ENVIRONMENTAL DYNAMICS INC.

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December 17, 2013

EDI Job Number: 13-Y-0452

Assessment and Abandoned Mines
Yukon Government
Box 2703
Whitehorse, YT

Attention: Adrienne Turcotte, Project Officer

Re: Faro Rose Creek Surface and Groundwater Sampling Field Program – Trips 2 & 3

In response to an urgent request by Assessment and Abandoned Mines (AAM), EDI Environmental Dynamics Inc. (EDI) conducted two field programs at the Faro Mine Site: November 12 to 14, November 27 to 30, and December 10, 2013, referred to as Trips 1, 2 and 3, respectively. Trip 1 was summarized in a memo dated December 3, 2013. The intent of this memo is to summarize field data obtained during Trips 2 and 3.

One crew of two personnel completed the following tasks in Trip 2 (Nov 27-30):

- Surface water sampling for aquatic toxicity testing (bioassays) with a split sample for water chemistry at five sites;
- Surface water sampling in Rose Creek at nine monitoring sites plus two additional sites twice (Tues/Thurs);
- Surface water sampling at NF1 Pond along the perimeter and across pond transects at 24 sites; and,
- Fish telemetry survey of NF1 Pond to confirm status of radio tagged fish (i.e., location and activity).

One crew of two personnel completed the following tasks in Trip 3 (Dec 3):

- Fish telemetry survey of NF1 Pond, Rose Creek Diversion, Pumphouse Pond and the South Fork to confirm status of radio tagged fish (i.e., location and activity).

Surface water sampling locations are shown in Figures 1 and 2. All field data collected at surface water sampling sites are summarized in Table 1. The ALS laboratory analytical reports for all water chemistry samples submitted during this field program are attached. Bioassay test results are pending and will be forwarded to AAM as soon as they are received.

In September 2013, 37 adult Arctic grayling in the Rose Creek watershed were implanted with internal radio tags, 10 of which were captured in or near NF1 Pond. As the rock drain is a barrier to fish movement, these fish cannot leave the upper North Fork, nor can other tagged fish enter this area. Results of the telemetry survey conducted November 27, 2013 indicate all 10 of 10 tags were in NF1 Pond (Table 2). The pond was surveyed again December 10, 2013, when 9 of 10 tags were detected. Tag 164 was detected as inactive in all three recent surveys, indicating a potential mortality or shed tag. The majority of the remaining tags were active, with a few undetected or unknown (Table 2).

Of the remaining 27 tags downstream from the rock drain, 3 were detected near the mine site in a telemetry survey October 31, 2013. On December 10 (Trip 3), these tags were detected in the Rose Creek Diversion and the South Fork (Table 2). Tags 173 and 184 were detected as active in the same location in the diversion channel (Figure 3). Tag 180 was detected as inactive in a slough-like side channel of the South Fork (Figure 3). As this location has very poor overwintering habitat potential (shallow, no flow, isolated from the main channel), this fish likely died after the October survey when conditions deteriorated and the fish could not access the main channel.

If you have any questions or concerns, please do not hesitate to contact Pat Tobler or myself at (867) 393-4882 or through email at mkearns@edynamics.com.

Yours truly,

EDI Environmental Dynamics Inc.

Submitted via email

Meighan Kearns, B.Sc., R.P.Bio.
Aquatic Biologist

Attachments:
- Tables 1 – 2
- Figures 1 – 3
- Site Photos
- ALS Laboratory Analytical Reports

Table 1. Surface water sampling field data, November 25-28, 2013.

