

Table 2 - Summary of Groundwater Analytical Results
Cambridge Bay Airport, Cambridge Bay, NU

Parameter	Sample ID Collection Date Laboratory Job # Laboratory Report Date	Standard Freshwater/Marine	Standard Date	Units	MW13-1 16-Sep-14 B484005 2-Oct-14	MW13-2 16-Sep-14 B484005 2-Oct-14	MW13-3 17-Sep-14 B484005 2-Oct-14	MWA-A (MW13-3 FD) 17-Sep-14 B484005 2-Oct-14	MW13-5 17-Sep-14 B484005 2-Oct-14	MW13-7 23-Sep-14 B486466 5-Oct-14	MW13-8 22-Sep-14 B486466 5-Oct-14
pH		nv	-	pH	7.77	-	7.81	7.81	7.92	7.49	
<i>Volatile Organic Compounds</i>											
Benzene		370/110	1999	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	1.4	<0.40
Toluene		2/215	1996	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Ethylbenzene		90/25	1996	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Total Xylenes		nv	-	ug/L	<0.8	<0.8	3.4	3	<0.8	<0.80	<0.80
<i>Petroleum Hydrocarbons F1</i>											
F1 (C6 to C10)		nv	-	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
F1 (C6 to C10 minus BTEX)		nv	-	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<i>Ext. Pet. Hydrocarbons</i>											
F2 (C10-C16 Hydrocarbons)		nv	-	mg/L	<0.10	0.12	<0.10	0.11	<0.10	<0.10	<0.27
F3 (C16-C34 Hydrocarbons)		nv	-	mg/L	<0.20	0.43	<0.20	<0.20	<0.20	<0.20	0.81
F4 (C34-C50 Hydrocarbons)		nv	-	mg/L	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.53
<i>Metals</i>											
Dissolved Aluminum (Al)		nv	-	mg/L	0.05	-	<0.030	-	0.041	<0.015	-
Dissolved Antimony (Sb)		nv	-	mg/L	<0.0060	-	<0.0060	-	<0.0060	<0.0030	-
Dissolved Arsenic (As)		0.005/0.0125	1997	mg/L	0.0041	-	<0.0020	-	0.0014	<0.0010	-
Dissolved Barium (Ba)		nv	-	mg/L	0.038	-	<0.10	-	0.025	0.048	-
Dissolved Beryllium (Be)		nv	-	mg/L	<0.010	-	<0.010	-	<0.0010	<0.0050	-
Dissolved Boron (B)		29 (short term), 1.5 (long term)/	2009	mg/L	0.51	-	4	-	0.12	0.27	-
Dissolved Calcium (Ca)		nv	-	mg/L	260	-	330	-	96	240	-
Dissolved Chromium (Cr)		nv	-	mg/L	<0.010	-	<0.010	-	<0.0010	<0.0050	-
Dissolved Cobalt (Co)		nv	-	mg/L	0.0084	-	0.051	-	0.0052	0.012	-
Dissolved Copper (Cu)		equation based on 3700 hardness = 0.004	1987	mg/L	0.003	-	0.0037	-	0.0025	0.003	-
Dissolved Iron (Fe)		0.3 (long term)/	1987	mg/L	2.6	-	<0.60	-	0.46	0.1	-
Dissolved Lead (Pb)		equation based on 3700 hardness = 0.007	1987	mg/L	<0.0020	-	<0.0020	-	<0.00020	<0.0010	-
Dissolved Lithium (Li)		nv	-	mg/L	0.053	-	<0.20	-	<0.020	0.041	-
Dissolved Magnesium (Mg)		nv	-	mg/L	210	-	710	-	67	170	-
Dissolved Manganese (Mn)		nv	-	mg/L	1.5	-	0.57	-	0.65	2.2	-
Dissolved Molybdenum (Mo)		0.073/	1999	mg/L	0.0066	-	0.02	-	0.0026	0.0073	-
Dissolved Nickel (Ni)		equation based on 3700 hardness = 0.15	1987	mg/L	0.0083	-	0.13	-	0.0064	0.011	-
Dissolved Phosphorus (P)		nv	-	mg/L	0.12	-	<1.0	-	<0.10	<0.10	-
Dissolved Potassium (K)		nv	-	mg/L	48	-	220	-	7.5	20	-
Dissolved Selenium (Se)		0.001/	1987	mg/L	<0.0020	-	<0.0020	-	0.00037	<0.0010	-
Dissolved Silicon (Si)		nv	-	mg/L	5.9	-	3	-	6.3	5.8	-
Dissolved Silver (Ag)		0.0001/	1987	mg/L	<0.0010	-	<0.0010	-	<0.00010	<0.00050	-
Dissolved Sodium (Na)		nv	-	mg/L	540 (l)	-	3600	-	180	270	-
Dissolved Strontium (Sr)		nv	-	mg/L	0.55	-	2.8	-	0.089	0.52	-
Dissolved Sulphur (S)		nv	-	mg/L	360	-	1300	-	130	210	-
Dissolved Thallium (Tl)		0.0008/	1999	mg/L	<0.0020	-	<0.0020	-	<0.00020	<0.0010	-
Dissolved Tin (Sn)		nv	-	mg/L	<0.010	-	<0.010	-	<0.0010	<0.0050	-
Dissolved Titanium (Ti)		nv	-	mg/L	<0.010	-	<0.010	-	0.0023	<0.0050	-
Dissolved Uranium (U)		0.033 (short term), 0.015 (long term)/	2011	mg/L	0.02	-	0.063	-	0.0048	0.036	-
Dissolved Vanadium (V)		nv	-	mg/L	<0.010	-	<0.010	-	<0.0010	<0.0050	-
Dissolved Zinc (Zn)		0.03/	1998	mg/L	<0.030	-	<0.030	-	<0.0030	0.055	-

