June 3, 2010 EBA File: Y22101137

Peregrine Diamonds Ltd.
Suite 201 – 1250 Homer Street
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Attention: Shirley Standafer-Pfister
Manager, Regulatory and Environmental Affairs

**Subject: Pre-Drilling Event Summary and Preliminary Results**
**Chidliak Property, Nunavut**

EBA completed the pre-drilling winter water quality sampling program at the Chidliak Property from April 5 to 12, 2010. Ms. Karla Langlois of EBA and Mr. Alden Williams, a Wildlife Officer and field assistant from Iqaluit (provided by Peregrine), carried out the pre-drilling winter water quality sampling program.

Poor weather conditions delayed the sampling team's arrival into camp, and once in camp, weather postponed many early morning attempts to begin sampling. Extra field time was required with the addition of new lake-based drill targets identified once on site.

Winter water quality sampling methods followed EBA's standard protocols. Preliminary results from the pre-drilling event are provided below. Final results will be provided in the draft and final annual reports.

## 1.0 WINTER WATER QUALITY

In compliance with Peregrine's Nunavut Water Board Type B Water Licence *#2BE-CHI0813*, amendment condition Part J, Item #7, the objective of the pre-drilling winter water quality program was to conduct baseline water quality sampling at each lake-based drill target prior to drilling. Based on pre-determined and prioritized lake-based drill target sites identified by Peregrine, a total of ten lakes (Table 1 and Figure 1) were sampled for routine, nutrient, total metals, dissolved metals, and total organic carbon water quality analyses. A single water quality station was sampled per lake; however, several water depths were sampled at each water quality station (Table 1). Near surface water quality samples are labelled "A", mid depth samples are labelled "B", and near bottom depth samples are labelled "C".

A trip blank, field blank, and duplicate sample were also analysed for the full suite of parameters (routine, nutrients, total and dissolved metals, and total organic carbon) as part of the quality assurance/quality control program. The duplicate sample was collected with WWQ7-C.



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| TABLE 1. SUMMARY OF WINTER WATER QUALITY SAMPLING, PRE-DRILLING 2010 | | | |
|---|---|---|---|
| **Winter Water Quality Station** | **Water Sample Location in Reference to Lake-Based Drill Target** | **Total Depth (Ice + Water) (m)** | **Number of Water Depths Sampled (labels)** |
| WWQ1 | CHI-142, 188 | 20.3 | 2 (A + B) |
| WWQ2 | CHI-133, 138 | 18.3 | 3 (A, B + C) |
| WWQ3 | CHI-192 | 3.5 | 1 (A) |
| WWQ4 | Reference, no drill target | 36.1 | 3 (A, B + C) |
| WWQ5 | Reference, upstream from CHI-292 | 28.6 | 3 (A, B + C) |
| WWQ6 | CHI-199 | 14.0 | 2 (A + B) |
| WWQ7 | CHI-163, 165, 166 | 34.2 | 3 (A, B + C) |
| WWQ8 | CHI-153 | 32.5 | 2 (A + B) |
| WWQ9 | CHI-131 | 4.4 | 1 (A) |
| WWQ10 | CHI-290, 291 | 20.7 | 2 (A + B) |

Dissolved oxygen (DO) and water temperatures were recorded at 1 metre (m) intervals ascending up the water column at each water quality sampling station, except where poor weather was approaching and the field crew was required to increase the sampling interval for safety concerns. At the time of the field program, the DO meter was unusually slow at a few water quality stations[1], but not all, even after switching the sensor membrane, solutions, and re-calibrating the unit. At this time however, EBA considers the reported DO and temperature levels as accurate. The DO and temperature profile of each winter water quality station is provided in Figures 2 to 11. In general, DO levels decreased with water depth at all winter water quality stations. Exceptions to this general trend occur at WWQ4, WWQ5 and WWQ7. At WWQ4 DO levels increased with water depth until 24 m then proceeded to decrease. DO levels decreased with depth at WWQ5 and WWQ7 until water depths of 25 m and 28 m, respectively, where DO levels began to increase with depth. All temperature levels increased with water depth.

Laboratory winter water quality results indicate that the majority of analytes sampled were at or below laboratory detection limits. Preliminary laboratory results are provided in Tables 2 and 3. Results indicate that all parameters are within the Canadian Council of Ministers of the Environment (CCME) Freshwater Aquatic Life (FAL) guidelines (December 2008), except pH, total and dissolved aluminum, total and dissolved cadmium, and total and dissolved copper (Table 4). The CCME FAL guideline for aluminum is pH dependent, whereas, cadmium and copper guidelines are hardness dependent. Since water hardness within the study area is very soft (<1.3 mg/L), indicating little to no calcium, magnesium, and other metallic ions are present in the water, the resulting cadmium guideline is also very low and below the laboratory detection limit. From discussions with laboratory

[1] The DO levels at WWQ2 and WWQ4 stations were collected at 2 m intervals.

personnel these low hardness values are rarely encountered and represent "clean" water (Guthro pers. Comm. 2010). Parameter values this low (example cadmium results x $10^{-6}$) and close to the laboratory detection limit may represent "false positives" detected from the equipment (Guthro pers. Comm. 2010).

However, dissolved zinc levels at WWQ5-A were reported above detection limits (yet still below CCME guidelines), whereas dissolved and total zinc level at the remaining stations were all reported below laboratory detection limits. Dissolved zinc at WWQ5-A may have been introduced in the field through either the field sampling methods and/or the Nalgene filter. In addition, dissolved copper levels at WWQ5-A and WWQ6-A were also reported above detection limits (but below CCME guidelines). However, dissolved copper levels were above CCME guidelines at WWQ7-C and its duplicate sample. Total copper levels were also above CCME guidelines in the duplicate sample; however, not in its sister sample (WWQ7-C). It appears dissolved copper may have been introduced from the Nalgene filter and/or from the field sampling, and the total copper may have been a laboratory error or introduced in the field.