Site Name	Easting	Northing	Date	Time	Sample Analysis/ Testing	QA/QC Rep. ID	In-situ Parameters			
							Temp (°C)	SPC (µS/cm)	pH	Turbidity (NTU)
NF1-E	584842	6913224	25-Nov-13	9:30	Bioassays + Chemistry	-	0.0	225.5	5.63	2.61
NF1-E	584842	6913223	26-Nov-13	13:00	Chemistry	-	0.3	242.2	7.34	3.30
NF1-E	584841	6913225	27-Nov-13	11:15	Chemistry	-	0.1	241.8	7.11	2.03
NF1-E	584840	6913227	28-Nov-13	9:30	Chemistry	-	0.3	249.6	7.09	2.20
NF1-F	584852	6913197	26-Nov-13	13:30	Chemistry	-	0.0	242.1	7.39	3.07
NF1-X-1	584828	6913227	27-Nov-13	8:30	Chemistry	-	0.0	256.0	6.73	2.92
NF1-X-10	584839	6913233	27-Nov-13	11:00	Chemistry	-	0.0	234.9	6.63	2.20
NF1-X-11	584834	6913235	27-Nov-13	11:15	Chemistry	-	0.0	251.6	6.47	2.10
NF1-X-12	584829	6913244	27-Nov-13	11:30	Chemistry	-	0.0	263.6	6.25	3.80
NF1-X-13	584841	6913244	27-Nov-13	12:00	Chemistry	-	0.4	261.2	6.28	1.66
NF1-X-14	584835	6913250	27-Nov-13	12:15	Chemistry	-	0.0	271.3	6.25	1.26
NF1-X-15	584847	6913237	27-Nov-13	12:30	Chemistry	-	0.0	240.8	6.64	1.36
NF1-X-16	584848	6913233	27-Nov-13	12:45	Chemistry	-	0.0	239.9	6.81	1.32
NF1-X-17	584853	6913226	27-Nov-13	13:00	Chemistry	-	0.0	239.5	6.98	1.19
NF1-X-18	584856	6913238	27-Nov-13	13:30	Chemistry	-	0.0	239.7	6.98	1.28
NF1-X-19	584850	6913247	27-Nov-13	13:45	Chemistry	-	0.0	240.9	6.97	1.40
NF1-X-2	584828	6913223	27-Nov-13	8:45	Chemistry	-	0.0	263.8	6.24	3.21
NF1-X-20	584866	6913255	27-Nov-13	14:10	Chemistry	-	0.0	242.2	6.87	1.55
NF1-X-21	584881	6913257	27-Nov-13	14:20	Chemistry	-	0.0	242.3	6.95	2.51
NF1-X-22	584925	6913259	27-Nov-13	15:00	Chemistry	-	0.0	319.0	6.10	1.45
NF1-X-3	584831	6913218	27-Nov-13	9:00	Chemistry	-	0.0	240.0	6.43	5.54
NF1-X-4	584836	6913212	27-Nov-13	9:10	Chemistry	-	0.0	228.5	6.72	7.70
NF1-X-5	584839	6913210	27-Nov-13	9:30	Chemistry	-	0.0	204.7	6.64	5.74
NF1-X-6	584845	6913203	27-Nov-13	9:45	Chemistry	-	0.0	169.8	6.84	3.59
NF1-X-7	584852	6913207	27-Nov-13	10:00	Chemistry	-	0.0	188.0	6.79	4.22

Table continued on next page.

