinity</b>					
Alkalinity total	29	(± 3) mg CaCO <sub>3</sub> /l	1		
②NW148 <b>Total Antimony</b>					
Antimony (Sb)	<0.002	mg/l	0.002	50% MAV 0.01 mg/l	✓ Client Specification

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	RESULTS (UNCERTAINTY)		LOQ	SPECIFICATIONS	
②NW149 <b>Total Arsenic</b> Arsenic (As)	<0.002	mg/l	0.002	50% MAV 0.005 mg/l	✓ Client Specification
②NW150 <b>Total Barium</b> Barium (Ba)	<0.005	mg/l	0.005	50% MAV 0.75 mg/l	✓ Client Specification
②NW154 <b>Total Cadmium</b> Cadmium (Cd)	<0.001	mg/l	0.001	50% MAV 0.002 mg/l	✓ Client Specification
②NW156 <b>Total Calcium</b> Calcium (Ca)	11.8	mg/l	0.1		
②NW157 <b>Total Chromium</b> Chromium (Cr)	<0.001	mg/l	0.001	50% MAV 0.025 mg/l	✓ Client Specification
②NW159 <b>Total Copper</b> Copper (Cu)	0.002	mg/l	0.002	50% MAV 1.0 mg/l	✓ Client Specification
②NW161 <b>Total Lead</b> Lead (Pb)	<0.001	mg/l	0.001	50% MAV 0.005 mg/l	✓ Client Specification
②NW163 <b>Total Magnesium</b> Magnesium (Mg)	0.6	mg/l	0.1		
②NW165 <b>Total Mercury</b> Mercury (Hg)	<0.001	mg/l	0.001	50% MAV 0.0035 mg/l	✓ Client Specification
②NW167 <b>Total Nickel</b> Nickel (Ni)	<0.001	mg/l	0.001	50% MAV 0.04 mg/l	✓ Client Specification
②NW171 <b>Total Sodium</b> Sodium (Na)	0.8	mg/l	0.1		

**SAMPLE CODE**      **817-2023-00107547**

<b>Product:</b>	Raw water	<b>Sampling Point name:</b>	Wanaka Airport Source, S3014
<b>Sampling Point code:</b>	UWI_WAN_AIR_RAW	<b>Reception temperature:</b>	5.5
<b>Reception Date &amp; Time:</b>	03/10/2023 14:57	<b>Analysis Ending Date:</b>	12/10/2023
<b>Analysis Start Date &amp; Time:</b>	03/10/2023 14:57	<b>Sampler(s)</b>	Francisco Cabanas Francisco
<b>Sampled Date &amp; Time</b>	03/10/2023 09:31	<b>Sampled By Eurofins</b>	Yes
<b>Sampling Purpose</b>	Monitoring		

	RESULTS (UNCERTAINTY)		LOQ	SPECIFICATIONS	
②NW007 <b>Chloride</b> Chloride (Cl)	1.95	(± 0.19) mg/l	0.02		
②NW011 <b>Sulphate</b> Sulphate	6.09	(± 0.61) mg/l	0.02		
②NW003 <b>Total Alkalinity</b> Alkalinity total	154	(± 15) mg CaCO <sub>3</sub> /l	1		
②NW148 <b>Total Antimony</b> Antimony (Sb)	0.005	mg/l	0.002	50% MAV 0.01 mg/l	✓ Client Specification
②NW149 <b>Total Arsenic</b> Arsenic (As)	<0.002	mg/l	0.002	50% MAV 0.005 mg/l	✓ Client Specification
②NW150 <b>Total Barium</b> Barium (Ba)	0.011	mg/l	0.005	50% MAV 0.75 mg/l	✓ Client Specification
②NW154 <b>Total Cadmium</b> Cadmium (Cd)	<0.001	mg/l	0.001	50% MAV 0.002 mg/l	✓ Client Specification
②NW156 <b>Total Calcium</b> Calcium (Ca)	60.7	mg/l	0.1		

