



ANALYSIS REPORT

Client:	Cawthron Institute (Nelson)	Lab No:	1847686	SPv1
Contact:	Maria Charry C/- Cawthron Institute (Nelson) Private Bag 2 Nelson Mail Centre Nelson 7042	Date Received:	22-Sep-2017	
		Date Reported:	05-Oct-2017	
		Quote No:	86159	
		Order No:		
		Client Reference:		
		Submitted By:	Maria Charry	

Sample Type: Saline

Sample Name:	Estold 19-Sep-2017	Esthum 19-Sep-2017	Hest 20-Sep-2017 2:00 pm	Oldest 20-Sep-2017 2:00 pm	
Lab Number:	1847686.1	1847686.2	1847686.3	1847686.4	

Individual Tests

Test	Unit	Estold	Esthum	Hest	Oldest	
Dissolved Cadmium*	g/m ³	-	-	< 0.0002	< 0.0002	-
Dissolved Copper*	g/m ³	-	-	0.0010	0.0022	-
Dissolved Lead*	g/m ³	-	-	0.0016	0.0022	-
Dissolved Zinc*	g/m ³	-	-	0.033	0.044	-
Total Ammoniacal-N	g/m ³	-	-	0.005	0.22	-
Non-Purgeable Organic Carbon (NPOC)*	g/m ³	-	-	1.6	1.5	-

Polycyclic Aromatic Hydrocarbons Trace in Water, By Liq/Liq

Test	Unit	Estold	Esthum	Hest	Oldest	
Acenaphthene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Acenaphthylene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Anthracene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Benzo[a]anthracene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Benzo[a]pyrene (BAP)*	g/m ³	< 0.000014	< 0.000014	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Benzo[g,h,i]perylene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Benzo[k]fluoranthene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Chrysene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Dibenzo[a,h]anthracene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Fluoranthene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Fluorene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Indeno(1,2,3-c,d)pyrene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Naphthalene*	g/m ³	< 0.00007	< 0.00007	-	-	-
Phenanthrene*	g/m ³	< 0.000014	< 0.000014	-	-	-
Pyrene*	g/m ³	< 0.000014	< 0.000014	-	-	-

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 clean 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.

Sample Type: Saline

Test	Method Description	Default Detection Limit	Sample No
Polycyclic Aromatic Hydrocarbons Trace in Water, By Liq/Liq*	Liquid / liquid extraction, SPE (if required), GC-MS SIM analysis [KBIs:4736,2695] Analysis performed at 1 Clyde Street, Hamilton	0.000005 g/m ³	1-2
Filtration, Unpreserved*	Sample filtration through 0.45µm membrane filter.	-	3-4
Filtration for dissolved metals analysis*	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B 22 nd ed. 2012.	-	3-4
Dissolved Cadmium*	Filtered sample, ICP-MS, ultratrace level. APHA 3125 B 22 nd ed. 2012.	0.0002 g/m ³	3-4



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 *, which are not accredited.

Sample Type: Saline			
Test	Method Description	Default Detection Limit	Sample No
Dissolved Copper*	Filtered sample, ICP-MS, ultratrace. APHA 3125 B 22 nd ed. 2012.	0.0010 g/m ³	3-4
Dissolved Lead*	Filtered sample, ICP-MS, ultratrace level. APHA 3125 B 22 nd ed. 2012.	0.0010 g/m ³	3-4
Dissolved Zinc*	Filtered sample, ICP-MS with dynamic reaction cell, ultratrace. APHA 3125 B 22 nd ed. 2012.	0.004 g/m ³	3-4
Total Ammoniacal-N	Saline sample. Phenol/hypochlorite colorimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H 22 nd ed. 2012.	0.005 g/m ³	3-4
Non-Purgeable Organic Carbon (NPOC)*	Acidification, purging to remove inorganic C, super-critical persulphate oxidation at 375°C, IR detection. APHA 5310 C (modified) 22 nd ed. 2012.	0.3 g/m ³	3-4

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.

This report must not be reproduced, except in full, without the written consent of the signatory.

Ara Heron BSc (Tech)
Client Services Manager - Environmental