

April 18, 2016

EDI Project No: 15Y0146

Assessment and Abandoned Mines Branch (AAM) K-149
Department of Energy, Mines and Resources, Yukon Government
Room 2C Royal Center, 4114-4th Avenue
PO 2703, Whitehorse, YT, Y1A 2C6

Attention: Erik Pit, Type II Project Manager

RE: Mount Nansen Water Resources Investigations – Monthly Report: February 2016

Trip dates:	February 15-16, 2016
EDI field staff:	Joel MacFabe, Megan Sandford, and Danny Skookum
Weather during trip:	Conditions for the two days included air temperatures from -15 to -3°C, with clear skies to light snow and calm to light wind conditions.

The following monthly report includes a summary of site conditions and data collected during EDI's February 2016 trip to Mount Nansen as part of the 2015/16 Water Resources Investigations. See Table 1 for a summary of data included in this report.

Table 1. Summary of information provided in this monthly report.

Report Section	Description
Site Conditions) Summary of weather and general site conditions
Meteorology) Statement on station status and identification of any data gaps or QA/QC issues) Snow depth sensor QA/QC
Hydrology) Discussion of noteworthy hydrology observations for this month) Statement of QA/QC for the data collected this month
Water Quality) Summary of noteworthy water quality observations for this month) Statement on QA/QC sample results for this month
Program Recommendations) Program recommendations for meteorological, hydrology and water quality programs
Additional Trip Information) Project Safety Concerns) Wildlife sightings) Budget and schedule considerations
List of Attachments) Maps of stations and sites) Site and station photos from trip) Data Tables – hydrology and water quality) Water quality lab result reports



SITE CONDITIONS

The February 2016 site trip represented mid-winter conditions at the Mount Nansen Site. Air temperatures were relatively warm, ranging from -15 to -4°C. Weather conditions ranged from clear skies to light snow, with calm to light winds. Ice cover was present across all watercourses and waterbodies, with ice thickness ranging from 2 cm to 55 cm, with the tailings pond having the thickest ice. Water levels were lower than during the previous winter trips. Stations and sites along Pony Creek, Back Creek and Dome Creek remain frozen to bed as well as various seeps around the site.

METEOROLOGY

Meteorological data was collected at the ATM-ROAD station throughout the month of February 2016. EDI conducted a preliminary QA/QC review of the February 2016 data. All sensors appear to be functioning as expected, including the longwave radiation sensor that previously produced anomalous readings from January 10-26, 2016. The snow sensor data quality produced a good quality reading at the time of the field visit; however, within the hourly dataset for the month of February there were 20 values where the snow sensor quality values indicated reduced echo signal strength and one value with high measurement uncertainty (See Table 2, Note). The variation in data quality appears to be associated with snowfall events and the reduced sensor reflections on fresh snow (i.e., no apparent problems with the sensor). On February 16, 2016, the snow level measured by EDI was 41.6 cm, whereas the snow sensor measurement was 41.3 cm (Table 2). This indicates that to date, the snow sensor appears to be slightly underestimating snow depth, however there is likely enough spatial variability of the snow distribution and ground surface elevation in the vicinity of the meteorological station that would account for the differences.

Meteorological data for the winter season (October 15, 2015 to March 31, 2016) will be summarized and reported on in the March 2016 monthly report, which will include the winter seasonal analysis.



Table 2. Comparison of snow depth measured at the site with the snow sensor measurement.

Measurement Date/Time	Manual Snow Depth Measurement near Station (cm)	Meteorological Station Snow Sensor Measurement (cm)	Snow Sensor Quality ¹	Difference (cm)
October 13, 2015 13:00	0.0	0.6	181 (Good)	0.6
November 16, 2015 14:20	20.0	18.2	185 (Good)	1.8
December 15, 2015 18:05	29.1	27.1	182 (Good)	2.0
January 12, 2016 13:35	32.5	30.0	169 (Good)	2.5
February 16, 2016 09:45	41.6	41.3	177 (Good)	0.3

Note:

¹- Quality numbers provide an indication of surface density in snow monitoring applications. Values will increase during snowfall events consisting of low-density snow. Quality Numbers: 0 = Not able to read distance; 152-210 = Good Measurement Quality Numbers; 210-300= Reduced Echo Signal Strength; 300-600 = High measurement uncertainty

HYDROLOGY

Discharge measurements were collected at all stations with suitable measurement conditions during the February 2016 trip. Water levels were continuing to decline to baseflow and represent the lowest to date in the 2015/2016 winter period. Hydrology stations at H-PC-DSP, H-BC, H-DC-B, H-DC-R and H-DC-D1b were frozen to substrate and flows were too low at H-DC-DX+105 to obtain an accurate discharge measurement. Continuous water level records are available for five stations for the period up to February 16, 2016: H-VC-U, H-VC-DBC, H-VC-UMN, H-VC-R and H-VC-R+290. Data was not downloaded successfully from the continuous water level logger at H-DC-M WP in February and it appears to be frozen to the bed. In November and December 2015, it was suspected that either the direct read cable to the logger or the communication device was damaged. There was a successful download in January 2016 with a new communication device, but the communication issue occurred again on the February 2016 trip. Damage to the cable is suspected and will be replaced as soon as feasible. The sensor that has frozen to bed will be checked for damage after thaw occurs (see Program Recommendations and Additional Trip Information Section for details).

See attached data tables for a summary of surface water conditions and hydrometric monitoring tasks completed at each station for February 2016 (Attachment 3). Quality control and quality assurance was conducted for all hydrometric data. Noteworthy observations are included below.

Noteworthy Observations

- Discharge measurements were collected with an ADV at all Victoria Creek stations, H-VC-U, H-VC-DBC, H-VC-UMN, H-VC-R with discharge values ranging from 0.024 to 0.050 m³/s.



- ⇓ A preliminary review of the discharge values from the Victoria Creek stations in February 2016 show that the measured discharge at H-VC-DBC (0.092 m³/s) is greater than at the downstream station at H-VC-UMN (0.024 m³/s). Similarly, the discharge at H-VC-UMN is greater than the discharge downstream at H-VC-R+290 (0.021 m³/s). Typically discharge increases in the downstream direction as the contributing watershed area increases, therefore this decreasing winter flow pattern may indicate that the Victoria Creek reaches are losing surface flow to groundwater pathways. Similar discharge patterns have been previously noted along Victoria Creek in July 2014, May-July 2015, and November 2015-January 2016. A more detailed review of the local hydrology along Victoria Creek will be completed at the end of the winter season when additional low flow data is available.
-)] Salt tracers were conducted at H-VC-R+290 with a resulting value of 0.021 m³/s. Typically the ADV is used to measure discharge at H-VC-R+290, however the flow depths were too shallow for an accurate velocity-area measurement.
 -)] At H-DC-M WP, water was continuing to flow through the weir plate and wooden support structure (similar to that observed in January 2016) and was not suitable for the typical volumetric discharge measurement, thus a salt tracer test was conducted. The discharge value was 0.005 m³/s. Attempts were made to re-route water in the active part of channel towards the stilling well to ensure the sensor remains wetted through winter. Large amounts of overflow ice were observed upstream of the weir pond, approximately 10 m upstream. This ice is extending downstream from the seepage discharge site.
 -)] No discharge measurement was collected at H-DC-DX+105 due to very low flows and poor conditions for accurate measurement.
 -)] The H-SEEP volumetric discharge measurement was 0.002 m³/s. Flow rate measured at the pump in the seepage pond shack was 0.002 m³/s.
 -)] Overflow ice conditions were present along Dome Creek in the vicinity of H-DC-R, H-DC-B and upstream of H-DC-M WP. The H-DC-B station was frozen to bed; no measurements could be collected at this station. The H-DC-R and H-DC-D1b stations are considered frozen to substrate for the winter.

WATER QUALITY

Water quality samples and data were collected at the regularly scheduled sites during the February 2016 trip. A total of nine sites were sampled. Many stations remain frozen to substrate for the winter period (as noted in the 'Site Conditions' section and in Attachment 3). The regular monthly drinking water sample was collected from the pumphouse well (WQ-PW). All samples were submitted for analysis through ALS Laboratories.

See the attached data tables for a summary of conditions at each site and a record of where samples were collected during each trip (Attachment 3). In-situ and laboratory results summary tables are also attached.



Parameters that exceeded the Canadian Council of Ministers of the Environment Freshwater Aquatic Life (CCME-AL) guidelines and/or the Mount Nansen Effluent Quality Standards (EQS) criteria are highlighted. The lab certificates of analysis are also attached in Attachment 4. Many results reflect typical conditions for this time of year at Mount Nansen where water levels are low and watercourses are covered in ice. Noteworthy observations and comments on sample QA/QC are included in the subsections below.

Noteworthy Observations

-) The Victoria Creek samples did not exceed any guidelines or standards (this is typical of the winter season).
-) The total zinc concentration in the February 2016 WQ-SEEP sample was above the CCME-AL guideline with a concentration of 0.122 mg/L. This is similar to the January 2016 sample result of 0.114 mg/L. This site also commonly exceeds the guidelines and/or standards for ammonia, arsenic, cadmium, iron, and manganese.
-) The WQ-TP samples exceeded the guidelines and/or standards for total suspended solids (TSS) ammonia, fluoride, arsenic, cadmium, copper, iron, lead, manganese, and zinc. These results are typical of the winter season.
-) The WQ-DC-U site downstream of the WQ-DC-B and WQ-SEEP sites exceeded the guidelines and/or standards for ammonia, fluoride, arsenic, iron, manganese and zinc (which is common in the winter months).
-) The WQ-DC-DX+105 samples exceeded the guidelines and/or standards for fluoride, aluminum, arsenic, cadmium, copper, iron, lead, manganese, silver and zinc. This site had the highest total and dissolved zinc concentrations of all sites sampled. These results are similar to previous sampling events, with the exception of aluminum, copper, lead and silver, which are likely associated with higher suspended sediment (TSS 46.7 mg/L) of the samples this trip, likely related to the very low flow conditions.