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	RESULTS (UNCERTAINTY)	LOQ	SPECIFICATIONS	
②NW157 <b>Total Chromium</b> Chromium (Cr)	<0.001	mg/l	0.001	50% MAV 0.025 mg/l ✓ Client Specification
②NW159 <b>Total Copper</b> Copper (Cu)	<0.002	mg/l	0.002	50% MAV 1.0 mg/l ✓ Client Specification
②NW161 <b>Total Lead</b> Lead (Pb)	<0.001	mg/l	0.001	50% MAV 0.005 mg/l ✓ Client Specification
②NW163 <b>Total Magnesium</b> Magnesium (Mg)	4.1	mg/l	0.1	
②NW165 <b>Total Mercury</b> Mercury (Hg)	<0.001	mg/l	0.001	50% MAV 0.0035 mg/l ✓ Client Specification
②NW167 <b>Total Nickel</b> Nickel (Ni)	<0.001	mg/l	0.001	50% MAV 0.04 mg/l ✓ Client Specification
②NW171 <b>Total Sodium</b> Sodium (Na)	3.6	mg/l	0.1	

LIST OF METHODS	
NW003 <b>Total Alkalinity:</b> APHA Online Edition 2320 B	NW007 <b>Chloride:</b> APHA Online Edition 4110 B
NW011 <b>Sulphate:</b> APHA Online Edition 4110 B	NW148 <b>Total Antimony:</b> APHA Online Edition 3125 B mod.
NW149 <b>Total Arsenic:</b> APHA Online Edition 3125 B mod.	NW150 <b>Total Barium:</b> APHA Online Edition 3125 B mod.
NW154 <b>Total Cadmium:</b> APHA Online Edition 3125 B mod.	NW156 <b>Total Calcium:</b> APHA Online Edition 3125 B mod.
NW157 <b>Total Chromium:</b> APHA Online Edition 3125 B mod.	NW159 <b>Total Copper:</b> APHA Online Edition 3125 B mod.
NW161 <b>Total Lead:</b> APHA Online Edition 3125 B mod.	NW163 <b>Total Magnesium:</b> APHA Online Edition 3125 B mod.
NW165 <b>Total Mercury:</b> APHA Online Edition 3125 B mod.	NW167 <b>Total Nickel:</b> APHA Online Edition 3125 B mod.
NW171 <b>Total Sodium:</b> APHA Online Edition 3125 B mod.	

Signature



**David Hoekendijk** Team Lead KTP

EXPLANATORY NOTE
① Test is not accredited
② Test is subcontracted within Eurofins group and is accredited
③ Test is subcontracted within Eurofins group and is not accredited
④ Test is subcontracted outside Eurofins group and is accredited
⑤ Test is subcontracted outside Eurofins group and is not accredited
⑥ Test result is provided by the customer and is not accredited
⑦ Tested at the sampling point by Eurofins and is not accredited
⑧ Tested at the sampling point by Eurofins and is accredited
⑨ Test is RLP accredited
⑩ Test is subcontracted within Eurofins group and is RLP accredited

**N/A** means Not Applicable

**Not Detected** means not detected at or above the Limit of Quantification (LOQ)

**LOQ** means Limit of Quantification and the unit of LOQ is the same as the result unit

## Food & Water Testing

The test result(s) in this report apply only to the sample as received.

This document can only be reproduced in full.

The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

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.

This report issued by Eurofins relates exclusively to the samples provided by the Customer and does not relate to the lot / batch from which the samples have been obtained.

Eurofins may subcontract the performance of part or all of the Services to a third party and the Customer authorises the release of all information necessary to the third party for the provision of the Services.

All samples become the property of Eurofins to the extent necessary for the performance of the Services.

Eurofins will not be required to store samples and may destroy or otherwise dispose of the samples or return the samples to the Customer (at the Customer's cost in all respects) immediately following analysis of the samples.

If the Customer pays for storage of the samples Eurofins will take commercially reasonable steps to store the samples for the agreed period in terms of industry practice.

The Customer acknowledges and accepts that: (a) it is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the sample.

The Eurofins water sampling services uses IANZ approved methodology based on AS/NZS 5667 and / or best practice to collect and transport samples that are fit for the purpose of analytical testing. Eurofins shall have no liability if the sample collected is not representative of the source from which it has been taken. The laboratory is not responsible for sampling activities unless explicitly indicated by the statement "Sampled by Eurofins" on the report for water samples.

The Customer acknowledges that the Services are provided using the then current state of technology and methods developed and generally applied by Eurofins and involve analysis, interpretations, consulting work and conclusions. Eurofins shall use commercially reasonable degree of care in providing the Services.

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**END OF REPORT**