**TABLE 4. SUMMARY OF PARAMETERS OUTSIDE CCME GUIDELINES**

| Parameter Outside CCME Guidelines | WWQ Station(s) with Parameters Outside CCME Guidelines |
|---|---|
| pH | All WWQ Stations |
| **Total Metals** | |
| Total Aluminum | WWQ5-A, B, and C<br>WWQ8-B<br>WWQ10-A and B |
| Total Cadmium | WWQ1-A<br>WWQ10-A, and B |
| Total Copper | Duplicate of WWQ7-C |
| **Dissolved Metals** | |
| Dissolved Aluminum | WWQ8-B<br>WWQ10-A and B |
| Dissolved Cadmium | WWQ1-A<br>WWQ3-A<br>WWQ8-A<br>WWQ10-A and B |
| Dissolved Copper | WWQ7-C<br>Duplicate of WWQ7-C |

Surface water temperature, pH, and electrical conductivity (EC) were measured in the field with a Multi-Parameter hand probe. At the time of the field sampling event, the temperature reading on the hand probe indicated an error and therefore, all surface water temperatures were estimated at 0.1

degrees Celsius (ºC). As a result of the temperature error reading, EBA has low confidence in the pH and EC values until these parameters can be re-tested during similar water quality conditions.

## 2.0 POTABLE WATER QUALITY

The objective of the potable water quality sampling program for this first sampling event was to collect representative potable water quality samples from Sunrise Camp. At the time of the field event, Sunrise Camp was the only camp in operation.

The water supply system at Sunrise Camp is organized with two separate water tanks that are individually filled directly from the lake via a rubber hose. Both water tanks are located in two different Dry Tents. Water tank 1 is connected to the Toilet Tent; whereas, water tank 2 is connected to the Kitchen Tent. A bleaching and UV filter system is implemented at water tank 2, and water tank 1 uses only bleach.

Potable water quality samples were collected at the kitchen tap and the tap in the toilet tent, and were submitted to ALS Laboratory Group (ALS) in Yellowknife, NT within 12 hours of sample collection. Potable water quality samples were analyzed for total coliforms, fecal coliforms, and *Escherichia* coliforms (*E*. coli). A duplicate sample, trip blank, and field blank were also collected and analyzed as part of the quality assurance/quality control program.

Laboratory results from the potable water quality samples indicate all parameters are below laboratory detection limits (<1 units/100 mL) (Table 6). However, the Canadian Drinking Water Quality Guidelines for total coliform and *E*. coli (0 MPN/100 mL) are lower than the laboratory detection limit. From discussions with laboratory personnel, no laboratory is presently capable of reporting lower detection limits. The potable water quality samples from Sunrise Camp are considered within the appropriate health criteria.

## 3.0 GENERAL WILDLIFE NOTES

The wildlife log from Sunrise Camp was obtained at the time of the field event. Wildlife sightings were reported from March 24 to April 7, 2010. During this time, a total of 24 caribou were observed within 20 km of Sunrise Camp, in addition to one Arctic fox, two common ravens, and one ptarmigan. Three polar bear tracks were also observed near Ptarmigan Fiord, approximately 11 kilometres (km) from the WWQ7 or approximately 57 km north of Sunrise Camp.

To protect wildlife from potentially being hunted and/or harassed within the area, all wildlife observations are to be kept confidential.

## CLOSURE

We trust that this letter report covering the preliminary results of the Pre-Drilling Winter Water Quality field program at the Chidliak property will be of interest. If you have any questions or require further clarification on any of the information provided, please advise.

Sincerely,
EBA Engineering Consultants Ltd.

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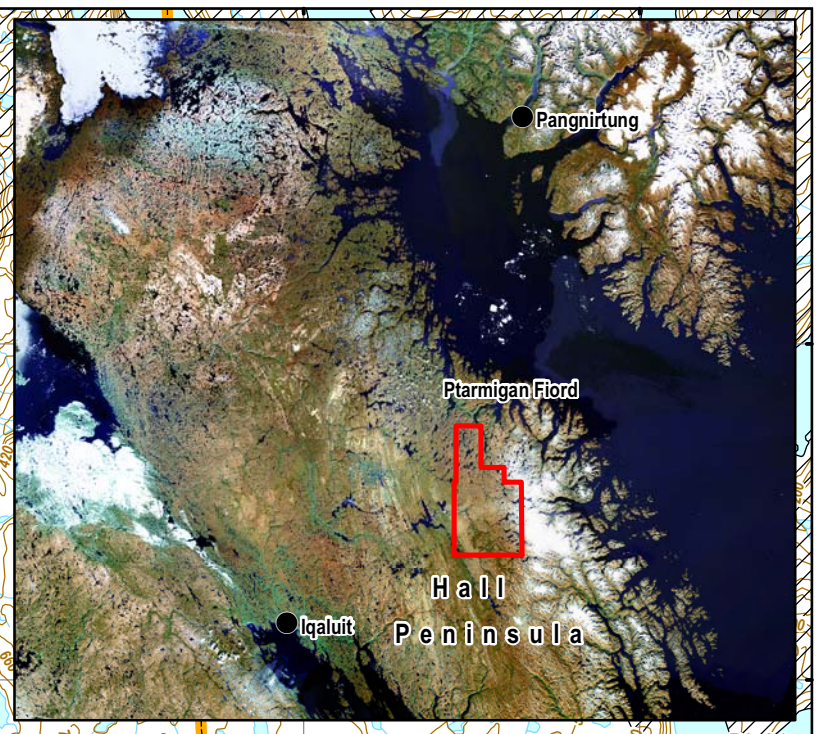
607000 617000 627000 637000 647000 657000

7170000 7160000 7150000 7140000 7130000 7120000 7110000

PA-22
PA-27
PA-28
PA-24
PA-29
PA-29

CHI-163
WWQ7
CHI-166
CHI-165
CHI-199
WWQ6
WWQ5
CHI-292
WWQ10
CHI-290
CHI-291
CHI-142
CHI-188
WWQ1
CHI-131
WWQ9
CHI-138
Sunrise Camp
CHI-133
WWQ3
WWQ2
CHI-192
Discovery Camp
WWQ4
WWQ8
CHI-153
McKeand River

Zone 19
Zone 20




## LEGEND

- Proposed 2010 Study Area
- Camp
- Winter Water Quality Stations
- Lake Based Drill Targets
- Contour (60m)
- Permanent Snow and Ice
- Sand
- Watercourse
- Waterbody
- Wetland
- UTM Zone Boundary
- Inuit-Owned Lands (IOLs)