Site Name	Easting	Northing	Date	Time	QA/QC Rep. ID	In-situ Parameters			
						Temp (°C)	SPC (µS/cm)	pH	Turbidity (NTU)
NF1-X-8	584848	6913214	27-Nov-13	10:15	Chemistry	-	0.0	194.5	6.86	4.85
NF1-X-9	584847	6913220	27-Nov-13	10:30	Chemistry	-	0.0	183.0	6.98	3.28
NF2	584690	6913014	25-Nov-13	13:30	Bioassays + Chemistry	-	0.0	220.8	7.36	2.12
NF2	584689	6913012	28-Nov-13	9:15	Chemistry	-	0.0	257.5	7.04	2.60
NF2	584687	6913012	26-Nov-13	10:10	Chemistry	-	0.0	264.4	7.22	2.19
NF2-A	584702	6913031	26-Nov-13	9:45	Chemistry	-	0.0	290.1	7.15	2.59
NF2-A	584705	6913029	28-Nov-13	8:55	Chemistry	-	0.0	277.5	6.85	2.36
NF2-B	584722	6913024	26-Nov-13	10:00	Chemistry	-	0.0	244.0	7.42	2.63
NF2-B	584718	6913025	28-Nov-13	9:00	Chemistry	-	0.0	242.6	7.09	2.09
R10	585106	6913463	25-Nov-13	11:30	Bioassays + Chemistry	-	0.0	219.3	7.01	1.57
R10	585107	6913466	26-Nov-13	11:30	Chemistry	-	0.0	241.1	7.49	1.82
R10	585103	6913466	28-Nov-13	9:45	Chemistry	-	0.0	238.4	7.51	2.05
R8	586297	6914402	26-Nov-13	11:50	Chemistry	-	0.0	214.0	7.75	3.22
R8	586299	6914403	28-Nov-13	10:10	Chemistry	-	0.0	210.0	7.73	1.58
R9	585229	6913661	26-Nov-13	11:40	Chemistry	-	0.0	239.0	7.72	2.01
R9	585227	6913663	28-Nov-13	10:00	Chemistry	-	0.0	236.4	7.71	1.62
X1	582540	6912921	25-Nov-13	13:00	Bioassays + Chemistry	-	0.0	262.6	7.33	2.00
X10	579443	6917880	26-Nov-13	8:48	Chemistry	-	0.0	286.8	7.24	2.59
X10	579443	6914881	28-Nov-13	8:00	Chemistry	-	0.0	284.6	7.28	3.15
X14	579338	6915076	26-Nov-13	9:11	Chemistry	X14-r	0.0	477.8	6.44	1.91
X14	579340	6915077	28-Nov-13	7:45	Chemistry	-	0.1	417.7	6.15	3.76
X2	584072	6912770	26-Nov-13	10:30	Chemistry	-	0.0	264.2	7.31	4.95
X2	584071	6912772	28-Nov-13	8:40	Chemistry	-	0.0	261.7	7.14	4.98
X3A	583152	6912540	25-Nov-13	12:20	Bioassays + Chemistry	-	0.1	245.7	7.20	1.65
X3A	583151	6912539	26-Nov-13	9:15	Chemistry	-	0.1	278.7	7.38	2.29
X3A	583152	6912537	28-Nov-13	8:20	Chemistry	X3A-r	0.1	276.8	7.22	1.93

Where, QA/QC Rep = Quality Assurance/ Quality Control Replicate; Temp = water temperature; and, SPC = specific conductance.

Table 2. Fish telemetry survey results summary, October to December, 2013.

		Status			
Tag ID	Location	Oct 30	Trip 1 Nov 13	Trip 2 Nov 27	Trip 3 Dec 10
117	NF1 Pond	Active	Active	Unknown	Unknown
120	NF1 Pond	Active	Active	Unknown	Active
121	NF1 Pond	Active	Active	Active	Active
124	NF1 Pond	Active	Active	Active	Active
157	NF1 Pond	Active	Active	Active	Active
160	NF1 Pond	Active	~Active	Active	Active
161	NF1 Pond	Active	Active	Active	Active
164	NF1 Pond	Active	Inactive	Inactive	Inactive
165	NF1 Pond	-	-	Active	-
168	NF1 Pond	Active	Active	Active	Active
173	RCD	Active	N/A	N/A	Active
180	South Fork	Active	N/A	N/A	Inactive
184	PP / RCD	Active$^{(PP)}$	N/A	N/A	Active$^{(RCD)}$

Notes:

- ~ = status is not certain but likely;
- - = tag was not detected;
- N/A = not applicable, this area was not surveyed;
- PP = Pumphouse Pond;
- RCD = Rose Creek Diversion;
- 'Inactive' status may indicate a fish in resting state or a potential mortality or shed tag;
- 'Unknown' indicates the tag was present but the status (Active/ Inactive) could not be determined.