QA/QC Samples

Travel Blank Sample – The travel blank had all parameters below detection limits. No contamination from storage or transport is suspected.

Field Blank Sample – All parameters were below detection limits. No contamination from field methodology is suspected.

Replicate Sample(s) – The average relative percent difference (RPD) of the replicate sample set for WQ-DC-DX+105-r was 25%, indicating that sample analysis is imprecise or that there is intrinsically high natural variability (RPD>20%). The average RPD for total metals in the replicate sample set was 43% and the average RPD for dissolved metals was 5%. The large RPD of the total metals samples is likely related to the high RPD of 72% in the TSS values between the replicate sample set, as TSS ranged from 46.7 mg/L to 22 mg/L in the two samples. The high TSS likely resulted in the high RPDs of 18 individual total metal



parameters, as higher concentrations of some metals are associated with suspended sediment conditions. All individual dissolved metals parameters had RPD less than 20% or below detection limits, and were considered adequately precise.

PROGRAM RECOMMENDATIONS

-) During each winter trip, continue to collect photographs and snow depths adjacent to the meteorological station compound to confirm snow sensor data.
-) Monitor ice build-up at the H-DC-M WP station and WQ-DC-U site.
-) Conduct concurrent ADV and salt tracer discharge measurement tests at select Victoria Creek stations in March 2016, where possible, to continue to validate the salt tracer method.
-) The sensor at H-DC-M WP has frozen to the channel bed despite efforts to keep water flowing at the well site. EDI recommends testing for sensor drift once the station thaws. The direct read cable will be replaced in the spring.
-) Many sites will remain frozen to substrate through the winter, and should be revisited in April/May depending on spring conditions. This likely applies to WQ-DC-DX, H/WQ-DC-D1b, WQ-PC-U, WQ-PC-D, H-PC-DSP, H/WQ-BC, H/WQ-DC-R, H/WQ-DC-B and WQ-CH-P-13-01; as well as the other seeps that have been dry most or all of the 2015 open water season – WQ-ADIT-SEEP, WQ-LW-SEEP-01, WQ-MS-S-08.

ADDITIONAL TRIP INFORMATION

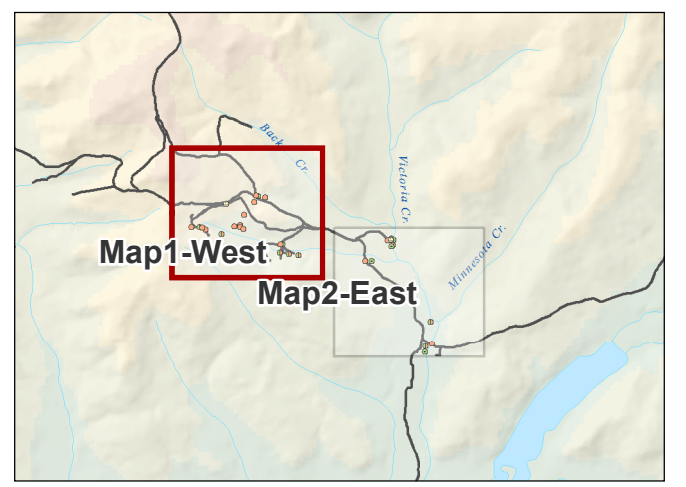
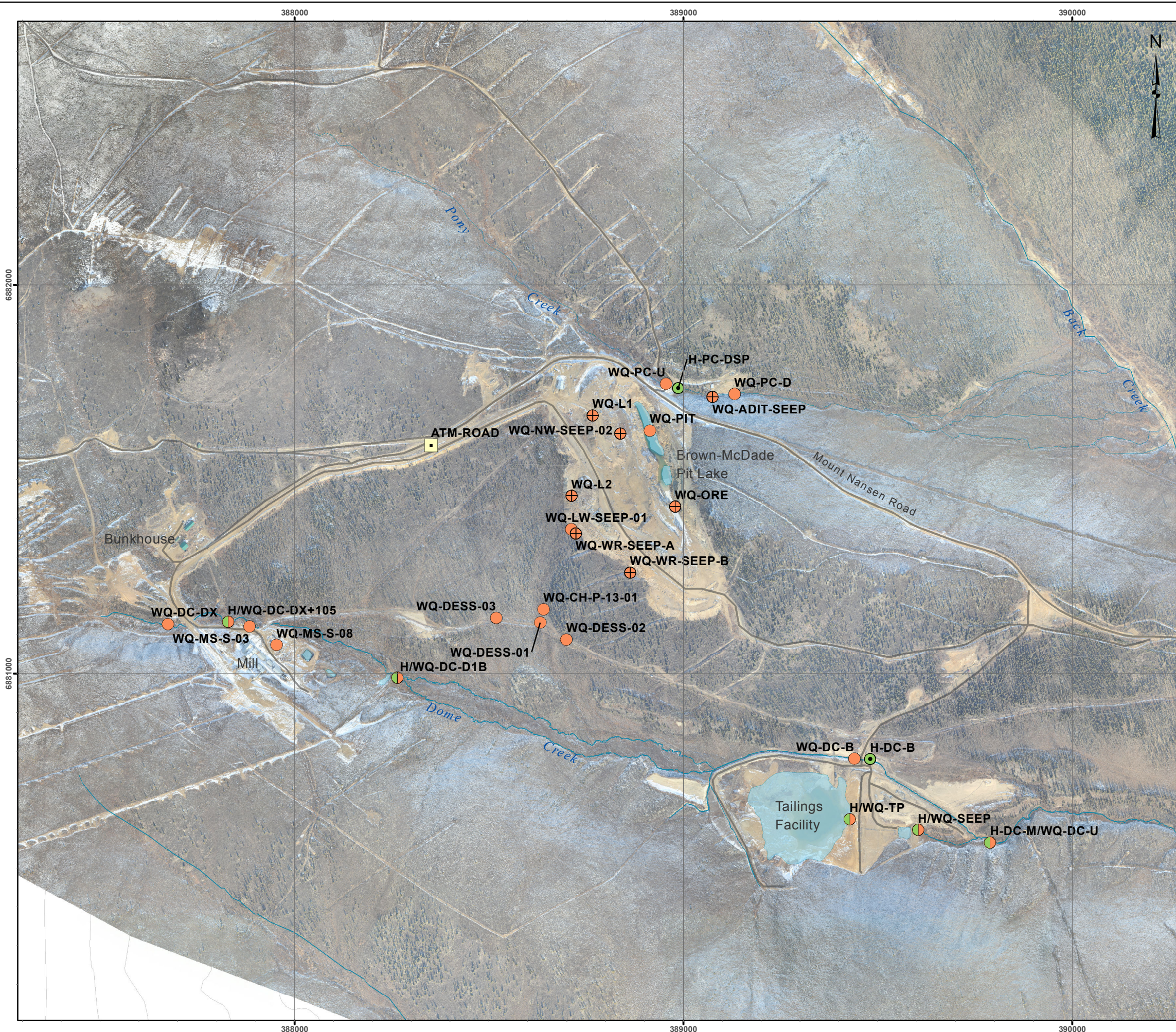
Any changes to project scope (i.e. additional sites sampled):	None. All sampling and monitoring was conducted within scope. The next trip is scheduled for March 14-15, 2016 – which will be the last field trip of the 2015/16 Water Resource Investigation contract.
Any alterations to sample schedule/budget:	See below regarding direct read cable. This cost was included on the February 2016 invoice and will be covered under the contingency fund.
Additional Comments:	Conditions were representative of mid-winter, with similar water levels to the last trip and ice and snow was present at all locations. Stations and sites along Pony Creek, Back Creek, and some areas of Dome Creek remain frozen to substrate for the winter period, along with all the seep areas. The existing direct read cable installed on the logger at H-DC-M WP was once again not working properly during the February 2016 site visit and since this has been a re-occurring issue, the direct read cable should be replaced during the spring to avoid further issues. The issues began in November 2015 through to December 2015, when the data could not be downloaded due to communication errors with the Leveloader (the logger downloading device). During the January 2016 trip, the crew was able to connect to the logger and download the data with no issues. However, the communication error reappeared during this recent February 2016 visit, where data could not be downloaded. EDI recommends that the replacement cable that was purchased back in early-January 2016 (following the November and December 2015 trip issues) be allocated to the project. The cost for the direct read cable is \$100.50 and may be covered in the contingency budget for the program as confirmed by AAM.
Wildlife Sightings:	One female caribou observed along the Mount Nansen Access Road on February 16th, 2016.
Site concerns (safety):	None.



LIST OF ATTACHMENTS

The following information is attached to this monthly report:

1. Maps of Hydrometric Stations and Water Quality Sites
2. Site and Station Photos from the trip
3. Data Tables
 - a. Hydrology – Site Conditions and Tasks Completed & Summary Table of Discharge Measurements.
 - b. Water Quality – Site Conditions and Samples Collected & Summary Table of In Situ Parameters and Lab Results
4. Copies of Lab Certificate of Analysis (COA) & Yukon Environmental Health Services Bacteriological Results (November 2015).



Legend

- Atmospheric Station (label e.g. ATM-ROAD)
- Hydrometric Station and Water Quality Site (label e.g. H/WQ-VC-UMN)
- Hydrometric Station (label e.g. H-VC-R)
- Water Quality Site (label e.g. WQ-PC-U)
- + Temporary Water Quality Site (label e.g. WQ-MS-S-03)
- Unpaved Road/Access

Mount Nansen Site (West): Hydrometric Stations and Water Quality Sites

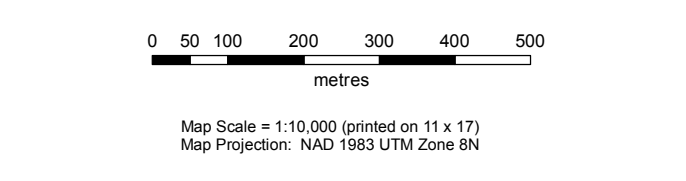
Notes:

1:50,000 and 1:250,000 Topographic Spatial Data provided by Geomatics - Yukon Government via online source (Corporate Spatial Warehouse) www.geomaticsyukon.ca.

