6 pages

Environmental Laboratory Services Ltd.

Capacity - HCC Non Routine H2O
Wellington Water Management
Private Bag 39-804
WELLINGTON MAIL CENTRE

Attention: Gary O'Meara

Analytical Report

Report Number: 07/7314
Issue: 1
18 May 2007

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
07/7314-01	Domestic Water Supply		24/04/2007 08:39	24/04/2007	0

Notes: Petone Water Supply

	Test	Result	Units	Comments	Signatory
0001	pH	7.7		Complies with NZDW Standard	Rachel Wallace KTP/LAS
0052	Alkalinity - Total	59	g CaCO3/m3	No limit listed in NZDWS	Rachel Wallace KTP/LAS
0055	Conductivity at 25°C	19.0	mS/m	No limit listed in NZDWS	Rachel Wallace KTP/LAS
0058	Free Available Chlorine	< 0.1	g/m3	Complies with NZDW Standard	Rachel Wallace KTP/LAS
0084	Turbidity	0.27	NTU	Complies with NZDW Standard	Rachel Wallace KTP/LAS
0103	Total Coliforms	<1	/100mL	No limit listed in NZDWS	Maria Norris KTP/LAS
0104	E. coli	<1	/100mL	Complies with NZDW Standard	Sunita Raju KTP/LAS
0601	Fluoride	0.06	g/m3	Complies with NZDW Standard	Rob Deacon KTP/LAS
0602	Chloride	14.7	g/m3	Complies with NZDW Standard	Rob Deacon KTP/LAS
0605	Nitrate - Nitrogen	0.70	g/m3	Complies with NZDW Standard	Rob Deacon KTP/LAS
0607	Sulphate	5.37	g/m3	Complies with NZDW Standard	Rob Deacon KTP/LAS
1602	Arsenic - Acid Soluble	0.006	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1606	Boron - Acid Soluble	0.020	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1610	Calcium - Acid Soluble	19.3	g/m3	See Total Hardness	Wayne Edgerley KTP/LAS
1615	Copper - Acid Soluble	0.036	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS

65 Port Road Seaview
Lower Hutt New Zealand
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07/7314-01	Domestic Water Supply		24/04/2007 08:39	24/04/2007	0

Notes: Petone Water Supply

	Test	Result	Units	Comments	Signatory
1619	Iron - Acid Soluble	0.043	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1622	Magnesium - Acid Soluble	3.02	g/m3	See Total Hardness	Wayne Edgerley KTP/LAS
1623	Manganese - Acid Soluble	< 0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1634	Sodium - Acid Soluble	12.1	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1641	Zinc - Acid Soluble	0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1642	Total Hardness	61	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS

Comments:

Sampled by ELS using approved containers and techniques.

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

Test Methodology:

Test	Methodology	Detection Limit
pH	APHA 21st Edition Method 4500 H. LAS official test 4.3, 5.03.	0.1
Alkalinity - Total	APHA 20th Edition Method 2320 B	1 g CaCO3/m3
Conductivity at 25°C	APHA 20th Edition Method 2510 B. LAS official test 4.2, 5.02.	0.1 mS/m
Free Available Chlorine	APHA 20th Edition Method 4500-Cl G	0.1 g/m3
Turbidity	APHA 20th Edition Method 2130 B. LAS official test 4.1, 5.04.	0.01 NTU
Total Coliforms	Chromogenic Presence/Absence test following APHA 21st Edition 9223 B. MIMM 11A1.1. LAS official test 1.1.1	1 /100mL
E. coli	Chromogenic Presence/Absence test following APHA 21st Edition 9223 B. MIMM 11A1.1. LAS official test 1.1.1	1 /100mL
Fluoride	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.12.	0.02 g/m3
Chloride	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.11.	0.02 g/m3
Nitrate - Nitrogen	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.13.	0.01 g/m3
Sulphate	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.16.	0.02 g/m3
Arsenic - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Boron - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Calcium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.21.	0.01 g/m3
Copper - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Iron - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.25.	0.005 g/m3
Magnesium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.27.	0.01 g/m3
Manganese - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.28.	0.005 g/m3
Sodium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.31.	0.02 g/m3
Zinc - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Total Hardness	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.05.	1 g/m3

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"<" 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.

g/m3 is the equivalent to mg/L and ppm.

Samples will be retained for a period of time, in suitable conditions appropriate to the analyses requested.

All test methods and confidence limits are available on request. This report must not be reproduced except in full, without the written consent of the laboratory.

