SOUTH-WEST CHEMICAL SERVICES

Specialising in water & soil & plant analysis, bacteriological testing, chemical,

Environmental & Consultancy Services

Mr Peter Hutchison, 19 Frances Road, Gelorup, WA...6230 Telephone/Fax: 08-97959821 Mobile: 0402 572 849

CERTIFICATE OF ANALYSIS

Chemical Water Analysis

Client Name: **Quantum Filtration Medium** Job No: 31833

Address: Leschenault Drive, North Shore, Bunbury, WA 6230

Tel No: 97214044 Fax No: 97214046 Mob:

Date Received: 18th July 2003 Lab No: 1495

Report date: 30th July 2003

Sample Source: North bore water sample taken from South West Health Campus, Bunbury.

Sample Use: Filtration

Test Method: Samples submitted by client are analysed on as received basis.

Analysis performed in accordance with MPL WILAB 5.0, 6.0 and 8.0

Analysis performed in accordance to NATA certification

		DETECT LIMIT	RECOMM. MAXIMUM	UNIT	Bore (Raw) water before filtration	Bore (Treated) water after filtration
1.	Conductivity	1 +	N/S	μS/m	470	500
2.	TDS (Calculated)	1 +	1000	mg/L	300	320
3.	pН	+	6.5 to 8.5		6.4	6.3
4.	Carbonate	1 +	N/S	mg/L	<1	<1
5.	Bicarbonate	1 +	N/S	mg/L	73	58
6.	Hydroxide	1 +	N/S	mg/L	<1	<1
7.	Sodium	5	180	mg/L	60	70
8.	Potassium	1	N/S	mg/L	12	12
9.	Calcium	1	N/S	mg/L	7	8
10.	Magnesium	1	N/S	mg/L	9	9
11.	Hardness as CaCO3	1	200	mg/L	55	55
12.	Iron	0.01	0.3	mg/L	<mark>16</mark>	0.02
13.	Silicon	2	N/S	mg/L	8	8
14.	Cadmium	1	2	μg/L	<1	<1
15.	Lead	1	10	μg/L	<1	<1
16.	Copper	0.01	1.0*	mg/L	< 0.01	< 0.01
17.	Manganese	0.01	0.1	mg/L	0.54	0.01
18.	Zinc	0.01	3	mg/L	0.63	1.8

The Recommended Maximums are taken from "Australian Drinking Water Guidelines" published by NHMRC and ARMC 1996 (* refers to updated value September 2001)

N/S = No Specified Maximum given

+ = indicates sample received outside holding time recommended by AS 5667.1. 1998

Peter Hutchison

Consultant Analytical Chemist.

BSc (Chemistry)

30th July 2003

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		DETECT LIMIT	RECOMM. MAXIMUM	UNIT	Bore (Raw) water	Bore (Treated) water
					in	out
19.	Selenium	1	10	μg/L	<1	<1
20.	Arsenic	1	7	μg/L	5	<1
21.	Chromium	0.01	0.05	mg/L	< 0.01	< 0.01
22.	Mercury	0.1	1	μg/L	< 0.1	<0.1
23.	Cobalt	0.01	N/S	mg/L	< 0.01	< 0.01
24.	Nickel	0.01	0.02	mg/L	< 0.01	< 0.01
25.	Aluminium	0.2	0.2	μg/L	<5	<5
26.	Barium	1	700	μg/L	94	42
27.	Chloride	1	250	mg/L	96	110
28.	Sulphate	1	250	mg/L	18	18
29.	Nitrate as NO3	0.1 +	100	mg/L	< 0.1	<0.1
30.	Nitrite as NO2	0.1 +	3	mg/L	< 0.1	<0.1
31.	Boron	0.05	4*	mg/L	0.05	< 0.05

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COMMENTS ON ANALYSIS

Chemical Water Analysis

The Comprehensive mineral analysis results (including heavy metals) for both water samples are attached.

31 parameters were tested.

Analysis was performed in accordance to NATA certification.

Results were compared to values taken from "Australian Drinking Water Guidelines" published by NHMRC and ARMC 1996 (* refers to updated value September 2001)

All analysed results for the treated filtered water were within "Australian Drinking Water Guidelines" except for pH - which was slightly low.

If I can be of any further assistance in interpretation or any other matter, please don't hesitate to contact South West Chemical Services.

Peter Hutchison Consultant Analytical Chemist. BSc (Chemistry)