

**INDIAN AND NORTHERN AFFAIRS
CANADA, BC REGION**

**ASSESSMENT STUDY OF
WATER AND WASTEWATER SYSTEMS
AND ASSOCIATED
WATER MANAGEMENT PRACTICES
AT SOOWAHLIE NO.14**

 **NovaTec Consultants Inc.**
Environmental Engineers and Scientists

Appendix C

Water Testing Results

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Is(are) under consultation

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Report # 5183

COMPLETION REPORT
CONSTRUCTION AND TESTING OF A COMMUNITY WATER SUPPLY WELL
ON SOOWAHLIE I.R. NO. 14

Prepared for
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ANALYTICAL DATA FOR WELLS 2 + 3

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Table 2. Groundwater Quality from Soowahlie I.R. No. 14 Wells

Parameter		Well No. 1-1992 (1)	Existing Well No. 1 (2)	Existing Well No. 2 (2)	Drinking Water Guidelines (3)
PHYSICAL TESTS					
pH		8.36	7.96	7.24	6.5 - 8.5
Conductivity (umhos/cm)		194.	240.	150.	-
Colour (CU)		<5.	<5.	<5.	15.
Total Hardness (mg/L)	CaCO ₃	98.	110.	70.5	-
Total Dissolved Solids (mg/L)		-	186.	116.	500.
Total Suspended Solids (mg/L)		-	<1.0	<1.0	-
Turbidity (NTU)		0.5	<1.0	<1.0	1/5
DISSOLVED ANIONS (mg/L)					
Alkalinity	CaCO ₃	87.6	96.0	60.	-
	HCO ₃	106.8	117.0	73.1	-
Chloride	Cl	2.2	24.4	6.2	250.
Fluoride	F	0.06	0.07	0.09	1.5
Silicate	SiO ₂	14.3	18.9	31.4	-
Sulphate	SO ₄	12.6	6.8	12.0	500.
NUTRIENTS (mg/L)					
Nitrate and Nitrite	N	0.117	0.008	0.56	10.0
DISSOLVED METALS (mg/L)					
Arsenic	As	0.0015	0.0011	0.0002	0.05
Barium	Ba	0.045	<0.010	<0.010	1.0
Cadmium	Cd	<0.0002	<0.0002	<0.0002	0.005
Calcium	Ca	32.1	37.0	14.4	-
Chromium	Cr	<0.015	<0.015	<0.015	0.05
Copper	Cu	<0.010	<0.010	<0.010	1.0
Iron	Fe	<0.030	<0.03	<0.03	0.30
Lead	Pb	<0.001	<0.001	<0.001	0.01
Magnesium	Mg	4.32	4.21	8.21	-
Manganese	Mn	0.014	<0.005	<0.005	0.05
Potassium	K	1.19	0.79	1.95	-
Sodium	Na	2.41	2.61	4.41	200.
Zinc	Zn	0.011	<0.005	0.016	5.0
TOTAL METALS (mg/L)					
Iron	Fe	0.050	<0.030	<0.030	-
Manganese	Mn	0.026	0.007	<0.005	-

Sources of information:

1. Analytical Service Laboratories Ltd. File No. 6330C; November 12, 1992.
2. Analytical Service Laboratories Ltd. File No. 7274A; March 29, 1989.
3. Maximum acceptable concentration for drinking water, as defined by Health and Welfare Canada (1989) and B.C. Ministry of Health (1982).



RESULTS OF ANALYSIS

File No. 6330C

Soowahl.
IR New
Well
92 10 02

Physical Tests

Colour	CU	<5.0
Conductivity	umhos/cm	194
Hardness	CaCO ₃	98.0
pH		8.36
Turbidity	NTU	0.50

Dissolved Anions

Alkalinity	CaCO ₃	87.6
Chloride	Cl	2.2
Fluoride	F	0.06
Silicate	SiO ₂	14.3
Sulphate	SO ₄	12.6

Nutrients

Nitrite/Nitrate Nitrogen	0.117
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Total Metals

Copper	T-Cu	-
Iron	T-Fe	0.050
Lead	T-Pb	-
Manganese	T-Mn	0.026

Dissolved Metals

Arsenic	D-As	0.0015
Barium	D-Ba	0.045
Cadmium	D-Cd	<0.0002
Calcium	D-Ca	32.1
Chromium	D-Cr	<0.015
Copper	D-Cu	<0.010
Iron	D-Fe	<0.030
Lead	D-Pb	<0.001
Magnesium	D-Mg	4.32
Manganese	D-Mn	0.014
Potassium	D-K	1.19
Sodium	D-Na	2.41
Zinc	D-Zn	0.011

< = Less than the detection limit indicated.

Results are expressed as milligrams per litre except where noted.



REMARKS

File No. 6330C

The water as represented by the sample Soowahlie IR New Well can be characterized as moderate with respect to dissolved mineralization. The water sample met Canadian and British Columbia drinking water guidelines for all parameters analysed.