584850 584900 584950 585000

6913250 6913200

NF1-X-14
t: 0.0923
d: 0.0517
14

NF1-X-12
t: 0.0288
d: 0.0218
12

NF1-X-13
t: 0.0134
d: 0.0147
13

NF1-X-19
t: 0.0155
d: 0.0138
19

NF1-X-20
t: 0.013
d: 0.0163
20

NF1-X-21
t: 0.0302
d: 0.0268
21

NF1-X-22
t: 0.143
d: 0.138
22

NF1-X-18
t: 0.0144
d: 0.013
18

NF1-X-15
t: 0.015
d: 0.0136
15

NF1-X-11
t: 0.0145
d: 0.0146
11

NF1-X-10
t: 0.0148
d: 0.0144
10

NF1-X-16
t: 0.0164
d: 0.0139
16

NF1-X-1
t: 0.0257
d: 0.0208
1

NF1-X-17
t: 0.0175
d: 0.0133
17

NF1-E
t: 0.0149
d: 0.0136
E

NF1-X-2
t: 0.0177
d: 0.0147
2

NF1-X-9
t: 0.0153
d: 0.0138
9

NF1-X-3
t: 0.0221
d: 0.0147
3

NF1-X-8
t: 0.0196
d: 0.0143
8

NF1-X-4
t: 0.0266
d: 0.0139
4

NF1-X-5
t: 0.0158
d: 0.0149
5

NF1-X-7
t: 0.016
d: 0.0139
7

NF1-X-6
t: 0.0203
d: 0.0138
6

NF1-F
t: 0.0165
d: 0.0139
F

Water sampling locations and results at NF-1, Faro Mine Site, 25-26 Novemeber 2013

Legend

Site conditions

- ⊗ Frozen to substrate
- Water present at site (site not sampled)
- 9 Water present at site (site sampled)[1]

[1]The laboratory results displayed on the map indicate total (t) and dissolved (d) zinc (mg/L).

N
W E
S

0 5 10 20 30 40
Metres

Map Scale = 1:625 (printed on 11 x 17)
Map Projection: North American Datum 1983 UTM Zone 8N

Data sources

Results refer to laboratory testing for total and dissolved zinc.

1:250,000 topographic spatial data provided by Geomatics - Yukon Government via online source (Corporate Spatial Warehouse) www.geomaticsyukon.ca.

Orthophoto of the Faro Mine Site was provided by Yukon Government - Energy, Mines and Resources - Assessment and Abandoned Mines Branch (2012).

Project data displayed is site specific. Data collected by EDI Environmental Dynamics Inc. was obtained (2013) using Garmin GPS technology.

This document is not an official land survey and the spatial data presented is subject to change.

Drawn:	Checked:		
LG	MK	**FIGURE 1**	Date: 04/12/2013

Map Prepared by
EDI Environmental Dynamics Inc.

Path: J:\Yukon\Projects\2013\13_Y_0452_AAM_NF_Sampling\Mapping\Fig1_NF1_WaterSampling.mxd

Location of surface water sampling and radio telemetry survey area, Faro Mine Complex, November 2013

Legend

Surface Water Site November 2013 — Aquatic toxicity surface water sampling site, 25 November 2013

Radio Telemetry Survey Area, 27 November 2013

N
W E
S

0 200 400 600 800 1,000
metres

Map Scale = 1:20,000 (printed on 11 x 17)
Map Projection: North American Datum 1983 UTM Zone 8N

Data sources
1:50,000 topographic spatial data provided by Geomatics - Yukon Government via online source (Corporate Spatial Warehouse) www.geomaticsyukon.ca.

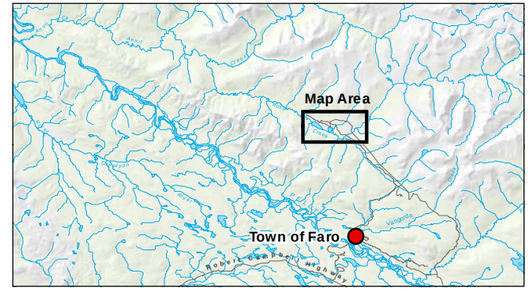
National Road Network courtesy of Her Majesty the Queen in Right of Canada, Department of Natural Resources. All Rights Reserved.

Detailed toppgraphic features of the Faro, Grum and Vangorda mine sites were provided by Yukon Government - Energy, Mines and Resources - Assessment and Abandoned Mines Branch (March 2012).

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

This document is not an official land survey and the spatial data presented is subject to change.

Drawn:	Checked:		
LG	MK	FIGURE 2	Date: 11/12/2013



EDI

Map Prepared by
EDI Environmental Dynamics Inc.

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Location of radio-tags detected during telemetry surveys at the Faro Mine Site, November 13, November 27 and December 10, 2013

Legend

- Location of radio tag detected
- Telemetry Survey Extent (Trips 1, 2 and 3)
- Telemetry Survey Extent (Trip 3)

Telemetry Survey Trip Dates:
Trip 1: November 13, 2013
Trip 2: November 27, 2013
Trip 3: December 10, 2013

N
W E
S

0 200 400 600 800 1,000
metres

Map Scale = 1:24,000 (printed on 11 x 17)
Map Projection: North American Datum 1983 UTM Zone 8N

Data sources
1:50,000 topographic spatial data provided by Geomatics - Yukon Government via online source (Corporate Spatial Warehouse) www.geomaticsyukon.ca.