N W E S

**NOTES**
Base Data Source: 1:250,000 NTS

FOR INTERNAL USE ONLY

**CHIDLIAK BASELINE STUDIES 2010**

# Pre-Drilling Winter Water Quality Sampling Event

| PROJECTION | DATUM |
|---|---|
| UTM Zone 19 | NAD83 |

Scale: 1:225,000
4 2 0 4
Kilometres

FILE NO.: Y22101137_Figure01_FieldWork.mxd

| PROJECT NO. | DWN | CKD | REV |
|---|---|---|---|
| Y22101137 | MEZ | KL | 0 |

| OFFICE | DATE |
|---|---|
| EBA-VANC | May 12, 2010 |

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**Figure 1**

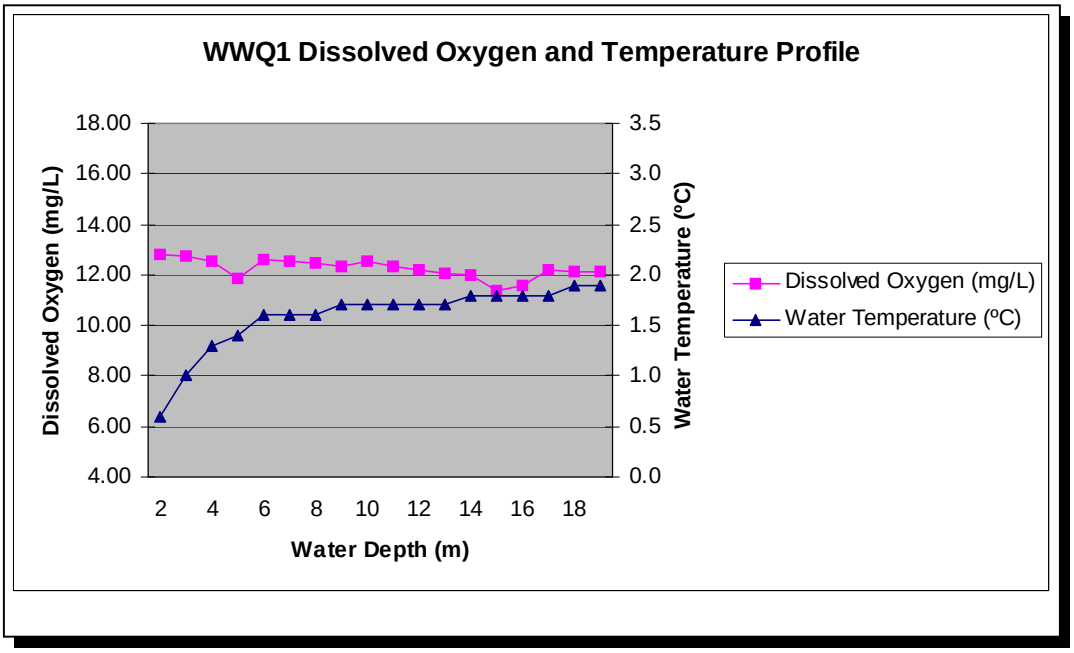


**Figure 2**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 1 on April 9, 2010

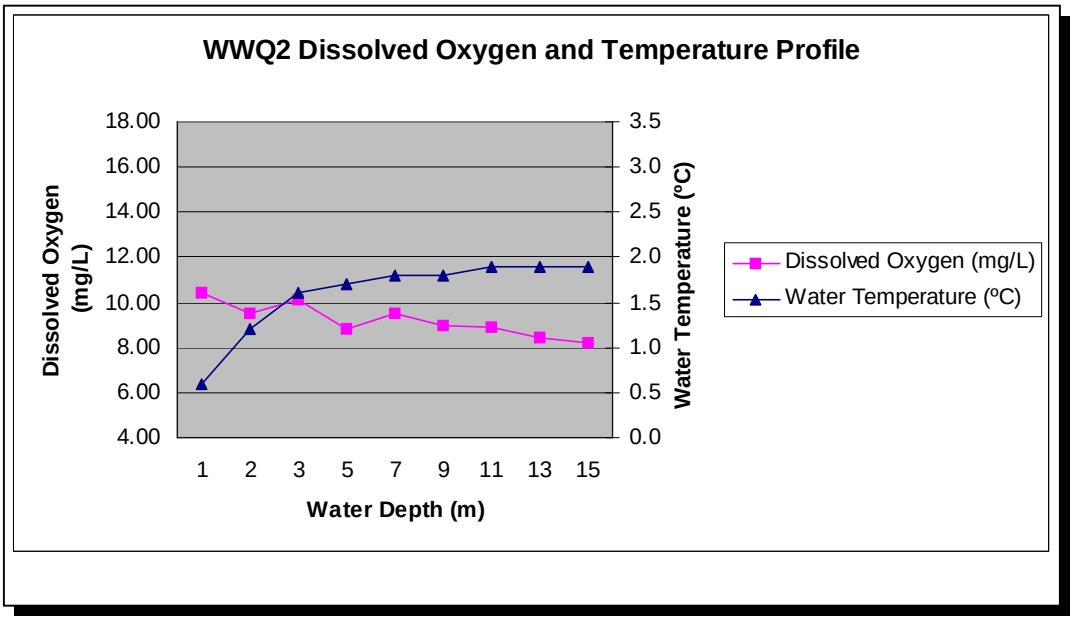


**Figure 3**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 2 on April 8, 2010

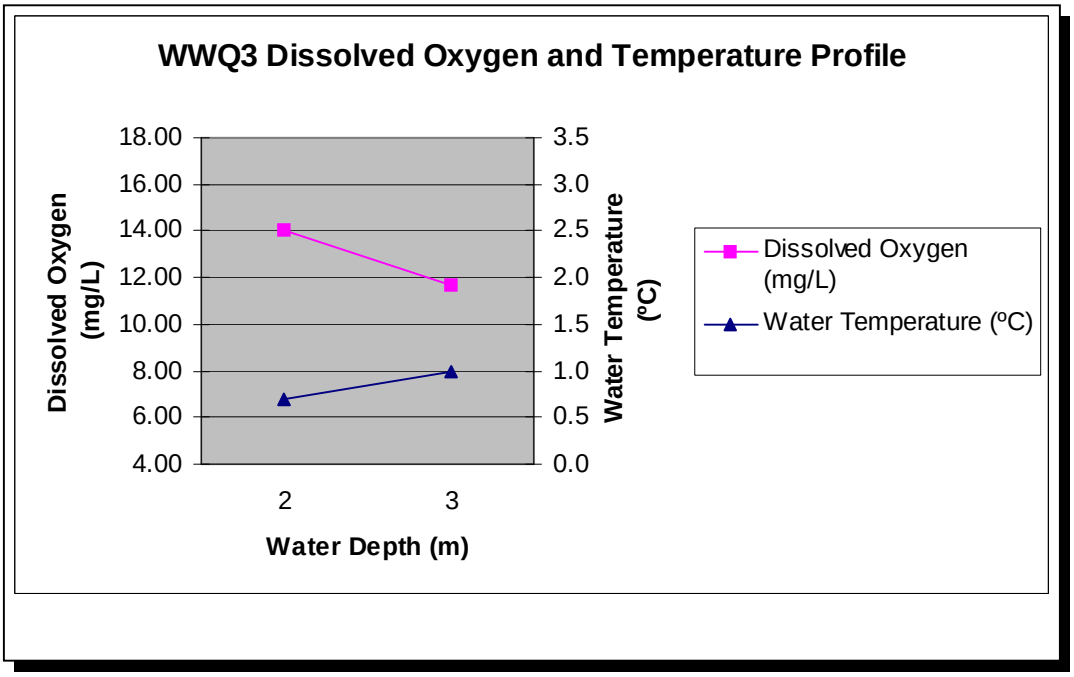


**Figure 4**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 3 on April 10, 201010

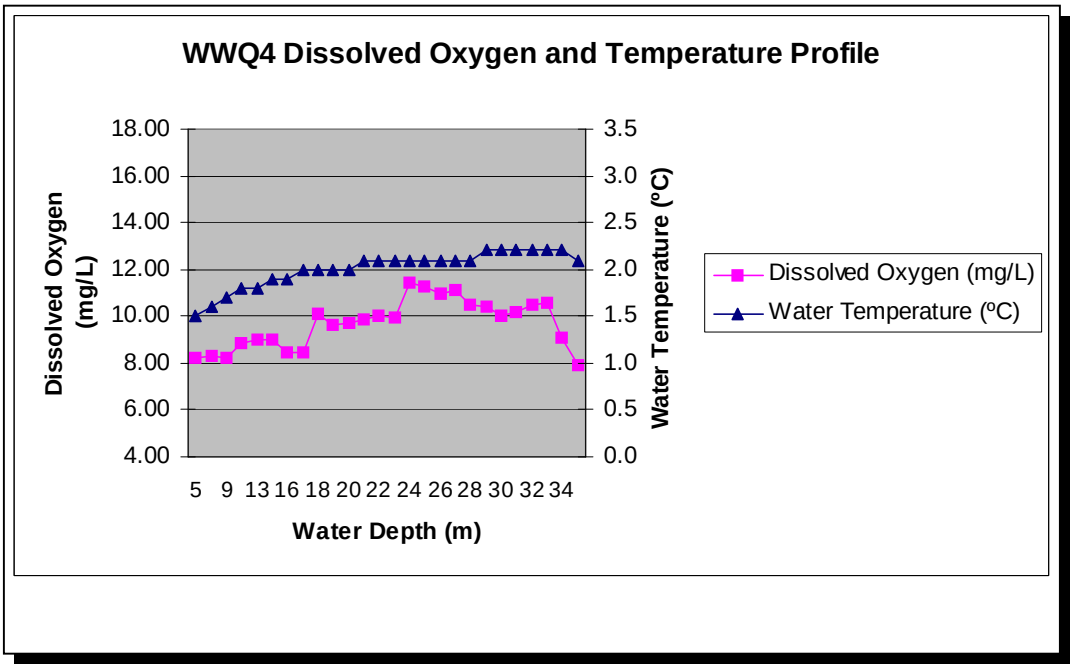


**Figure 5**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 4 on April 8, 2010

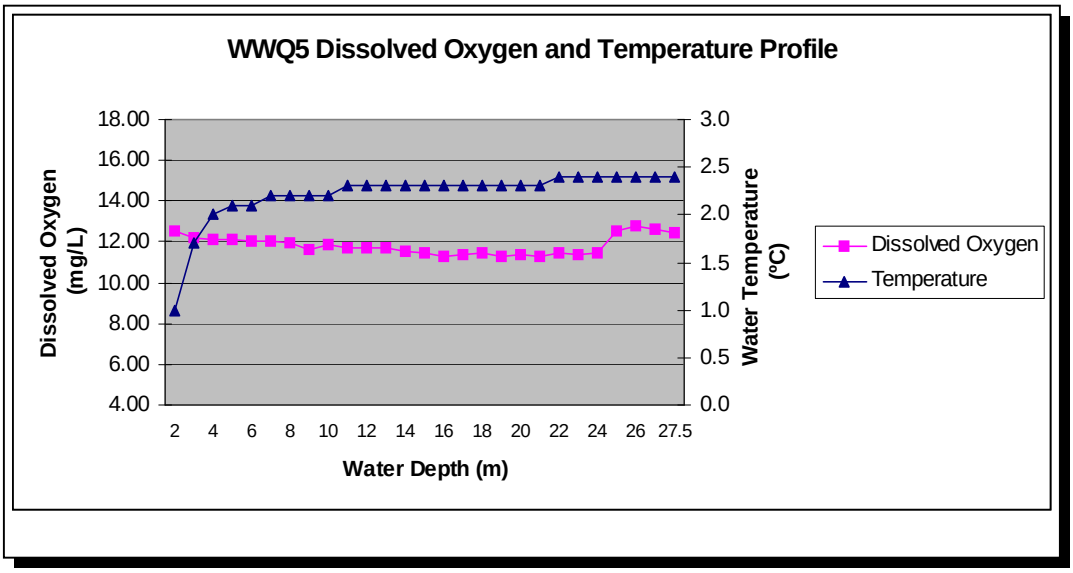


**Figure 6**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 5 on April 8, 2010

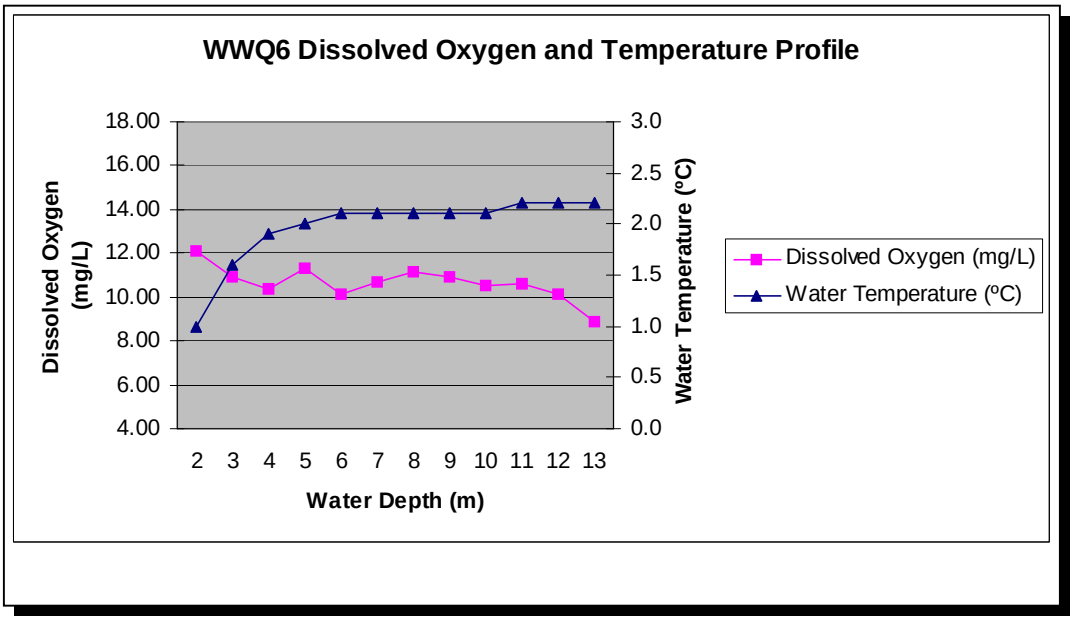


**Figure 7**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 6 on April 8, 2010

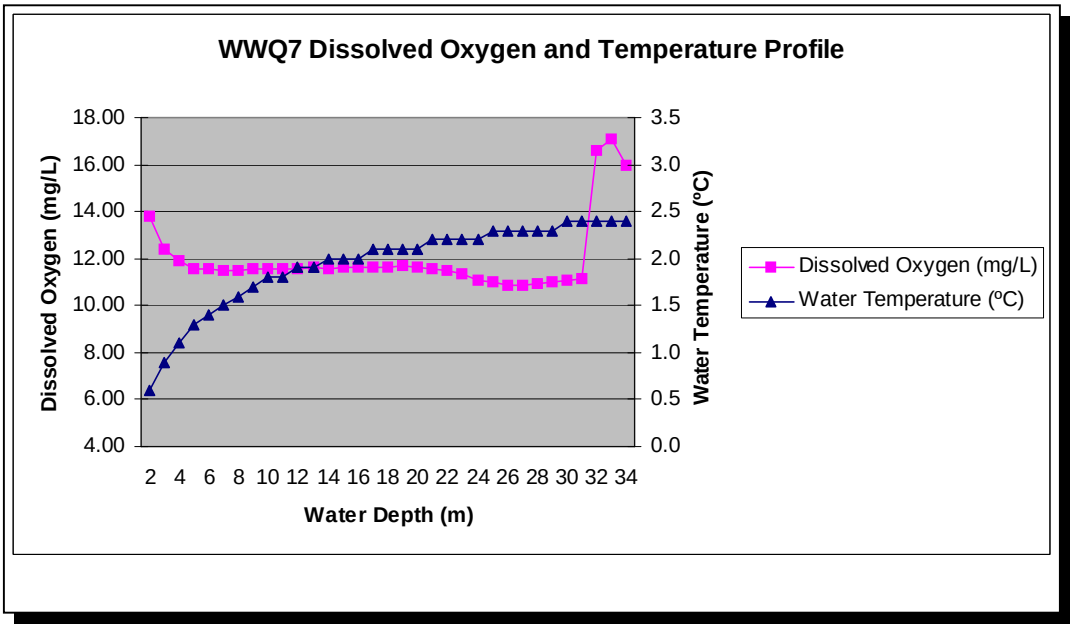


**Figure 8**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 7 on April 7, 2010

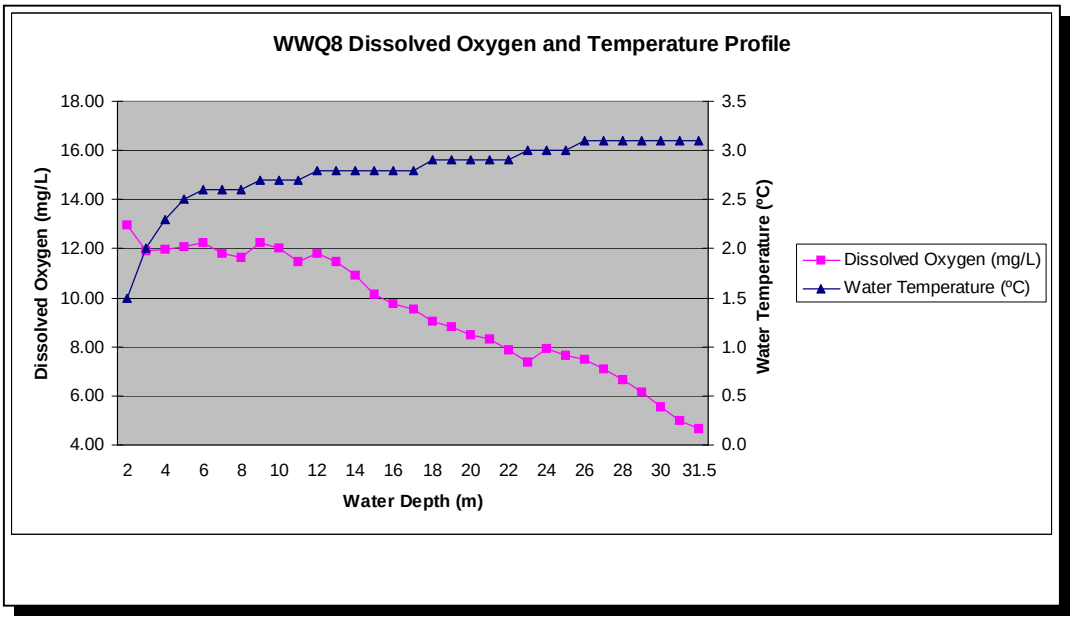


**Figure 9**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 8 on April 9, 2010

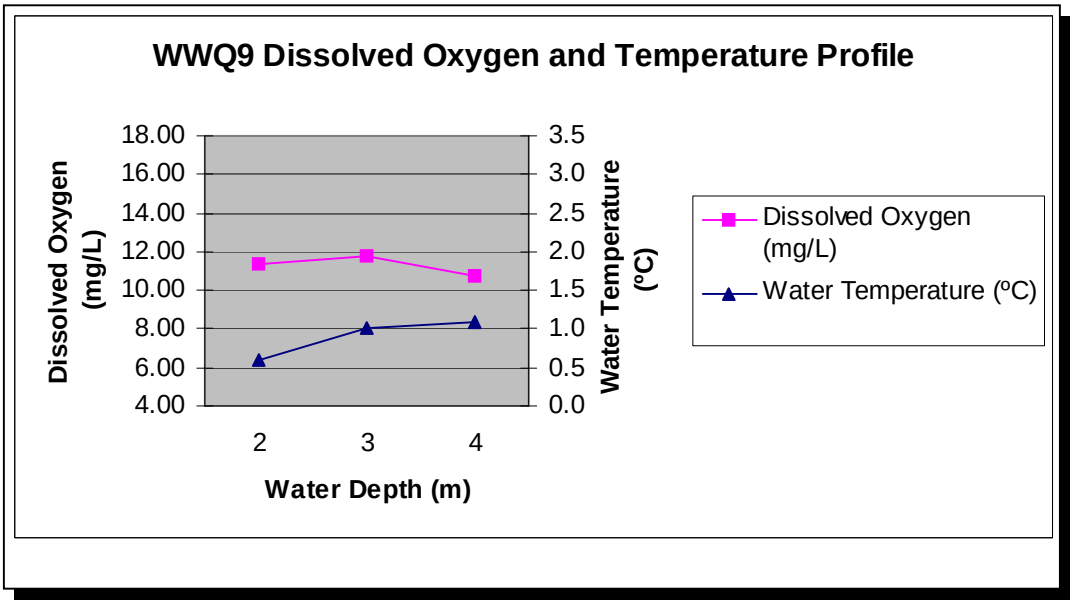


**Figure 10**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 9 on April 10, 2010

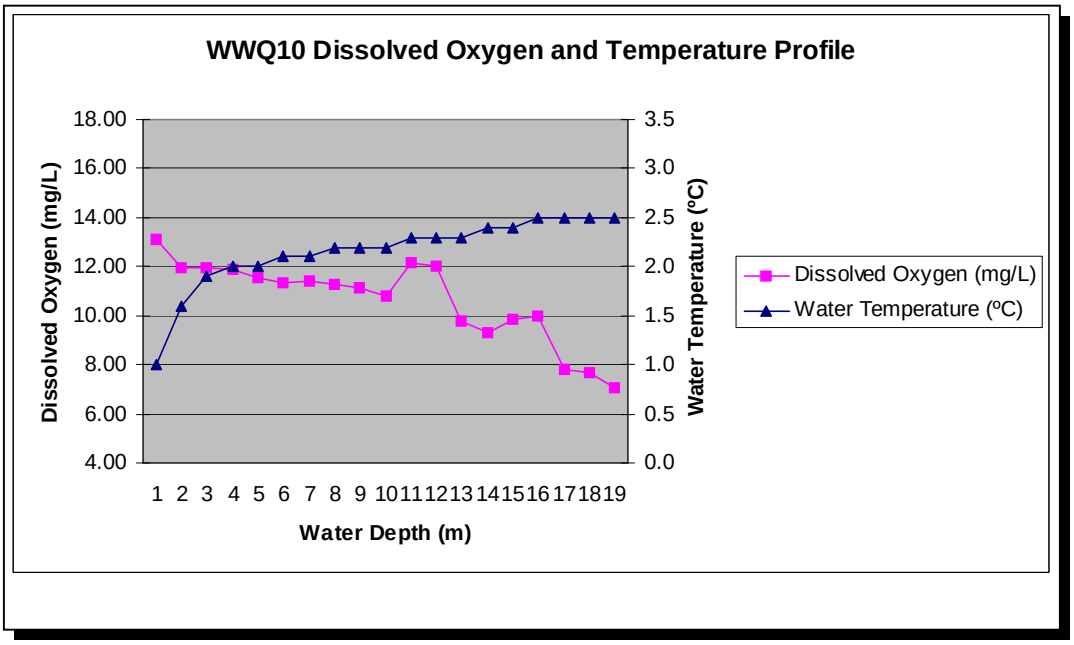


**Figure 11**
Dissolved Oxygen and Temperature Profile at Winter Water Quality Station 10 on April10, 2010

Peregrine Diamonds Ltd. Chidliak Property