Notes:

< - not detectable, less than laboratory instrument detection limit

µg/L - micrograms per liter

nv - no standard exists

FD - Field Duplicate sample

Bold - value exceeds referenced standard

Standard - CCME Water Quality Guidelines for the Protection of Aquatic Life, Freshwater/Marine

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Cambridge Bay Airport, Cambridge Bay, NU

Parameter	Sample ID Collection Date Laboratory Job # Laboratory Report Date	Standard Freshwater/Marine	Units	MW13-1 16-Sep-14 B484005 2-Oct-14	MW13-3 17-Sep-14 B484005 2-Oct-14	MW13-5 17-Sep-14 B484005 2-Oct-14	MW13-7 23-Sep-14 B486466 5-Oct-14
<i>Polycyclic Aromatics Hydrocarbons</i>							
Benzo[a]pyrene equivalency		0.015/	ug/L	<0.010	<0.010	<0.010	<0.010
Acenaphthene		5.8/	ug/L	<0.10	<0.10	<0.10	<0.10
Acenaphthylene		nv	ug/L	<0.10	<0.10	<0.10	<0.10
Acridine		4.4/	ug/L	<0.20	<0.20	<0.20	<0.20
Anthracene		0.012/	ug/L	<0.010	<0.010	<0.010	<0.010
Benzo(a)anthracene		0.018/	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
Benzo(b&j)fluoranthene		nv	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
Benzo(k)fluoranthene		nv	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
Benzo(g,h,i)perylene		nv	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
Benzo(c)phenanthrene		nv	ug/L	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene		0.015/	ug/L	<0.0075	<0.0075	<0.0075	<0.0075
Benzo[e]pyrene		nv	ug/L	<0.050	<0.050	<0.050	<0.050
Chrysene		nv	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
Dibenz(a,h)anthracene		nv	ug/L	<0.0075	<0.0075	<0.0075	<0.0075
Fluoranthene		0.04/	ug/L	<0.010	<0.010	<0.010	<0.010
Fluorene		3/	ug/L	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene		nv	ug/L	<0.0085	<0.0085	<0.0085	<0.0085
2-Methylnaphthalene		nv	ug/L	<0.10	<0.10	<0.10	<0.10
Naphthalene		1.1/1.4	ug/L	<0.10	0.23	<0.10	<0.10
Phenanthrene		0.4/	ug/L	<0.050	<0.050	<0.050	<0.050
Perylene		nv	ug/L	<0.050	<0.050	<0.050	<0.050
Pyrene		0.025/	ug/L	<0.020	<0.020	<0.020	<0.020
Quinoline		3.4/	ug/L	<0.20	<0.20	<0.20	<0.20