Report Released By

Rob Deacon

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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 IANZ", which are outside the scope of this laboratory's accreditation.

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Environmental Laboratory Services Ltd.

Hutt City Council (Capacity)NR
Wellington Water Management
Private Bag 39-804
WELLINGTON MAIL CENTRE

Attention: Gary O'Meara

Analytical Report

Report Number: 07/7313
Issue: 1
30 April 2007

Sample	Site	Map Ref.	Date Sampled	Date Received	Order No.
07/7313-01	Domestic Water Supply		18/04/2007 08:36	18/04/2007	0

Notes: Buick Street Water Supply

	Test	Result	Units	Comments	Signatory
0001	pH	6.5		Below NZDWS Guideline Value of 7	Rachel Wallace KTP/LAS
0052	Alkalinity - Total	25	g CaCO3/m3	No limit listed in NZDWS	Rachel Wallace KTP/LAS
0055	Conductivity at 25°C	10.3	mS/m	No limit listed in NZDWS	Rachel Wallace KTP/LAS
0058	Free Available Chlorine	< 0.1	g/m3	Complies with NZDW Standard	Rachel Wallace KTP/LAS
0084	Turbidity	0.12	NTU	Complies with NZDW Standard	Rachel Wallace KTP/LAS
0103	Total Coliforms	<1	/100mL	No limit listed in NZDWS	Sunita Raju KTP/LAS
0104	E. coli	<1	/100mL	Complies with NZDW Standard	Sunita Raju KTP/LAS
0601	Fluoride	0.18	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
0602	Chloride	13.8	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
0605	Nitrate - Nitrogen	0.25	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
0607	Sulphate	4.50	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1602	Arsenic - Acid Soluble	< 0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1606	Boron - Acid Soluble	0.015	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1610	Calcium - Acid Soluble	4.41	g/m3	See Total Hardness	Wayne Edgerley KTP/LAS
1615	Copper - Acid Soluble	< 0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS

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07/7313-01	Domestic Water Supply		18/04/2007 08:36	18/04/2007	0

Notes: Buick Street Water Supply

	Test	Result	Units	Comments	Signatory
1619	Iron - Acid Soluble	0.007	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1622	Magnesium - Acid Soluble	2.37	g/m3	See Total Hardness	Wayne Edgerley KTP/LAS
1623	Manganese - Acid Soluble	< 0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1634	Sodium - Acid Soluble	11.2	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1641	Zinc - Acid Soluble	< 0.005	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS
1642	Total Hardness	21	g/m3	Complies with NZDW Standard	Wayne Edgerley KTP/LAS

Comments:

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Test Methodology:

Test	Methodology	Detection Limit
pH	APHA 21st Edition Method 4500 H. LAS official test 4.3, 5.03.	0.1
Alkalinity - Total	APHA 20th Edition Method 2320 B	1 g CaCO3/m3
Conductivity at 25°C	APHA 20th Edition Method 2510 B. LAS official test 4.2, 5.02.	0.1 mS/m
Free Available Chlorine	APHA 20th Edition Method 4500-Cl G	0.1 g/m3
Turbidity	APHA 20th Edition Method 2130 B. LAS official test 4.1, 5.04.	0.01 NTU
Total Coliforms	Chromogenic Presence/Absence test following APHA 21st Edition 9223 B. MIMM 11A1.1. LAS official test 1.1.1	1 /100mL
E. coli	Chromogenic Presence/Absence test following APHA 21st Edition 9223 B. MIMM 11A1.1. LAS official test 1.1.1	1 /100mL
Fluoride	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.12.	0.02 g/m3
Chloride	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.11.	0.02 g/m3
Nitrate - Nitrogen	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.13.	0.01 g/m3
Sulphate	Ion Chromatography following USEPA 300.0 (modified). LAS official test 5.16.	0.02 g/m3
Arsenic - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Boron - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Calcium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.21.	0.01 g/m3
Copper - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Iron - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.26.	0.005 g/m3
Magnesium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.27.	0.01 g/m3
Manganese - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.28.	0.005 g/m3
Sodium - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.31.	0.02 g/m3
Zinc - Acid Soluble	ICP-OES following APHA 21st Edition Method 3120 B (modified)	0.005 g/m3
Total Hardness	ICP-OES following APHA 21st Edition Method 3120 B (modified). LAS official test 5.06.	1 g/m3

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g/m3 is the equivalent to mg/L and ppm.

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