## Table 2. Pre-Drilling Winter Water Quality Results, April 7-10, 2010

| Analyte | Trip Blank | Field Blank | WWQ1-A | WWQ1-B | WWQ2-A | WWQ2-B | WWQ2-C | WWQ3-A | WWQ4-A | WWQ4-B | WWQ4-C | Units | Detection Limit | CCME Guideline |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Major Ions, Nutrients, and Inorganics** | | | | | | | | | | | | | | |
| Calcium (Ca)-Total | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Calcium (Ca)-Dissolved | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Phosphorus- Total | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | mg/L | 0.020 | --- |
| Potassium (K)-Total | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Potassium (K)-Dissolved | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Sodium (Na)-Total | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 0.5 | --- |
| Sodium (Na)-Dissolved | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 0.02 | --- |
| Hardness (as CaCO3) | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | mg/L | 1.3 | --- |
| Nitrate and Nitrite as N | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | mg/L | 0.071 | --- |
| Nitrate (as N) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | 2.9 |
| Nitrite (as N) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | 0.06 |
| Nitrogen, Total | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.44 | <0.20 | <0.20 | <0.20 | mg/L | 0.20 | --- |
| Total Kjeldahl Nitrogen | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.44 | <0.20 | <0.20 | <0.20 | mg/L | 0.20 | --- |
| pH | 5.74 | 6.16 | 6.27 | 6.10 | 6.19 | 6.18 | 6.13 | 6.29 | 6.16 | 6.05 | 6.07 | pH | 0.10 | 6.5 - 9 |
| Electrical Conductivity (EC) | 0.71 | 1.02 | 4.94 | 4.94 | 5.11 | 5.21 | 5.28 | 6.87 | 4.65 | 4.52 | 4.66 | uS/cm | 0.20 | --- |
| Ammonia-N | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0058 | 0.0067 | 0.0072 | 0.0105 | <0.0050 | 0.0095 | 0.0072 | mg/L | 0.0050 | ---* |
| Total Organic Carbon | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 1.0 | --- |