National Road Network courtesy of Her Majesty the Queen in Right of Canada, Department of Natural Resources. All Rights Reserved.

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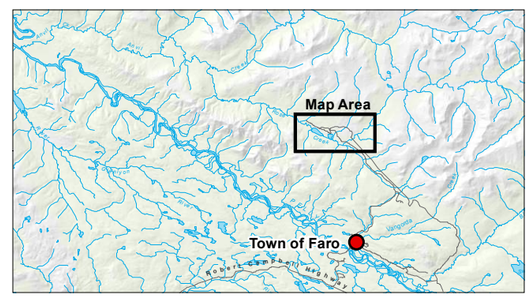
Project data displayed is site specific. Data collected by EDI Environmental Dynamics Inc. was obtained using Garmin GPS technology.

This document is not an official land survey and the spatial data presented is subject to change.

Drawn:	Checked:		
LG	MK	FIGURE 3	Date: 13/12/2013



EDI

Map Prepared by
EDI Environmental Dynamics Inc.

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Site Photos - Index

Photo No.	Site ID No.	Photo No.	Site ID No.
1	NF1 Pond	21	NF1-X-18
2	NF1-E	22	NF1-X-19
3	NF1-E	23	NF1-X-20
4	NF1-X-1	24	NF1-X-21
5	NF1-X-2	25	NF1-X-22
6	NF1-X-3	26	NF2
7	NF1-X-4	27	NF2-A
8	NF1-X-5	28	NF2-B
9	NF1-X-6	29	R8
10	NF1-X-7	30	R9
11	NF1-X-8	31	R10
12	NF1-X-9	32	R10
13	NF1-X-10	33	X1
14	NF1-X-11	34	X2
15	NF1-X-12	35	X3A
16	NF1-X-13	36	X10
17	NF1-X-14	37	X14
18	NF1-X-15	38	Tag 180
19	NF1-X-16	39	Tags 173 & 184
20	NF1-X-17	40	NF1 Pond

Photo 1. Upstream overview of NF1 Pond sampling locations, November 27, 2013.

Photo 2. Across-pond view of sampling site NF1-E, November 26, 2013.

Photo 3. Upstream view of sampling site NF1-E, November 26, 2013.

Photo 4. Sampling site NF1-X-1, November 27, 2013.

Photo 5. Sampling site NF1-X-2, November 27, 2013.

Photo 6. Sampling site NF1-X-3, November 27, 2013.

Photo 7. Sampling site NF1-X-4, November 27, 2013.

Photo 8. Sampling site NF1-X-5, November 27, 2013.

Photo 9. Sampling site NF1-X-6, November 27, 2013.

Photo 10. Sampling site NF1-X-7, November 27, 2013.

Photo 11. Sampling site NF1-X-8, November 27, 2013.

Photo 12. Sampling site NF1-X-9, November 27, 2013.

Photo 13. Sampling site NF1-X-10, November 27, 2013.