Watercourse, drainage areas and Mount Nansen Road layers digitized / modified by EDI (2011) using orthophotos provided by Yukon Government, Energy, Mines and Resources (2011).

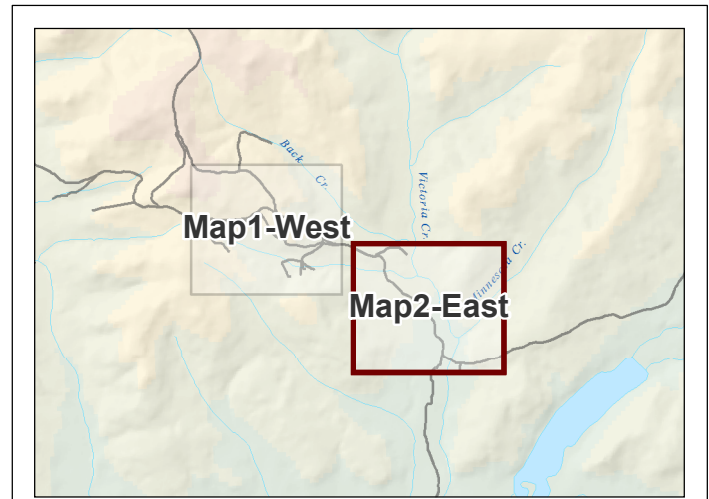
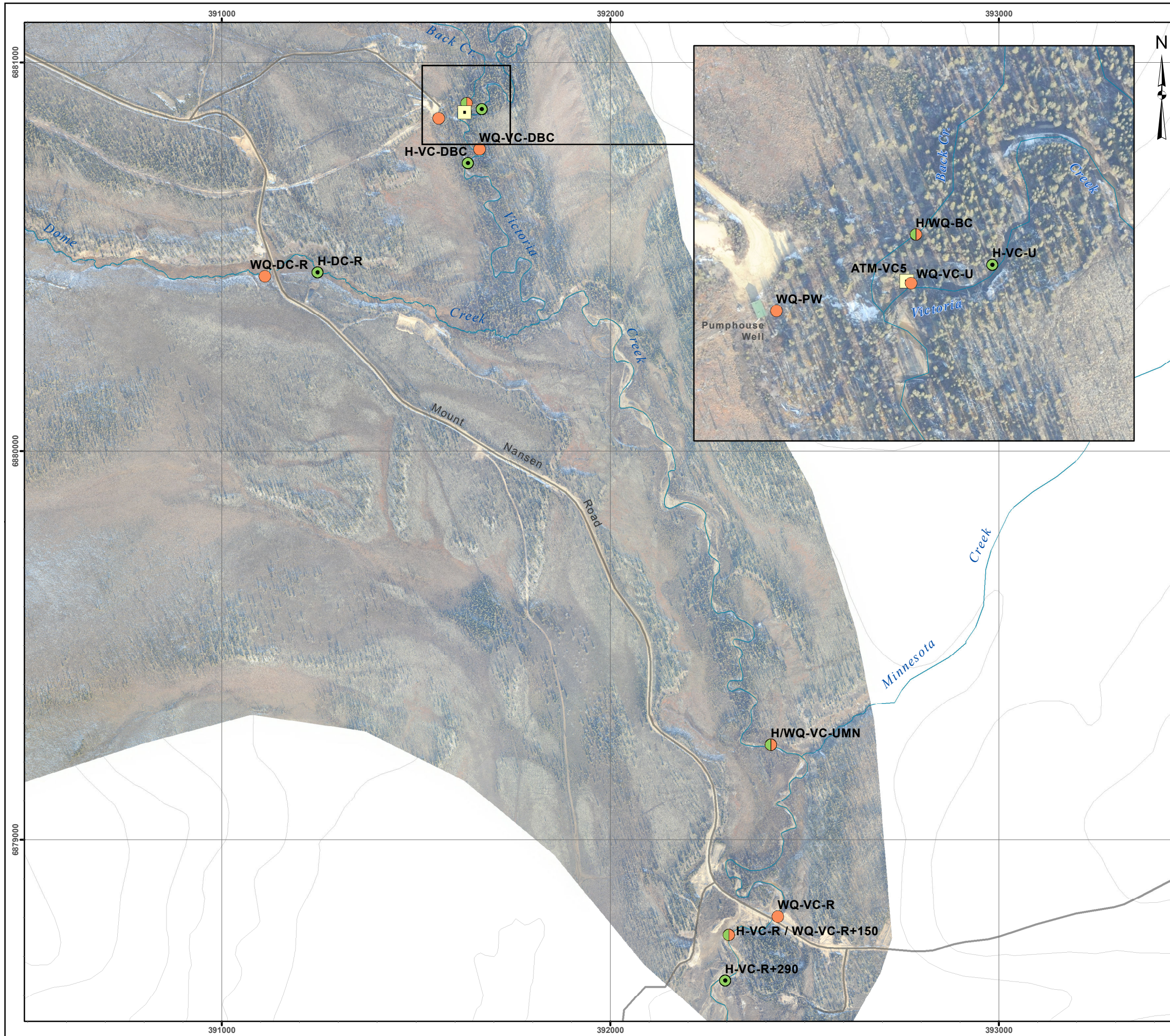
Imagery provided by Yukon Government - Energy, Mines and Resources - Abandoned Mines Branch.

Project data displayed is site specific. Data collected by EDI Environmental Dynamics Inc. (2015) was obtained using Garmin GPS technology.



Drawn: MP	Checked: MM/SD	Date: 21/09/2015	MAP 1
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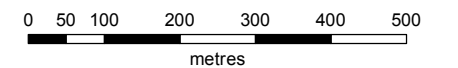


Legend

- Atmospheric Station (label e.g. ATM-ROAD)
- Hydrometric Station and Water Quality Site (label e.g. H/WQ-VC-UMN)
- Hydrometric Station (label e.g. H-VC-R)
- Water Quality Site (label e.g. WQ-PC-U)
- Temporary Water Quality Site (label e.g. WQ-MS-S-03)
- Unpaved Road/Access

Mount Nansen Site (East): Hydrometric Stations and Water Quality Sites

Notes:
 1:50,000 and 1:250,000 Topographic Spatial Data provided by Geomatics - Yukon Government via online source (Corporate Spatial Warehouse) www.geomaticsyukon.ca.
 Watercourse, drainage areas and Mount Nansen Road layers digitized / modified by EDI (2011) using orthophotos provided by Yukon Government, Energy, Mines and Resources (2011).
 Imagery provided by Yukon Government - Energy, Mines and Resources - Abandoned Mines Branch.
 Project data displayed is site specific. Data collected by EDI Environmental Dynamics Inc. (2015) was obtained using Garmin GPS technology.



Map Scale = 1:10,000 (printed on 11 x 17)
 Map Projection: NAD 1983 UTM Zone 8N

Drawn: MP	Checked: MM/SD	Date: 21/09/2015	MAP 2
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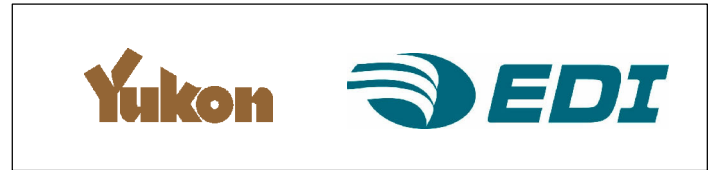




Photo 1. H/WQ-DC-DX+105 – looking upstream.



Photo 2. H/WQ-DC-B – looking upstream. Site frozen to bed.



Photo 3. H/WQ-DC-B – looking downstream. Site frozen to bed.



Photo 4. H-DC-M WP – looking at weir pond, showing seepage upstream of pond extending from seepage discharge.



Photo 5. WQ-DC-U looking downstream.



Photo 6. H-DC-R –Site frozen to bed. View downstream of road crossing.



Photo 7. WQ-DC-R – site frozen to bed. Overview of site upstream of road.



Photo 8. WQ-SEEP - looking downstream.



Photo 9. WQ/H-TP – photo too dark.



Photo 10. H/WQ-BC – remains frozen to substrate (upstream view).



Photo 11. View of Victoria Creek-Mount Nansen Road Crossing (looking downstream).



Photo 12. WQ-VC-R – thick overflow ice upstream of Mount Nansen Access Road (WQ sample collected at winter location WQ-VC-R+150).



Photo 13. WQ-VC-U – looking upstream.



Photo 14. H-VC-U – looking upstream.



Photo 15. WQ-VC-DBC – looking upstream.



Photo 16. H-VC-DBC – looking upstream.



Photo 17. H-VC-UMN – view of left downstream bank.



Photo 18. WQ-VC-UMN – looking upstream – also location for ADV cross section for H-VC-UMN.



Photo 19. WQ-VC-R+150 – looking downstream.



Photo 20. H-VC-R – looking downstream.



Photo 21. H-VC-R+290 – looking downstream.



Photo 22. H/WQ-PW – overview.



Photo 23. Met station snow depth.



Photo 24. Met station overview.