| Total Suspended Solids | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | mg/L | 3.0 | --- |
| Turbidity | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.13 | 0.12 | 0.12 | 0.21 | <0.10 | 0.12 | NTU | 0.10 | --- |
| **Total Metals** | | | | | | | | | | | | | | |
| Aluminum (Al) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.005** |
| Antimony (Sb) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | --- |
| Arsenic (As) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.005 |
| Barium (Ba) | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | mg/L | 0.0030 | --- |
| Beryllium (Be) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Boron (B) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Cadmium (Cd) | <0.000010 | <0.000010 | 0.000013 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | mg/L | 0.000010 | 0.0000008*** |
| Chromium (Cr) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.001 |
| Cobalt (Co) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | --- |
| Copper (Cu) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.002**** |
| Iron (Fe) | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | mg/L | 0.030 | 0.3 |
| Lead (Pb) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.001**** |
| Lithium (Li) | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | mg/L | 0.010 | --- |
| Magnesium (Mg) | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.15 | <0.10 | <0.10 | <0.10 | mg/L | 0.10 | --- |
| Manganese (Mn) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | --- |
| Mercury (Hg) | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | mg/L | 0.000020 | 0.000026 |
| Molybdenum (Mo) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.073 |
| Nickel (Ni) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | 0.025**** |
| Selenium (Se) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.001 |
| Silver (Ag) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0001 |
