

ANALYTICAL REPORT

City of Terrace
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Work Order: N21K027

RECEIVED: 03-Nov-2021

Project: Frank Street Wells
Project Number: -
Project Manager: Robert Hoekstra

REPORTED: 29-Dec-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

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LAB #	N21K027-01	N21K027-02	N21K027-03
SAMPLED DATE	02-Nov-21	02-Nov-21	02-Nov-21
SAMPLED TIME	11:30	11:00	10:30
SAMPLE ID	Well #1	Well #2	Well #3

	MRL Units	CDWG			
General Parameters (Water)					
pH	1.0 pH units	7.0-10.5	7.1	7.0	7.2
Alkalinity (total, as CaCO3)	1 mg/L	-	190	160	180
Conductivity	1.0 uS/cm	-	507	442	492
Colour	1 PtCo units	AO <= 15	2	3	1
Turbidity	0.05 NTU	MAC = 1	0.13	0.39	0.28
Solids, Total Dissolved / TDS	1.0 mg/L	AO <= 500	320	280	310
Cyanide, Total	0.0020 mg/L	MAC = 0.2	<0.0020	<0.0020	<0.0020
Phosphorus, Total (as P)	0.0050 mg/L	-	0.0182 [2]	0.0208 [2]	0.0200 [2]

Calculated Parameters (Water)					
Nitrate (as N)	0.10 mg/L	MAC = 10	0.21		0.36
Nitrate (as N)	0.40 mg/L	MAC = 10		0.60	
Hardness, Total (as CaCO3)	0.500 mg/L	-	210	188	206

Anions (Water)					
Chloride	1.0 mg/L	AO <= 250	29.4	30.7	34.2
Fluoride	0.05 mg/L	MAC = 1.5	<0.10	<0.10	<0.10
Nitrite (as N)	0.01 mg/L	MAC = 1	<0.01	<0.01	<0.01
Nitrate + Nitrite (as N)	0.10 mg/L	MAC = 10	0.21	0.60	0.36
Sulfate	1.0 mg/L	AO <= 500	15.4	13.0	15.7

Total Metals (Water)					
Aluminum, total	0.0050 mg/L	OG < 0.1	0.0063	<0.0050	0.0220
Antimony, total	0.00020 mg/L	MAC = 0.006	<0.00020	<0.00020	<0.00020
Arsenic, total	0.00050 mg/L	MAC = 0.01	<0.00050	<0.00050	0.00053
Barium, total	0.0050 mg/L	MAC = 1	0.113	0.0905	0.111
Beryllium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Bismuth, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Boron, total	0.0500 mg/L	MAC = 5	<0.0500	<0.0500	<0.0500
Cadmium, total	0.000010 mg/L	MAC = 0.005	<0.000010	0.000036	<0.000010
Calcium, total	0.20 mg/L	-	69.8	62.4	69.1
Chromium, total	0.00050 mg/L	MAC = 0.05	<0.00050	<0.00050	<0.00050
Cobalt, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Copper, total	0.00040 mg/L	AO = 1 MAC = 2	0.00088	0.00876	0.00699

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Total Metals (continued)

Iron, total	0.010 mg/L	AO ≤ 0.3	0.012	0.022	<0.010
Lead, total	0.00020 mg/L	MAC = 0.005	0.00051	0.00053	0.00027
Lithium, total	0.00010 mg/L	-	0.00216	0.00183	0.00219
Magnesium, total	0.010 mg/L	-	8.63	7.64	8.07
Manganese, total	0.00020 mg/L	AO ≤ 0.02 MAC = 0.12	0.00027	<0.00020	0.00398
Mercury, total	0.000010 mg/L	MAC = 0.001	<0.000010	<0.000010	<0.000010
Molybdenum, total	0.00010 mg/L	-	0.00060	0.00046	0.00062
Nickel, total	0.00040 mg/L	-	<0.00040	0.00108	<0.00040
Phosphorus, total	0.050 mg/L	-	<0.050	<0.050	<0.050
Potassium, total	0.10 mg/L	-	2.68	2.28	2.46
Selenium, total	0.00050 mg/L	MAC = 0.05	<0.00050	<0.00050	0.00060
Silicon, total	1.0 mg/L	-	6.7	7.6	7.3
Silver, total	0.000050 mg/L	-	<0.000050	<0.000050	<0.000050
Sodium, total	0.10 mg/L	AO ≤ 200	17.4	17.4	15.2
Strontium, total	0.0010 mg/L	MAC = 7	0.242	0.209	0.232
Sulfur, total	3.0 mg/L	-	9.5	6.9	9.1
Tellurium, total	0.00050 mg/L	-	<0.00050	<0.00050	<0.00050
Thallium, total	0.000020 mg/L	-	<0.000020	<0.000020	<0.000020
Thorium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Tin, total	0.00020 mg/L	-	<0.00020	<0.00020	<0.00020
Titanium, total	0.0050 mg/L	-	<0.0050	<0.0050	<0.0050
Tungsten, total	0.0010 mg/L	-	<0.0010	<0.0010	<0.0010
Uranium, total	0.000020 mg/L	MAC = 0.02	0.000365	0.000281	0.000360
Vanadium, total	0.0010 mg/L	-	<0.0010	<0.0010	<0.0010
Zinc, total	0.0040 mg/L	AO ≤ 5	0.0158	0.0374	0.0163
Zirconium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010

BCMOE Aggregate Hydrocarbons (Water)

VHw (6-10)	100 ug/L	-	<100 [1]	<100 [1]	<100 [1]
VPHw	100 ug/L	-	<100	<100	<100

Volatile Organic Compounds (VOC) (Water)

Benzene	0.5 ug/L	MAC = 5	<0.5 [1]	<0.5 [1]	<0.5 [1]
Ethylbenzene	1.0 ug/L	AO = 1.6 MAC = 140	<1.0 [1]	<1.0 [1]	<1.0 [1]

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Volatile Organic Compounds (VOC) (continued)

Methyl tert-butyl ether	1.0 ug/L	AO <= 15	<1.0 [1]	<1.0 [1]	<1.0 [1]
Styrene	1.0 ug/L	-	<1.0 [1]	<1.0 [1]	<1.0 [1]
Toluene	1.0 ug/L	AO = 24 MAC = 60	<1.0 [1]	<1.0 [1]	<1.0 [1]
Xylenes (total)	2.0 ug/L	AO = 20 MAC = 90	<2.0 [1]	<2.0 [1]	<2.0 [1]
Toluene-d8	70-130 [surr]	-	117% [1]	122% [1]	115% [1]
4-Bromofluorobenzene	70-130 [surr]	-	88% [1]	84% [1]	92% [1]

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Special Notes

- 1 = Headspace in sample container is greater than 5% volume - VOC results may be compromised
- 2 = The sample was prepared and/or analyzed past the recommended holding time.

Glossary of Terms

MRL	Method Reporting Limit
<	Less than the reported detection limit (RDL)
mg/L	Milligrams per Litre
NTU	Nephelometric Turbidity Units
pH units	pH units
PtCo units	Platinum Colbalt colour units
ug/L	Micrograms per Litre
uS/cm	Micro Siemens per centimeter
MAC	Maximum Acceptable Concentration. Values above MAC are formatted with red text and solid outline.
AO	Aesthetic Objective (not health related). Values above AO are formatted with a dashed outline.
OG	Operational guideline (for treated water)

Standards / Guidelines Referenced

CDWG	Canadian Drinking Water Quality Guidelines (2019) https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/sum_guide-res_recom-eng.pdf
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