Measurement ID	Hydrometric Identifier (HID)	Measurement Date	Measurement Time	Discharge Measurement Method	Discharge (m ³ /s)	Discharge Data Flag	Surveyed Water Elevation (m)	Survey Data Flag	Comments
440	ATM-VC5	16/02/2016	12:45	N					Barologger functioning correctly.
430	H-DC-DX+105	16/02/2016	8:55	N		X		N	Low flow conditions not suitable for salt tracer or volumetric discharge measurement methods. Flow estimated to be below reportable discharge limit (<0.001 m ³ /s).
436	H-DC-D1b	15/02/2016		N		X		N	Station frozen to bed for winter.
433	H-DC-B	15/02/2016		N		X		N	Station frozen to bed for winter.
439	H-TP	15/02/2016	19:10	N		B		N	Snow at staff gauges with no ice or water.
425	H-SEEP	15/02/2016	18:30	V	0.002			N	Volumetric measurement collected at pipe outlet. Flow rate at pump at 19:55: 123.413 L/min (0.002 m ³ /s) and total discharge = 321,595 L.
431	H-DC-M WP	15/02/2016	17:42	SS	0.005	B		N	Extensive overflow ice from Dome Creek/Seep area extends to upstream end of weir pond. Ice approximately 20cm in vicinity of well. Well frozen to bed. Direct read cable on data logger not functioning properly at time of visit.
437	H-DC-R	15/02/2016		N		X		N	Station frozen to bed for winter.
435	H-PC-DSP	15/02/2016		N		X		N	Station frozen to bed for winter.
438	H-BC	15/02/2016		N		X		N	Site dry. No evidence of flow since last site visit.
429	H-VC-U	16/02/2016	13:16	ADV-MID	0.050	B		N	Open water leads cover approximately 80% of active channel. Ice thickness along banks up to 7 cm thick. Water flow depth approximately 15 cm. Discharge measurement completed at same location as previous measurement.
424	H-PW	16/02/2016	13:50	V	0.003			N	Flow looks normal for time of year. Ice build up downstream of pipe outlet. Volumetric discharge measurement completed.
428	H-VC-DBC	16/02/2016	12:15	ADV-MID	0.092	B		N	ADV discharge measurement completed at same location as previous visit. Channel covered with snow and ice approximately 2.5 cm thick. No signs of overflow. Stable channel conditions during discharge measurement.
427	H-VC-UMN	16/02/2016	10:20	ADV-MID	0.024	B		N	Evidence of ice backing up from Minnesota Creek into Victoria creek. Leading edge of overflow ice approximately 50 m downstream of stilling well.
426	H-VC-R	15/02/2016	12:45	N		X		N	Transect from previous visit covered with ice less than 1 cm thick. Site conditions not suitable for discharge measurement due to shallow flow depth and water flowing on top of ice surface. Discharge measurement completed at H-VC-R+290.
432	H-VC-R+290	15/02/2016	14:47	SS	0.021	B		N	Salt tracer completed for discharge estimate.

* Pony Creek (H-PC-DSP) and Dome Creek at D1b (H-DC-D1b) remain frozen to bed for winter period.

Discharge Measurement Method Legend

Measurement Method ID	Measurement Method	Measurement Description
ADV-MID	Mid Section Method - Acoustic Doppler Velocimeter	Cross-sectional velocity using an ADV, mid-section method.
SS	Brine Salt Slug Tracer	Salt dilution gauging using a brine salt slug.
V	Volumetric	Volumetric measurement obtained by filling a graduated container at a culvert, pipe outlet or weir.
W	Weir	Measurement obtained by a rated structure (v-notch weir).
N	None	No measurement could be obtained.
SD	Dry Salt Slug Tracer	Salt dilution gauging using a dry salt slug.
HWM	High Water Mark - Indirect Method	Indirect method using high water mark in the slope-area calculation for estimating high discharges.
ADCP	Acoustic Doppler Current Profiler	Cross-sectional velocity using an ADCP, mid-section method.
SC	Constant Rate Salt Tracer	Salt dilution gauging using the constant rate method.
CM-MID	Mid Section Method - Current Meter	Cross-sectional velocity using a velocimeter (Swoffer or Pygmy AA)

Hydrometric Stations

Hydrometric ID	Hydrometric Stations
ATM-VC5	Atmospheric Barologger (5) at Victoria Creek
H-BC	Back Creek
H-DC-B	Diversion Channel at Bridge
H-DC-D1B	Dome Creek at D1b
H-DC-DX	Dome Creek at DX
H-DC-DX+105	Dome Creek at DX+105
H-DC-M-WP	Middle Dome Creek at Weir Pond
H-DC-R	Dome Creek at Road
H-PC-DSP	Pony Creek Downstream of Pit
H-SEEP	Seepage Pond Outflow
H-TP	Tailings Pond
H-VC-DBC	Victoria Creek Downstream of Back Creek
H-VC-R	Victoria Creek at Road
H-VC-U	Upper Victoria Creek
H-VC-UMN	Victoria Creek Upstream of Minnesota Creek

Discharge Data Flag Legend

Discharge Data Flag	Discharge Data Flag Description
E	Estimated value
B	Backwater effects (ice related)
F	Instrument malfunction
M	Manual measurement
A	Automated measurement (logged)
ML	Missing length data
MD	Missing depth data
MW	Missing width data
O	Outside of measurement reporting range
P	Potential Place Mining Interference with Flow
S	Suspect data
X	Poor channel conditions for discharge measurement
MI	Missing Data
SH-L	Data logger Shift
SH-SG	Staff Gauge Shift
UR	Under review

Survey Data Flag Legend

Survey Flag	Survey Flag Description
S	Suspect data
MI	Missing data
UR	Under review
F	Instrument Malfunction
O	Outside measurement Accuracy (+/-0.003 m)
N	No survey conducted

Water Quality Site	Sample Collected? (Y/N)	Measurement Date	Comments
WQ-BC	N	16-Feb-16	Remains frozen to bed.
WQ-CH-P-13-01	N	16-Feb-16	Remains frozen to bed.
WQ-DC-B	N	16-Feb-16	Remains frozen to bed.
WQ-DC-D1b	N	16-Feb-16	Remains frozen to bed.
WQ-DC-DX	N	16-Feb-16	Remains frozen to bed.
WQ-DC-DX+105	Y	16-Feb-16	Creek was ice covered with ~1cm thick ice. Flow very low and slow. Very difficult to sample without disturbing sediment.
WQ-DC-R	N	15-Feb-16	Remains frozen to bed.
WQ-DC-U	Y	15-Feb-16	Overflow ice extending from area upstream of weir, water still flowing through weir area and downstream to sample site.
WQ-PC-D	N	16-Feb-16	Remains frozen to bed.
WQ-PC-U	N	16-Feb-16	Remains frozen to bed.
WQ-PW	Y	16-Feb-16	Flow normal, ice accumulation at pipe outlet is normal.
WQ-SEEP	Y	15-Feb-16	Ice accumulation in culvert is normal, turbidity looks lower (water is more clear) than normal. Immediately DS of culvert water is open and not iced over.
WQ-TP	Y	15-Feb-16	Hinge cracking around shore and auditory cracking at time of auguring. Top 15cm of ice is opaque likely from overflow ice, full ice thickness 0.55 cm.
WQ-VC-DBC	Y	16-Feb-16	Low water levels, no overflow ice present, 3 small open water areas.
WQ-VC-R	N	15-Feb-16	Frozen to bed - thick overflow ice - sampled from WQ-VC-R+150 downstream.
WQ-VC-R+150	Y	15-Feb-16	Sampled from open water lead upstream of hydro site.
WQ-VC-U	Y	16-Feb-16	Low water levels, open water up and downstream of sample site.
WQ-VC-UMN	Y	16-Feb-16	Ice covering all open water lead areas up stream ~2.5 cm thick.
QA/QC Samples			
Replicate 1	Y	16-Feb-16	Replicate collected at WQ-DC-DX+105 (sample ID WQ-DC-DX+105-r).
Field Blank	Y	16-Feb-16	Sample bottles filled with deionized water supplied by ALS; samples were filtered and preserved as instructed. Collected at WQ-PW.
Travel Blank	Y	-	Samples provided by lab and were transported to and from site.



EDI ENVIRONMENTAL DYNAMICS INC.
ATTN: Meghan Marjanovic
2195 - 2nd Ave
Whitehorse YT Y1A 3T8

Date Received: 17-FEB-16
Report Date: 29-FEB-16 14:44 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1735057
Project P.O. #: NOT SUBMITTED
Job Reference: MOUNT NANSEN 15-Y-0146
C of C Numbers: 1, 2
Legal Site Desc:

Can Dang
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1735057-1 Water 15-FEB-16 13:35 WQ-VC-R+150	L1735057-2 Water 15-FEB-16 17:05 WQ-DC-U	L1735057-3 Water 15-FEB-16 18:40 WQ-SEEP	L1735057-4 Water 15-FEB-16 19:10 WQ-TP	L1735057-5 Water 16-FEB-16 14:45 FIELD BLANK
Grouping	Analyte					
WATER						
Physical Tests	Conductivity (uS/cm)	286	1770	1660	2850	<2.0
	Hardness (as CaCO3) (mg/L)	137	1000	916	1850	<0.50
	pH (pH)	7.51	7.64	7.04	7.71	5.55
	Total Suspended Solids (mg/L)	<3.0	10.7	46	105	<3.0
	Total Dissolved Solids (mg/L)	154	1380	1310	2390	<1.0
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	107	285	250	267	<1.0
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	107	285	250	267	<1.0
	Ammonia, Total (as N) (mg/L)	<0.0050	4.71	4.87	1.67	<0.0050
	Chloride (Cl) (mg/L)	<0.50	<2.5 ^{DLA}	<2.5 ^{DLA}	<2.5 ^{DLA}	<0.50
	Fluoride (F) (mg/L)	0.056	0.13	<0.10 ^{DLA}	0.37	<0.020
	Nitrate (as N) (mg/L)	0.167	0.397	0.623	0.185	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	0.0165	0.0208	<0.0050 ^{DLA}	<0.0010
	Sulfate (SO4) (mg/L)	37.6	794	751	1470	<0.30
	Anion Sum (meq/L)	2.93	22.3	20.7	35.9	<0.10
	Cation Sum (meq/L)	2.92	22.7	21.5	40.0	<0.10
	Cation - Anion Balance (%)	-0.1	0.9	2.0	5.4	0.0
	Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	0.0181	0.0131	<0.0050
Cyanide, Total (mg/L)		<0.0050	0.0431	0.0711	<0.0050	<0.0050
Cyanate (mg/L)		0.22	<0.20	<0.20	<0.20	<0.20
Thiocyanate (SCN) (mg/L)		<0.50	3.02	4.68	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.0078	0.0132	0.0158	0.0193	<0.0030
	Antimony (Sb)-Total (mg/L)	0.00054	0.00045	0.00050	0.0210	<0.00010
	Arsenic (As)-Total (mg/L)	0.00124	0.0449	0.0809	0.229	<0.00010
	Barium (Ba)-Total (mg/L)	0.0813	0.0907	0.0620	0.0378	<0.000050
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000040 ^{DLA}	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.00010 ^{DLA}	<0.000050
	Boron (B)-Total (mg/L)	<0.010	0.052	0.054	0.153	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000109	0.000204	0.000507	0.00708	<0.000050
	Calcium (Ca)-Total (mg/L)	35.2	282	268	558	<0.050
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00048	0.00058	<0.00020 ^{DLA}	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00804	0.00877	0.00164	<0.00010
	Copper (Cu)-Total (mg/L)	0.00109	0.00135	0.00281	0.0504	<0.00050
	Iron (Fe)-Total (mg/L)	<0.010	5.02	16.9	0.590	<0.010
	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	0.000055	0.00866	<0.000050
	Lithium (Li)-Total (mg/L)	0.0010	0.0015	0.0013	0.0199	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1735057-6 Water TRAVEL BLANK	L1735057-7 Water 16-FEB-16 09:00 WQ-DC-DX+105-R	L1735057-8 Water 16-FEB-16 08:55 WQ-DC-DX+105	L1735057-9 Water 16-FEB-16 12:55 WQ-VC-U	L1735057-10 Water 16-FEB-16 10:15 WQ-VC-UMN	
Grouping	Analyte					
WATER						
Physical Tests	Conductivity (uS/cm)	<2.0	1150	1130	231	285
	Hardness (as CaCO3) (mg/L)	<0.50	698	696	123	152
	pH (pH)	5.54	7.59	7.58	7.47	7.56
	Total Suspended Solids (mg/L)	<3.0	22.0	46.7	<3.0	<3.0
	Total Dissolved Solids (mg/L)	<1.0	814	812	125	162
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	<1.0	258	255	92.0	108
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	<1.0	258	255	92.0	108
	Ammonia, Total (as N) (mg/L)	<0.0050	0.0219	0.0201	<0.0050	<0.0050
	Chloride (Cl) (mg/L)	<0.50	<1.0	<1.0 ^{DLA}	<0.50	<0.50
	Fluoride (F) (mg/L)	<0.020	0.197	0.217	0.054	0.060
	Nitrate (as N) (mg/L)	<0.0050	<0.010	<0.010 ^{DLA}	0.178	0.122
	Nitrite (as N) (mg/L)	<0.0010	<0.0020	0.0029	<0.0010	<0.0010
	Sulfate (SO4) (mg/L)	<0.30	407	408	22.9	39.0
	Anion Sum (meq/L)	<0.10	13.6	13.6	2.33	2.98
	Cation Sum (meq/L)	<0.10	14.3	14.3	2.61	3.24
	Cation - Anion Balance (%)	0.0	2.4	2.5	5.7	4.3
	Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total (mg/L)		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate (mg/L)		<0.20	<0.20	<0.20	<0.20	<0.20
Thiocyanate (SCN) (mg/L)		<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0030	0.714	1.64	0.0368	0.0107
	Antimony (Sb)-Total (mg/L)	<0.00010	0.0119	0.0197	0.00010	0.00068
	Arsenic (As)-Total (mg/L)	<0.00010	0.148	0.301	0.00028	0.00298
	Barium (Ba)-Total (mg/L)	<0.000050	0.0226	0.0449	0.0879	0.0838
	Beryllium (Be)-Total (mg/L)	<0.000020	0.000030	0.000071	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	0.000101	0.000194	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.0000050	0.00501	0.0114	0.0000198	0.0000390
	Calcium (Ca)-Total (mg/L)	<0.050	175	173	32.6	39.6
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00088	0.00182	0.00012	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00139	0.00286	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	0.00330	0.00635	0.00112	0.00129
	Iron (Fe)-Total (mg/L)	<0.010	3.02	6.39	0.045	0.016
	Lead (Pb)-Total (mg/L)	<0.000050	0.0106	0.0182	<0.000050	0.000078
	Lithium (Li)-Total (mg/L)	<0.0010	0.0098	0.0099	<0.0010	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID	Description	Sampled Date	Sampled Time	Client ID
		L1735057-11	Water	16-FEB-16	12:25	WQ-VC-DBC
WATER						
Physical Tests	Conductivity (uS/cm)			230		
	Hardness (as CaCO3) (mg/L)			124		
	pH (pH)			7.54		
	Total Suspended Solids (mg/L)			4.0		
	Total Dissolved Solids (mg/L)			126		
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)			92.7		
	Alkalinity, Carbonate (as CaCO3) (mg/L)			<1.0		
	Alkalinity, Hydroxide (as CaCO3) (mg/L)			<1.0		
	Alkalinity, Total (as CaCO3) (mg/L)			92.7		
	Ammonia, Total (as N) (mg/L)			<0.0050		
	Chloride (Cl) (mg/L)			<0.50		
	Fluoride (F) (mg/L)			0.053		
	Nitrate (as N) (mg/L)			0.178		
	Nitrite (as N) (mg/L)			<0.0010		
	Sulfate (SO4) (mg/L)			22.8		
	Anion Sum (meq/L)			2.34		
	Cation Sum (meq/L)			2.62		
	Cation - Anion Balance (%)			5.5		
Cyanides	Cyanide, Weak Acid Diss (mg/L)			<0.0050		
	Cyanide, Total (mg/L)			<0.0050		
	Cyanate (mg/L)			<0.20		
	Thiocyanate (SCN) (mg/L)			<0.50		
Total Metals	Aluminum (Al)-Total (mg/L)			0.0368		
	Antimony (Sb)-Total (mg/L)			<0.00010		
	Arsenic (As)-Total (mg/L)			0.00025		
	Barium (Ba)-Total (mg/L)			0.0831		
	Beryllium (Be)-Total (mg/L)			<0.000020		
	Bismuth (Bi)-Total (mg/L)			<0.000050		
	Boron (B)-Total (mg/L)			<0.010		
	Cadmium (Cd)-Total (mg/L)			0.0000223		
	Calcium (Ca)-Total (mg/L)			30.9		
	Chromium (Cr)-Total (mg/L)			0.00013		
	Cobalt (Co)-Total (mg/L)			<0.00010		
	Copper (Cu)-Total (mg/L)			0.00103		
	Iron (Fe)-Total (mg/L)			0.044		
	Lead (Pb)-Total (mg/L)			<0.000050		
	Lithium (Li)-Total (mg/L)			<0.0010		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1735057-1	L1735057-2	L1735057-3	L1735057-4	L1735057-5
		Description	Water	Water	Water	Water	Water
		Sampled Date	15-FEB-16	15-FEB-16	15-FEB-16	15-FEB-16	16-FEB-16
		Sampled Time	13:35	17:05	18:40	19:10	14:45
		Client ID	WQ-VC-R+150	WQ-DC-U	WQ-SEEP	WQ-TP	FIELD BLANK
Grouping	Analyte						
WATER							
Total Metals	Magnesium (Mg)-Total (mg/L)		11.7	69.2	56.7	101	<0.10
	Manganese (Mn)-Total (mg/L)		0.00145	6.88	6.77	10.5	<0.00010
	Mercury (Hg)-Total (mg/L)		<0.0000050	<0.0000050	<0.0000050	0.0000068	<0.0000050
	Molybdenum (Mo)-Total (mg/L)		0.000413	0.00121	0.00111	0.00462	<0.000050
	Nickel (Ni)-Total (mg/L)		<0.00050	0.00356	0.00408	0.0063	<0.00050
	Phosphorus (P)-Total (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)		0.94	6.93	6.37	33.8	<0.10
	Selenium (Se)-Total (mg/L)		0.000066	0.000269	0.000260	0.00011	<0.000050
	Silicon (Si)-Total (mg/L)		6.56	7.87	7.76	6.11	<0.050
	Silver (Ag)-Total (mg/L)		<0.000010	0.000015	0.000030	0.000201	<0.000010
	Sodium (Na)-Total (mg/L)		3.79	38.0	36.8	39.7	<0.050
	Strontium (Sr)-Total (mg/L)		0.306	0.858	0.754	1.43	<0.00020
	Sulfur (S)-Total (mg/L)		12.2	254	237	531	<0.50
	Thallium (Tl)-Total (mg/L)		<0.000010	<0.000010	<0.000010	0.000387	<0.000010
	Tin (Sn)-Total (mg/L)		<0.00010	<0.00010	<0.00010	<0.00020 ^{DLA}	<0.00010
	Titanium (Ti)-Total (mg/L)		<0.00030	<0.0015 ^{DLM}	<0.0018 ^{DLM}	<0.00060 ^{DLA}	<0.00030
	Uranium (U)-Total (mg/L)		0.000840	0.00201	0.00189	0.00279	<0.000010
	Vanadium (V)-Total (mg/L)		<0.00050	0.00119	0.00267	<0.0010 ^{DLA}	<0.00050
	Zinc (Zn)-Total (mg/L)		<0.0030	0.0571	0.122	0.613	<0.0030
	Zirconium (Zr)-Total (mg/L)		<0.00030	0.00045	0.00072	<0.00060 ^{DLA}	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location		FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location		FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)		0.0040	0.0063	0.0212	0.0034	<0.0010
	Antimony (Sb)-Dissolved (mg/L)		0.00054	0.00043	0.00049	0.0178	<0.00010
	Arsenic (As)-Dissolved (mg/L)		0.00120	0.0422	0.0582	0.149	<0.00010
	Barium (Ba)-Dissolved (mg/L)		0.0837	0.0877	0.0610	0.0372	<0.000050
	Beryllium (Be)-Dissolved (mg/L)		<0.000020	<0.000020	<0.000020	<0.000040 ^{DLA}	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.00010 ^{DLA}	<0.000050
	Boron (B)-Dissolved (mg/L)		<0.010	0.049	0.051	0.150	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		0.0000111	0.000165	0.000413	0.00698	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)		35.6	287	273	571	<0.050
	Chromium (Cr)-Dissolved (mg/L)		<0.00010	0.00027	0.00043	<0.00020 ^{DLA}	<0.00010
	Cobalt (Co)-Dissolved (mg/L)		<0.00010	0.00800	0.00862	0.00159	<0.00010
	Copper (Cu)-Dissolved (mg/L)		0.00103	0.00091	0.00198	0.0405	<0.00020
	Iron (Fe)-Dissolved (mg/L)		<0.010	3.64	16.2	0.190	<0.010
	Lead (Pb)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	0.00177	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.0010	0.0014	0.0013	0.0198	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1735057-6 Water TRAVEL BLANK	L1735057-7 Water 16-FEB-16 09:00 WQ-DC-DX+105-R	L1735057-8 Water 16-FEB-16 08:55 WQ-DC-DX+105	L1735057-9 Water 16-FEB-16 12:55 WQ-VC-U	L1735057-10 Water 16-FEB-16 10:15 WQ-VC-UMN
Grouping	Analyte					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	<0.10	57.0	56.4	10.3	12.8
	Manganese (Mn)-Total (mg/L)	<0.00010	1.71	3.16	0.0941	0.0217
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	0.0000064	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.000442	0.000587	0.000381	0.000374
	Nickel (Ni)-Total (mg/L)	<0.00050	0.00234	0.00417	0.00051	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	0.129	<0.050	<0.050
	Potassium (K)-Total (mg/L)	<0.10	3.62	3.72	0.75	1.07
	Selenium (Se)-Total (mg/L)	<0.000050	<0.000050	0.000069	<0.000050	0.000069
	Silicon (Si)-Total (mg/L)	<0.050	7.60	8.97	6.46	7.27
	Silver (Ag)-Total (mg/L)	<0.000010	0.000194	0.000326	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	<0.050	5.08	5.04	2.94	4.10
	Strontium (Sr)-Total (mg/L)	<0.00020	0.387	0.387	0.313	0.340
	Sulfur (S)-Total (mg/L)	<0.50	127	123	7.41	12.6
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000121	0.000185	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.00030	0.0384	0.0908	0.00120	<0.00030
	Uranium (U)-Total (mg/L)	<0.000010	0.00400	0.00412	0.000724	0.000797
	Vanadium (V)-Total (mg/L)	<0.00050	0.00323	0.00708	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	0.755	1.23	<0.0030	0.0044
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location		FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location		FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)		<0.0010	0.0010	0.0060	0.0061
	Antimony (Sb)-Dissolved (mg/L)		0.00798	0.00807	<0.00010	0.00065
	Arsenic (As)-Dissolved (mg/L)		0.0159	0.0180	0.00023	0.00292
	Barium (Ba)-Dissolved (mg/L)		0.0114	0.0121	0.0862	0.0833
	Beryllium (Be)-Dissolved (mg/L)		<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)		<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		0.000403	0.000331	0.0000235	0.0000344
	Calcium (Ca)-Dissolved (mg/L)		183	183	32.8	40.4
	Chromium (Cr)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	0.00011
	Cobalt (Co)-Dissolved (mg/L)		0.00063	0.00066	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)		<0.00020	<0.00020	0.00094	0.00118
	Iron (Fe)-Dissolved (mg/L)		0.208	0.235	<0.010	0.012
	Lead (Pb)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.0093	0.0098	<0.0010	<0.0010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1735057-11			
		Water	16-FEB-16	12:25	WQ-VC-DBC
Grouping	Analyte				
WATER					
Total Metals	Magnesium (Mg)-Total (mg/L)	9.92			
	Manganese (Mn)-Total (mg/L)	0.0958			
	Mercury (Hg)-Total (mg/L)	<0.000050			
	Molybdenum (Mo)-Total (mg/L)	0.000381			
	Nickel (Ni)-Total (mg/L)	<0.00050			
	Phosphorus (P)-Total (mg/L)	<0.050			
	Potassium (K)-Total (mg/L)	0.75			
	Selenium (Se)-Total (mg/L)	<0.000050			
	Silicon (Si)-Total (mg/L)	6.16			
	Silver (Ag)-Total (mg/L)	<0.000010			
	Sodium (Na)-Total (mg/L)	2.77			
	Strontium (Sr)-Total (mg/L)	0.302			
	Sulfur (S)-Total (mg/L)	7.06			
	Thallium (Tl)-Total (mg/L)	<0.000010			
	Tin (Sn)-Total (mg/L)	<0.00010			
	Titanium (Ti)-Total (mg/L)	0.00110			
	Uranium (U)-Total (mg/L)	0.000704			
	Vanadium (V)-Total (mg/L)	<0.00050			
	Zinc (Zn)-Total (mg/L)	<0.0030			
	Zirconium (Zr)-Total (mg/L)	<0.00030			
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD			
	Dissolved Metals Filtration Location	FIELD			
	Aluminum (Al)-Dissolved (mg/L)	0.0056			
	Antimony (Sb)-Dissolved (mg/L)	<0.00010			
	Arsenic (As)-Dissolved (mg/L)	0.00024			
	Barium (Ba)-Dissolved (mg/L)	0.0863			
	Beryllium (Be)-Dissolved (mg/L)	<0.000020			
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050			
	Boron (B)-Dissolved (mg/L)	<0.010			
	Cadmium (Cd)-Dissolved (mg/L)	0.0000228			
	Calcium (Ca)-Dissolved (mg/L)	32.7			
	Chromium (Cr)-Dissolved (mg/L)	<0.00010			
	Cobalt (Co)-Dissolved (mg/L)	<0.00010			
	Copper (Cu)-Dissolved (mg/L)	0.00097			
	Iron (Fe)-Dissolved (mg/L)	<0.010			
	Lead (Pb)-Dissolved (mg/L)	<0.000050			
	Lithium (Li)-Dissolved (mg/L)	<0.0010			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1735057-1	L1735057-2	L1735057-3	L1735057-4	L1735057-5
		Description	Water	Water	Water	Water	Water
		Sampled Date	15-FEB-16	15-FEB-16	15-FEB-16	15-FEB-16	16-FEB-16
		Sampled Time	13:35	17:05	18:40	19:10	14:45
		Client ID	WQ-VC-R+150	WQ-DC-U	WQ-SEEP	WQ-TP	FIELD BLANK
Grouping	Analyte						
WATER							
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)		11.6	69.8	57.0	103	<0.10
	Manganese (Mn)-Dissolved (mg/L)		0.00126	6.77	6.60	10.4	<0.00010
	Mercury (Hg)-Dissolved (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.000373	0.00108	0.00102	0.00461	<0.000050
	Nickel (Ni)-Dissolved (mg/L)		<0.00050	0.00336	0.00397	0.0061	<0.00050
	Phosphorus (P)-Dissolved (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)		0.85	6.90	6.37	33.5	<0.10
	Selenium (Se)-Dissolved (mg/L)		0.000077	0.000260	0.000319	0.00015	<0.000050
	Silicon (Si)-Dissolved (mg/L)		6.57	7.83	7.83	6.08	<0.050
	Silver (Ag)-Dissolved (mg/L)		<0.000010	<0.000010	0.000012	0.000084	<0.000010
	Sodium (Na)-Dissolved (mg/L)		3.76	37.8	36.5	38.9	<0.050
	Strontium (Sr)-Dissolved (mg/L)		0.299	0.832	0.745	1.43	<0.00020
	Sulfur (S)-Dissolved (mg/L)		12.1	254	234	527	<0.50
	Thallium (Tl)-Dissolved (mg/L)		<0.000010	<0.000010	<0.000010	0.000395	<0.000010
	Tin (Sn)-Dissolved (mg/L)		<0.00010	<0.00010	<0.00010	<0.00020 ^{DLA}	<0.00010
	Titanium (Ti)-Dissolved (mg/L)		<0.00030	<0.00090 ^{DLM}	0.00099	<0.00060 ^{DLA}	<0.00030
	Uranium (U)-Dissolved (mg/L)		0.000794	0.00192	0.00183	0.00283	<0.000010
	Vanadium (V)-Dissolved (mg/L)		<0.00050	0.00089	0.00197	<0.0010 ^{DLA}	<0.00050
	Zinc (Zn)-Dissolved (mg/L)		<0.0010	0.0546	0.123	0.597	<0.0010
	Zirconium (Zr)-Dissolved (mg/L)		<0.00030	0.00043	0.00072	<0.00060 ^{DLA}	<0.00030