| Strontium (Sr) | <0.00020 | <0.00020 | 0.00144 | 0.00164 | 0.00193 | 0.00203 | 0.00203 | 0.00287 | 0.00386 | 0.00384 | 0.00399 | mg/L | 0.0002 | --- |
| Thallium (Tl) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0008 |
| Tin (Sn) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Titanium (Ti) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Uranium (U) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | --- |
| Vanadium (V) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Zinc (Zn) | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | mg/L | 0.0040 | 0.03 |
| **Dissolved Metals** | | | | | | | | | | | | | | |
| Aluminum (Al) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.005** |
| Antimony (Sb) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | --- |
| Arsenic (As) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.005 |
| Barium (Ba) | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | mg/L | 0.0030 | --- |
| Beryllium (Be) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Boron (B) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Cadmium (Cd) | <0.000010 | <0.000010 | 0.000022 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | 0.00001 | <0.000010 | <0.000010 | <0.000010 | mg/L | 0.000010 | 0.0000008*** |
| Chromium (Cr) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.001 |
| Cobalt (Co) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | --- |
| Copper (Cu) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.002**** |
| Iron (Fe) | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | mg/L | 0.030 | 0.3 |
| Lead (Pb) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.001**** |
| Lithium (Li) | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | mg/L | 0.010 | --- |
| Magnesium (Mg) | <0.10 | <0.10 | <0.10 | <0.10 | 0.11 | 0.13 | 0.13 | 0.17 | <0.10 | <0.10 | <0.10 | mg/L | 0.10 | --- |
| Manganese (Mn) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | --- |