Notes:

< - not detectable, less than laboratory instrument detection limit

µg/L - micrograms per liter

nv - no standard exists

Standard - CCME Water Quality Guidelines for the Protection of Aquatic Life, Freshwater/Marine, 1999

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Cambridge Bay Airport, Cambridge Bay, NU

Parameter	Sample ID	Standard Freshwater/Marine	Standard Date	Units	MW13-1	MW13-3	MW13-5	MW13-7
	Collection Date				16-Sep-14	17-Sep-14	17-Sep-14	23-Sep-14
	Laboratory Job #				B484005	B484005	B484005	B486466
	Laboratory Report Date				2-Oct-14	2-Oct-14	2-Oct-14	5-Oct-14
Calculated Parameters								
Anion Sum		nv	-	meq/L	80	120	18	33
Cation Sum		nv	-	meq/L	56	240	18	38
Hardness (CaCO3)		nv	-	mg/L	1500	3700	510	1300
Ion Balance		nv	-	N/A	0.69	2	1	1.1
Dissolved Nitrate (NO3)		550 (short term), 13 (long term)/ 1500 (short term), 200 (long term)	2012	mg/L	<0.044	<0.22	<0.044	<0.044
Nitrate plus Nitrite (N)		nv	-	mg/L	<0.010	<0.050	<0.010	<0.010
Dissolved Nitrite (NO2)		nv	-	mg/L	<0.033	<0.16	<0.033	<0.033
Total Dissolved Solids		nv	-	mg/L	4300	9400	1000	2000
Misc. Inorganics								
Conductivity		nv	-	uS/cm	6600	9900	1700	3500
Total Suspended Solids		background level dependent	1999	mg/L	-	-	-	31
pH		6.5 to 9.0	1987	pH	7.77	7.81	7.92	7.49
Low Level Elements								
Dissolved Cadmium		nv	-	mg/L	<200	<200	<20	<100
Anions								
Alkalinity (PP as CaCO3)		nv	-	mg/L	<0.50	<0.50	<0.50	<0.50
Alkalinity (Total as CaCO3)		nv	-	mg/L	560	290	280	430
Bicarbonate (HCO3)		nv	-	mg/L	680	360	340	520
Carbonate (CO3)		nv	-	mg/L	<0.50	<0.50	<0.50	<0.50
Hydroxide (OH)		nv	-	mg/L	<0.50	<0.50	<0.50	<0.50
Dissolved Sulphate (SO4)		nv	-	mg/L	1600 (1)	1700 (1)	370 (1)	520 (1)
Dissolved Chloride (Cl)		640 (short term), 120 (long term)/	2011	mg/L	1300 (1)	2700 (1)	160	490 (1)
Nutrients								
Total Ammonia (N)		approx. 4.8 (based on pH and temp.)	2001	mg/L	0.68	1.1	<0.050	1.5
Dissolved Nitrite (N)		0.197	1987	mg/L	<0.010	<0.050 (2)	<0.010	<0.010
Dissolved Nitrate (N)		nv	-	mg/L	<0.010	<0.050 (2)	<0.010	<0.010
Misc. Organics								
Oil and Grease		nv	-	mg/L	<4.2 (3)	<4.2 (3)	-	<2.0
Phenols		0.004 (long term)/	1999	mg/L	0.041	0.020 (2)	0.0078	0.0077

Notes:

< - not detectable, less than laboratory instrument detection limit

(1) Detection limits raised due to dilution to bring analyte within the calibrated range

(2) Detection limits raised due to matrix interference

(3) Detection limit raised based on sample volume used for analysis

nv - no standard exists

Bold - value exceeds referenced standard

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