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1735057-6 Water TRAVEL BLANK	L1735057-7 Water 16-FEB-16 09:00 WQ-DC-DX+105-R	L1735057-8 Water 16-FEB-16 08:55 WQ-DC-DX+105	L1735057-9 Water 16-FEB-16 12:55 WQ-VC-U	L1735057-10 Water 16-FEB-16 10:15 WQ-VC-UMN
Grouping	Analyte				
WATER					
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	58.3	58.3	10.1	12.5
	Manganese (Mn)-Dissolved (mg/L)	1.05	1.14	0.0885	0.0198
	Mercury (Hg)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000360	0.000371	0.000353	0.000350
	Nickel (Ni)-Dissolved (mg/L)	0.00129	0.00143	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	3.45	3.44	0.71	1.02
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000070
	Silicon (Si)-Dissolved (mg/L)	6.62	6.60	6.33	7.18
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	4.87	5.13	2.84	3.95
	Strontium (Sr)-Dissolved (mg/L)	0.389	0.394	0.305	0.328
	Sulfur (S)-Dissolved (mg/L)	128	127	7.22	12.4
	Thallium (Tl)-Dissolved (mg/L)	0.000071	0.000077	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.00397	0.00401	0.000683	0.000756
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.554	0.590	0.0011	0.0042
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1735057-11	Water	16-FEB-16	12:25	WQ-VC-DBC
Grouping	Analyte					
WATER						
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	10.2				
	Manganese (Mn)-Dissolved (mg/L)	0.0956				
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050				
	Molybdenum (Mo)-Dissolved (mg/L)	0.000370				
	Nickel (Ni)-Dissolved (mg/L)	<0.00050				
	Phosphorus (P)-Dissolved (mg/L)	<0.050				
	Potassium (K)-Dissolved (mg/L)	0.71				
	Selenium (Se)-Dissolved (mg/L)	<0.000050				
	Silicon (Si)-Dissolved (mg/L)	6.36				
	Silver (Ag)-Dissolved (mg/L)	<0.000010				
	Sodium (Na)-Dissolved (mg/L)	2.86				
	Strontium (Sr)-Dissolved (mg/L)	0.308				
	Sulfur (S)-Dissolved (mg/L)	7.31				
	Thallium (Tl)-Dissolved (mg/L)	<0.000010				
	Tin (Sn)-Dissolved (mg/L)	<0.00010				
	Titanium (Ti)-Dissolved (mg/L)	<0.00030				
	Uranium (U)-Dissolved (mg/L)	0.000692				
	Vanadium (V)-Dissolved (mg/L)	<0.00050				
	Zinc (Zn)-Dissolved (mg/L)	<0.0010				
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Cobalt (Co)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Lithium (Li)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Nickel (Ni)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Copper (Cu)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1735057-1, -10, -11, -2, -3, -4, -5, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity
This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.			
BE-D-L-CCMS-VA	Water	Diss. Be (low) in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
BE-T-L-CCMS-VA	Water	Total Be (Low) in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
CL-IC-N-WR	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CN-CNO-WT	Water	Cyanate	APHA 4500-CN-L
This analysis is carried out using procedures adapted from APHA method 4500-CN "Cyanide". Cyanate is determined by the Cyanate hydrolysis method using an ammonia selective electrode			
CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE
This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.			
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there			