| Mercury (Hg) | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | mg/L | 0.000020 | 0.000026 |
| Molybdenum (Mo) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.073 |
| Nickel (Ni) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | 0.025**** |
| Selenium (Se) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.001 |
| Silver (Ag) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0001 |
| Thallium (Tl) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0008 |
| Tin (Sn) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Titanium (Ti) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Uranium (U) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | --- |
| Vanadium (V) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Zinc (Zn) | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | mg/L | 0.0040 | 0.03 |

### Legend

^ Canadian Council of Ministers of the Environment - Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life (December 2007).

Outside CCME Guidelines

Detection Limit above CCME Guidelines

< denotes result below laboratory detection level

--- = No CCME Guideline

* = CCME guideline for Ammonia-N (Total Ammonia) is pH and water temperature dependent. There is no CCME guideline value for water with pH levels less than 6.0.

** CCME guideline for Aluminum is pH dependent. The guideline presented here for Aluminum is specific to the pH of the water at this site during this particular sampling event.

*** = CCME guideline for Cadmium is dependent on hardness of the water and is calculated using the formula: Cd guideline = 10 exp{0.86[log(hardness)]-3.2}. The value 1.3 mg/L was used for the maximum average hardness concentration.

**** = CCME guideline dependent on hardness of the water and is specific to the average hardness of the water at this site during this particular sampling event.

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## Table 3. Pre-Drilling Winter Water Quality Results, April 7-10, 2010