Reference Information

could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-WAD-CFA-VA	Water	Weak Acid Diss. Cyanide in water by CFA	APHA 4500-CN CYANIDE
This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.			
EC-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
F-IC-N-WR	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
HARDNESS-CALC-VA	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-D-CVAA-VA	Water	Diss. Mercury in Water by CVAAS or CVAFS	APHA 3030B/EPA 1631E (mod)
Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
HG-T-CVAA-VA	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
IONBALANCE-VA	Water	Ion Balance Calculation	APHA 1030E
Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.			
Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as:			
Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]			
MET-D-CCMS-VA	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-DIS-LOW-ICP-VA	Water	Dissolved Metals in Water by ICPOES	EPA 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-TOT-LOW-ICP-VA	Water	Total Metals in Water by ICPOES	EPA 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
NH3-F-VA	Water	Ammonia in Water by Fluorescence	APHA 4500 NH ₃ -NITROGEN (AMMONIA)
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
NO2-L-IC-N-WR	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)

Reference Information

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-L-IC-N-WR Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

PH-PCT-VA Water pH by Meter (Automated) APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode

It is recommended that this analysis be conducted in the field.

S-DIS-ICP-VA Water Dissolved Sulfur in Water by ICPOES EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

S-TOT-ICP-VA Water Total Sulfur in Water by ICPOES EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

SO4-IC-N-WR Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

TDS-CALC-VA Water TDS (Calculated) APHA 1030E (20TH EDITION)

This analysis is carried out using procedures adapted from APHA 1030E "Checking Correctness of Analyses".

TSS-MAN-WR Water Total Suspended Solids by Gravimetric APHA 2540 D

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids are determined by filtering a sample through a glass fibre filter and drying the filter at 104 degrees celsius.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1	2
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Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Report To		Report Format		Below (Rush Turnaround Time (TAT) is not available for all tests)													
Company: EDI		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)		R <input checked="" type="checkbox"/> Regular (Standard TAT if received by 3 pm - business days)													
Contact: Meghan Marjanovic		Quality Control (QC) Report with Report <input type="checkbox"/> Yes <input type="checkbox"/> No		P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT													
Address: 2195 - 2nd Avenue Whitehorse, YT Y1A 3T8		<input type="checkbox"/> Criteria on Report - provide details below if box checked		E <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT													
Phone: 867-393-4882		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		E2 <input type="checkbox"/> Same day or weekend emergency - contact ALS to confirm TAT and surcharge													
		Email 1 or Fax: mmarianovic@edynamics.com		Specify Date Required for E2, E or P:													
		Email 2: Emilie.Hamm@gov.yk.ca															
		Email 3: erik.pit@gov.yk.ca															
Invoice To: Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
Copy of Invoice with Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX															
Company: EDI		Email 1 or Fax: sjenner@edynamics.com															
Contact: S Jenner		Email 2: mmarianovic@edynamics.com															
Project Information		Oil and Gas Required Fields (client use)															
ALS Quote #: Q49310		Approver ID:		Cost Center:													
Job #: MOUNT NANSEN 15-Y-0146		GL Account:		Routing Code:													
PO / AFE:		Activity Code:															
LSD:		Location:															
ALS Lab Work Order # (lab use only)		ALS Contact: Sean Slugget		Sampler: MS, JM													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA, EC-PCT-VA, PH-PCT-VA	ANIONS-ALL-IC-WR, TSS-MAN-WR	CN-WAD-CFA-VA, CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NHG-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA	Number of Containers	
	WQ-VC-R+150			15 - Feb -16	13:35	Water	R	R	R	R	R	R	R	R	R	9	
	WQ-DC-U			15 - Feb -16	17:05	Water	R	R	R	R	R	R	R	R	R	9	
	WQ-9EEP			15 - Feb -16	18:40	Water	R	R	R	R	R	R	R	R	R	9	
	WQ-TP			15 - Feb -16	19:10	Water	R	R	R	R	R	R	R	R	R	9	
	Field Blank			16 - Feb -16	14:45	Water	R	R	R	R	R	R	R	R	R	9	
	Travel Blank			/ - Feb -16	/	Water	R	R	R	R	R	R	R	R	R	9	
	WQ-PH			16 - Feb -16	13:50	Water	R	R	R	R	R	R	R	R	R	9	
Drinking Water (DW) Samples ¹ (client use)		Special Instructions / Specify Criteria to add on report (client Use)															
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input type="checkbox"/> No		SAMPLE CONDITION AS RECEIVED (lab use only)															
Are samples for human drinking water use? <input type="checkbox"/> Yes <input type="checkbox"/> No		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice packs Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input checked="" type="checkbox"/>															
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)					FINAL SHIPMENT RECEPTION (lab use only)										
Released by: JM		Date: 17 Feb 16		Time: 10:10		Received by: [Signature]		Date: 17 Feb 2016		Time: 10:10		Received by: Sean		Date: Feb 18 2016		Time: 11:25	



L1735057-COFC

COC Number: 14 -

Page 1 of 1

Report To		Report Format / Distribution				<i>(Rush Turnaround Time (TAT) is not available for all tests)</i>										
Company: EDI		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)				R <input checked="" type="checkbox"/> Regular (Standard TAT if received by 3 pm - business days)										
Contact: Meghan Marjanovic		Quality Control (QC) Report with Report <input type="checkbox"/> Yes <input type="checkbox"/> No				P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT										
Address: 2195 - 2nd Avenue Whitehorse, YT Y1A 3T8		<input type="checkbox"/> Criteria on Report - provide details below if box checked				E Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT										
Phone: 867-393-4882		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				E2 <input type="checkbox"/> Same day or weekend emergency - contact ALS to confirm TAT and surcharge										
		Email 1 or Fax mmarjanovic@edynamics.com				Specify Date Required for E2,E or P:										
		Email 2 Emilie.Hamm@gov.yk.ca														
		Email 3 erik.pit@gov.yk.ca														
Invoice To Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Invoice Distribution				Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below										
Copy of Invoice with Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX														
Company: EDI		Email 1 or Fax sjenner@edynamics.com														
Contact: S Jenner		Email 2 mmarjanovic@edynamics.com														
Project Information		Oil and Gas Required Fields (client use)														
ALS Quote #: Q49310		Approver ID:		Cost Center:												
Job #: MOUNT NANSEN 15-Y-0146		GL Account:		Routing Code:												
PO / AFE:		Activity Code:														
LSD:		Location:														
ALS Lab Work Order # (lab use only)		ALS Contact: Sean Slugget		Sampler: MS, JM												
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA, EC-PCT-VA, PH-PCT-VA	ANIONS-ALL-IC-WR, TSS-MAN-WR	CN-WAD-CFA-VA, CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NHG-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA	Number of Containers
	WQ-DS-DX+105-r			16-Feb-16	0900	Water	R	R	R	R	R	R	R	R	R	9
	WQ-DC-DX+105			16-Feb-16	08:55	Water	R	R	R	R	R	R	R	R	R	9
	WQ-VC-U			16-Feb-16	12:55	Water	R	R	R	R	R	R	R	R	R	9
	WQ-VC-UMN			16-Feb-16	10:15	Water	R	R	R	R	R	R	R	R	R	9
	WQ-VC-DBC			16-Feb-16	12:25	Water	R	R	R	R	R	R	R	R	R	9
				-Feb-16		Water	R	R	R	R	R	R	R	R	R	9
				-Feb-16		Water	R	R	R	R	R	R	R	R	R	9
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report (client Use)														
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input type="checkbox"/> No																
Are samples for human drinking water use? <input type="checkbox"/> Yes <input type="checkbox"/> No																
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)														
Released by: JM	Date: 17 Feb 16	Time: 10:00	Received by: [Signature]												Date: FEB 17 2016	Time: 11:25
		FINAL SHIPMENT RECEPTION (lab use only)														
		Received by: [Signature]														
		Date: FEB 17 2016														
		Time: 11:25														



EDI ENVIRONMENTAL DYNAMICS INC.
ATTN: Meghan Marjanovic
2195 - 2nd Ave
Whitehorse YT Y1A 3T8

Date Received: 17-FEB-16
Report Date: 26-FEB-16 18:30 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1735046
Project P.O. #: NOT SUBMITTED
Job Reference: MOUNT NANSEN 15-Y-0146
C of C Numbers: 1
Legal Site Desc:

Can Dang
Senior Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID Description Sampled Date Sampled Time Client ID				
		L1735046-1 Water 16-FEB-16 13:50 WQ-PW				
WATER						
Physical Tests	Colour, True (CU)		<5.0			
	Conductivity (uS/cm)		355			
	Hardness (as CaCO3) (mg/L)		193			
	pH (pH)		7.65			
	Total Dissolved Solids (mg/L)		205			
	Turbidity (NTU)		0.29			
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)		167			
	Chloride (Cl) (mg/L)		<0.50			
	Fluoride (F) (mg/L)		0.112			
	Nitrate (as N) (mg/L)		0.116			
	Nitrite (as N) (mg/L)		<0.0010			
	Sulfate (SO4) (mg/L)		33.9			
	Anion Sum (meq/L)		4.06			
	Cation Sum (meq/L)		4.10			
	Cation - Anion Balance (%)		0.5			
Total Metals	Aluminum (Al)-Total (mg/L)		<0.010			
	Antimony (Sb)-Total (mg/L)		<0.00050			
	Arsenic (As)-Total (mg/L)		0.00038			
	Barium (Ba)-Total (mg/L)		0.084			
	Boron (B)-Total (mg/L)		<0.10			
	Cadmium (Cd)-Total (mg/L)		<0.00020			
	Calcium (Ca)-Total (mg/L)		45.3			
	Chromium (Cr)-Total (mg/L)		<0.0020			
	Copper (Cu)-Total (mg/L)		<0.0010			
	Iron (Fe)-Total (mg/L)		<0.030			
	Lead (Pb)-Total (mg/L)		0.00062			
	Magnesium (Mg)-Total (mg/L)		19.5			
	Manganese (Mn)-Total (mg/L)		<0.0020			
	Mercury (Hg)-Total (mg/L)		<0.00020			
	Potassium (K)-Total (mg/L)		0.93			
	Selenium (Se)-Total (mg/L)		<0.0010			
	Sodium (Na)-Total (mg/L)		4.9			
	Uranium (U)-Total (mg/L)		0.00168			
	Zinc (Zn)-Total (mg/L)		<0.050			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-COL-VA	Water	Alkalinity by Colourimetric (Automated)	EPA 310.2
This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.			
CL-IC-N-WR	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
COLOUR-TRUE-VA	Water	Colour (True) by Spectrometer	BCMOE Colour Single Wavelength
This analysis is carried out using procedures adapted from British Columbia Environmental Manual "Colour- Single Wavelength." Colour (True Colour) is determined by filtering a sample through a 0.45 micron membrane filter followed by analysis of the filtrate using the platinum-cobalt colourimetric method. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. Concurrent measurement of sample pH is recommended.			
EC-MAN-WR	Water	Conductivity by Meter	APHA 2510 (B)
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using an electrode.			
F-IC-N-WR	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
HARDNESS-CALC-VA	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-TOT-CVAFS-VA	Water	Total Hg in Water by CVAFS LOR=50ppt	EPA 1631E (mod)
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry or atomic absorption spectrophotometry (EPA Method 245.7).			
IONBALANCE-VA	Water	Ion Balance Calculation	APHA 1030E
Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero. Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as: Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]			
MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-TOT-ICP-VA	Water	Total Metals in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
NO2-L-IC-N-WR	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-WR	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
PH-MAN-WR	Water	pH by Meter	APHA 4500-H+
pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 – 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.			
SO4-IC-N-WR	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
TDS-CALC-VA	Water	TDS (Calculated)	APHA 1030E (20TH EDITION)

Reference Information

This analysis is carried out using procedures adapted from APHA 1030E "Checking Correctness of Analyses".

TURBIDITY-VA Water Turbidity by Meter APHA 2130 "Turbidity"

This analysis is carried out using procedures adapted from APHA Method 2130 "Turbidity". Turbidity is determined by the nephelometric method.

TURBIDITY-VA Water Turbidity by Meter APHA 2130 Turbidity

This analysis is carried out using procedures adapted from APHA Method 2130 "Turbidity". Turbidity is determined by the nephelometric method.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com



L1735046-COFC

COC Number: 14 -

Page 2 of 2

Report To		Report Format / I			(Rush Turnaround Time (TAT) is not available for all tests)																	
Company: EDI		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			R <input checked="" type="checkbox"/> Regular (Standard TAT if received by 3 pm - business days)																	
Contact: Meghan Marjanovic		Quality Control (QC) Report with Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT																	
Address: 2195 - 2nd Avenue Whitehorse, YT Y1A 3T8		<input type="checkbox"/> Criteria on Report - provide details below if box checked			E Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT																	
Phone: 867-393-4882		Select Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			E2 <input type="checkbox"/> Same day or weekend emergency - contact ALS to confirm TAT and surcharge																	
		Email 1 or Fax: mmarianovic@edynamics.com			Specify Date Required for E2, E or P:																	
		Email 2: Emilie.Hamm@gov.yk.ca			Analysis Request																	
		Email 3: erik.pit@gov.yk.ca																				
Invoice To: Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																	
Copy of Invoice with Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																				
Company: EDI		Email 1 or Fax: sjenner@edynamics.com			FULL-TOT-DW-WR										Number of Containers							
Contact: S Jenner		Email 2: mmarianovic@edynamics.com																				
Project Information		Oil and Gas Required Fields (client use)																				
ALS Quote #: Q49312		Approver ID:	Cost Center:																			
Job #: MOUNT NANSEN 15-Y-0146		GL Account:	Routing Code:																			
PO / AFE:		Activity Code:																				
LSD:		Location:																				
ALS Lab Work Order # (lab use only)		ALS Contact: Sean Sluggett	Sampler: JM, MS																			
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)												Sample Type						
	WQ-PW		16 - Feb-16	13:50												Water	R					3
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report (client Use)																				
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input type="checkbox"/> No		SAMPLE CONDITION AS RECEIVED (lab use only) Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice packs Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input checked="" type="checkbox"/> INITIAL COOLER TEMPERATURES °C: 5.6 FINAL COOLER TEMPERATURES °C: 8																				
Are samples for human drinking water use? <input type="checkbox"/> Yes <input type="checkbox"/> No																						
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)																				
Released by: JM	Date: 17 Feb 16	Time: 10:00	Received by:	Date: 17 Feb 16	Time: 10:15	Received by: Jean					Date: FEB 18 2016	Time: 11:25										



Health and Social Services
Santé et Affaires sociales
Environmental Health Services
Service d'hygiène du milieu

BACTERIOLOGICAL ANALYSIS OF DRINKING WATER
ANALYSE BACTÉRIOLOGIQUE DE L'EAU POTABLE

#2 Hospital Road, Whitehorse, Yukon Y1A 3H8
phone : (867) 667-8391 fax : (867) 667-8322
Toll free: 1-800-661-0408 ext.8391

2 Hospital Road, Whitehorse (Yukon) Y1A 3H8
Tél. : 867-667-8391 Téléc. : 867-667-8322
Sans frais au Yukon : 1-800-661-0408, poste 8391

Contact Information • Coordonnées de la personne ressource

Contact Person / Personne ressource: Meghan Marjanovic
Mailing address / Adresse postale: 2195 Second Ave Whitehorse YT
Phone / Téléphone: 867 393 4882
Fax / Télécopieur: 867 393 4883
Postal code / Code postal: Y1A 3T8

First Nation, Municipal or Business Name / Nom de la Première nation, de la municipalité ou de l'entreprise: MOUNT NANSEN SITE
Agent: Environmental Dynamics inc

Sampling Location • Lieu de la prise d'échantillon

Municipal Address / Adresse municipale: Pump House well
Legal Description Lot / Désignation officielle Lot: PW
Other Information (e.g., Location, Business / Building Name) / Autres renseignements (ex.: emplacement, nom de l'entreprise, nom de l'édifice):

Sample Collection / Prélèvement de l'échantillon

Sample Collected By / Échantillon prélevé par: MSa/DS
Date: 16 02 16 Time: 13:50 am/pm

Sampling Site (e.g., kitchen tap) / Point d'échantillonnage (ex.: robinet de cuisine): out flow pipe
Is this a Resample from a Previous Test? / Est-ce un deuxième échantillon d'un test antérieur? Yes / Oui No / Non

Sample Supply / Source d'approvisionnement en eau

Public Supply / Municipal - par canalisation
 Bulk Water Distributor / Municipal - par camion
 Business / Privé - entreprise
 Private Residence / Privé - résidence

Sample Source / Provenance de l'échantillon

Dug Well / Puits creusé
 Driven Well / Puits tubulaire
 Drilled Well / Puits foré à la sondeuse
 Water Holding Tank / Réservoir d'eau
 Other (explain) / Autre (précisez)

Water Treatment / Traitement de l'eau

Is the Water Chlorinated? / L'eau contient-elle du chlore? Yes / Oui No / Non
Free Available Chlorine / Chlore libre disponible: _____ ppm / mg/L

Other Treatment Systems (e.g., UV, softener, filter) / Autre dispositif de traitement (ex.: désinfection aux rayons UV, adoucisseur d'eau, filtre):

For Laboratory Use Only / À l'usage du laboratoire seulement

Receipt of Sample / Réception de l'échantillon: Date: 16-02-17 Time: 9:40 am/pm By: SS
Condition of Sample / État de l'échantillon: Satisfactory / Satisfaisant Unsatisfactory / Non satisfaisant Details / Précisez: 2.8°C
Incubation: Date: 16-02-17 Time: 10:25 am/pm By: SS Incubator / Incubateur: 4
Analysis Completed / Analyse terminée: Date: 16-02-18 Time: 12:00 am/pm By: SS

Results (See Reverse Side for Interpretation) per 100 ml
Résultats (Voir au verso l'interprétation des résultats)

Total Coliforms/Coliformes totaux

Present / Présence Absent / Absence

E. coli/E. coli

Present / Présence Absent / Absence

Comments / Commentaires

Report Authorized By / Rapport autorisé par: [Signature] Position / Poste: WLT Date: 16-02-18

Distribution: White - Chain of Custody / Blanc - Chaîne de possession Yellow - Lab Copy / Jaune - Laboratoire Pink - Client Copy / Rose - Client

Sample Number: **62269**
Numéro de l'échantillon: **62269**