| Analyte | WWQ5-A | WWQ5-B | WWQ5-C | WWQ6-A | WWQ6-B | WWQ7-A | WWQ7-B | WWQ7-C | Duplicate | WWQ8-A | WWQ8-B | WWQ9-A | WWQ10-A | WWQ10-B | Units | Detection Limit | CCME Guideline |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Major Ions, Nutrients, and Inorganics** | | | | | | | | | | | | | | | | | |
| Calcium (Ca)-Total | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Calcium (Ca)-Dissolved | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Phosphorus- Total | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | mg/L | 0.020 | --- |
| Potassium (K)-Total | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Potassium (K)-Dissolved | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | mg/L | 0.50 | --- |
| Sodium (Na)-Total | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 0.5 | --- |
| Sodium (Na)-Dissolved | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 0.02 | --- |
| Hardness (as CaCO3) | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | <1.3 | mg/L | 1.3 | --- |
| Nitrate and Nitrite as N | <0.071 | <0.071 | <0.071 | <0.071 | <0.071 | 1.14 | <0.071 | <0.071 | <0.071 | <0.071 | 0.081 | <0.071 | <0.071 | <0.071 | mg/L | 0.071 | --- |
| Nitrate (as N) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | 1.14 | <0.050 | <0.050 | <0.050 | <0.050 | 0.081 | <0.050 | <0.050 | 0.067 | mg/L | 0.050 | 2.9 |
| Nitrite (as N) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | 0.06 |
| Nitrogen, Total | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 1.14 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | mg/L | 0.20 | --- |
| Total Kjeldahl Nitrogen | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | mg/L | 0.20 | --- |
| pH | 6.01 | 6.02 | 6.07 | 6.30 | 6.35 | 4.33 | 6.27 | 6.37 | 6.36 | 6.00 | 5.86 | 6.24 | 5.89 | 5.90 | pH | 0.10 | 6.5 - 9 |
| Electrical Conductivity (EC) | 5.24 | 5.28 | 5.5 | 5.85 | 5.58 | 26.5 | 6.19 | 6.48 | 6.45 | 4.35 | 5.18 | 6.51 | 8.44 | 9.24 | uS/cm | 0.20 | --- |
| Ammonia-N | 0.0054 | <0.0050 | 0.0074 | 0.0075 | 0.0085 | 0.008 | 0.007 | 0.0065 | 0.0099 | 0.007 | 0.0096 | 0.0107 | 0.0075 | 0.0127 | mg/L | 0.0050 | ---* |
| Total Organic Carbon | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | mg/L | 1.0 | --- |
| Total Suspended Solids | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | 3 | mg/L | 3.0 | --- |
| Turbidity | 0.13 | 0.18 | 0.16 | 0.12 | 0.17 | 0.16 | 0.13 | 0.16 | 0.15 | 0.14 | <0.10 | 0.15 | 0.2 | 0.19 | NTU | 0.10 | --- |
| **Total Metals** | | | | | | | | | | | | | | | | | |
| Aluminum (Al) | 0.0077 | 0.0087 | 0.0069 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0087 | <0.0050 | 0.0194 | 0.0219 | mg/L | 0.0050 | 0.005** |
| Antimony (Sb) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | --- |
| Arsenic (As) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.005 |
| Barium (Ba) | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0037 | 0.0031 | 0.0038 | 0.0037 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | mg/L | 0.0030 | --- |
| Beryllium (Be) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Boron (B) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Cadmium (Cd) | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | 0.000017 | 0.00002 | mg/L | 0.000010 | 0.0000008*** |
| Chromium (Cr) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.001 |
| Cobalt (Co) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | --- |
| Copper (Cu) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0029 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.002**** |
| Iron (Fe) | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | mg/L | 0.030 | 0.3 |
| Lead (Pb) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.001**** |
| Lithium (Li) | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | mg/L | 0.010 | --- |
| Magnesium (Mg) | 0.10 | 0.12 | 0.11 | 0.15 | 0.13 | 0.17 | 0.13 | 0.14 | 0.15 | <0.10 | <0.10 | 0.11 | 0.22 | 0.24 | mg/L | 0.10 | --- |
| Manganese (Mn) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0072 | 0.0077 | mg/L | 0.0050 | --- |
| Mercury (Hg) | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | mg/L | 0.000020 | 0.000026 |
| Molybdenum (Mo) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.073 |
| Nickel (Ni) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0021 | 0.0022 | mg/L | 0.0020 | 0.025**** |
| Selenium (Se) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.001 |
| Silver (Ag) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0001 |
| Strontium (Sr) | 0.00139 | 0.00144 | 0.00152 | 0.0034 | 0.00321 | 0.00417 | 0.00344 | 0.00365 | 0.00371 | 0.00143 | 0.00169 | 0.00289 | 0.0024 | 0.00257 | mg/L | 0.0002 | --- |
| Thallium (Tl) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0008 |
| Tin (Sn) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Titanium (Ti) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Uranium (U) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | --- |
| Vanadium (V) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Zinc (Zn) | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | mg/L | 0.0040 | 0.03 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | |
| Aluminum (Al) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.007 | <0.0050 | 0.0121 | 0.0164 | mg/L | 0.0050 | 0.005** |
| Antimony (Sb) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | --- |
| Arsenic (As) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.005 |
| Barium (Ba) | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0035 | 0.0034 | 0.0037 | 0.0037 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | mg/L | 0.0030 | --- |
| Beryllium (Be) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Boron (B) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Cadmium (Cd) | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | <0.000010 | 0.000013 | <0.000010 | <0.000010 | 0.000025 | 0.000025 | mg/L | 0.000010 | 0.0000008*** |
| Chromium (Cr) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.001 |
| Cobalt (Co) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | mg/L | 0.0020 | --- |
| Copper (Cu) | 0.0015 | <0.0010 | <0.0010 | 0.0012 | <0.0010 | <0.0010 | <0.0010 | 0.0023 | 0.0025 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | 0.002**** |
| Iron (Fe) | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | <0.030 | mg/L | 0.030 | 0.3 |
| Lead (Pb) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.001**** |
| Lithium (Li) | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | mg/L | 0.010 | --- |
| Magnesium (Mg) | 0.11 | 0.14 | 0.12 | 0.15 | 0.14 | 0.17 | 0.16 | 0.17 | 0.17 | <0.10 | 0.1 | 0.11 | 0.25 | 0.26 | mg/L | 0.10 | --- |
| Manganese (Mn) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0077 | 0.008 | mg/L | 0.0050 | --- |
| Mercury (Hg) | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | mg/L | 0.000020 | 0.000026 |
| Molybdenum (Mo) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | mg/L | 0.0050 | 0.073 |
| Nickel (Ni) | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0024 | 0.0022 | mg/L | 0.0020 | 0.025**** |
| Selenium (Se) | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | <0.00040 | mg/L | 0.00040 | 0.001 |
| Silver (Ag) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0001 |
| Thallium (Tl) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | 0.0008 |
| Tin (Sn) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | mg/L | 0.050 | --- |
| Titanium (Ti) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Uranium (U) | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | mg/L | 0.00010 | --- |
| Vanadium (V) | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | mg/L | 0.0010 | --- |
| Zinc (Zn) | 0.0087 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | <0.0040 | mg/L | 0.0040 | 0.03 |

**Legend**

^ Canadian Council of Ministers of the Environment - Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life (December 2007).

Outside CCME Guidelines

Detection Limit above CCME Guidelines

< denotes result below laboratory detection level

--- = No CCME Guideline

* = CCME guideline for Ammonia-N (Total Ammonia) is pH and water temperature dependent. There is no CCME guideline value for water with pH levels less than 6.0.

** CCME guideline for Aluminum is pH dependent. The guideline presented here for Aluminum is specific to the pH of the water at this site during this particular sampling event.

*** = CCME guideline for Cadmium is dependent on hardness of the water and is calculated using the formula: Cd guideline = 10 exp{0.86[log(hardness)]-3.2}. The value 1.3 mg/L was used for the maximum average hardness concentration.

**** = CCME guideline dependent on hardness of the water and is specific to the average hardness of the water at this site during this particular sampling event.

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## Table 6. Sunrise Camp Potable Water Quality, April 12, 2010

| Analyte | Travel Blank | Trip Blank | Raw Water | Kitchen Tap | Bathroom Tap | Duplicate | Units | Detection Limit | Drinking Water Quality Guideline |
|---|---|---|---|---|---|---|---|---|---|
| Fecal Coliforms | <1 | <1 | <1 | <1 | <1 | <1 | CFU / 100mL | 1 | --- |
| Total Coliforms | <1 | <1 | <1 | <1 | <1 | <1 | MPN / 100 mL | 1 | 0 |
| *Escherichia* Coliforms (E. coli) | <1 | <1 | <1 | <1 | <1 | <1 | MPN / 100 mL | 1 | 0 |

**Legend**

^Federal-Provincial-Territorial Committee on Drinking Water (2008) Guidelines for Canadian Drinking Water Quality

Outside CCME Guidelines

Detection Limit above CCME Guidelines

< denotes result below detection level