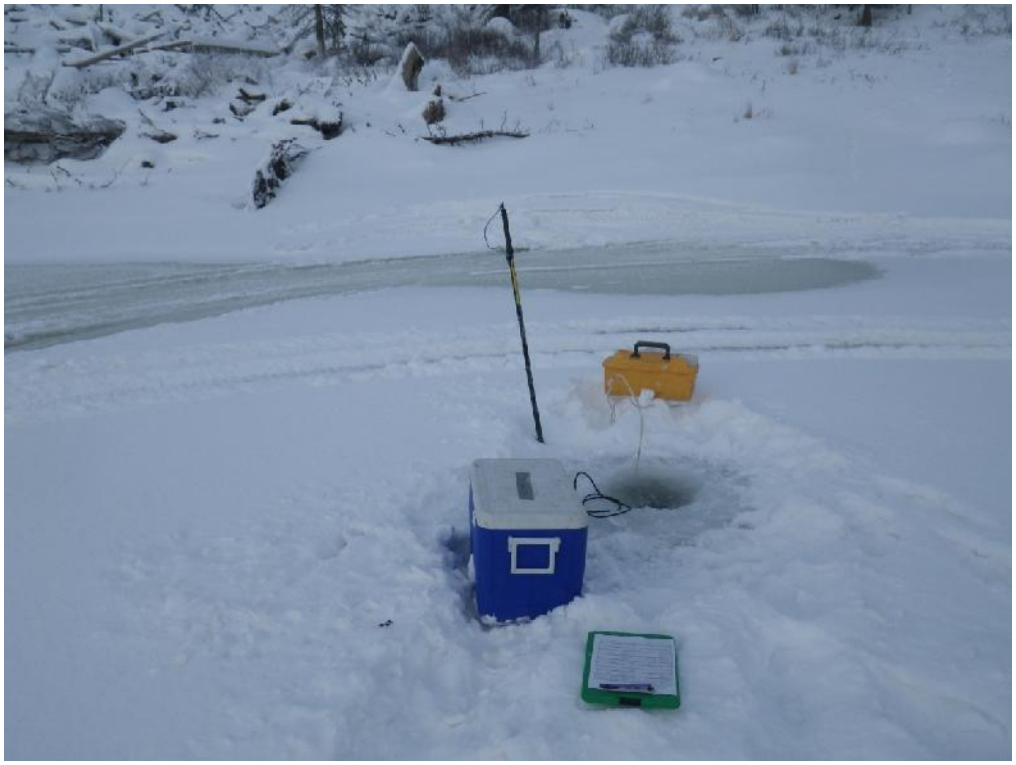

Photo 14. Sampling site NF1-X-11, November 27, 2013.

Photo 15. Sampling site NF1-X-12, November 27, 2013.

Photo 16. Sampling site NF1-X-13, November 27, 2013.

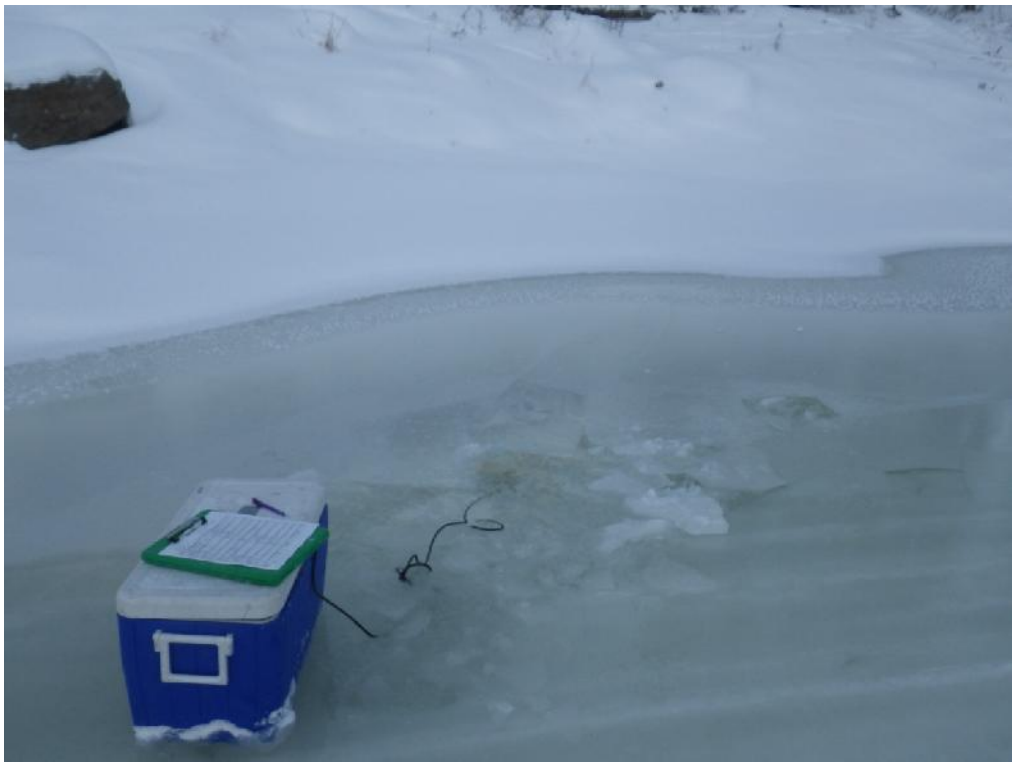

Photo 17. Sampling site NF1-X-14, November 27, 2013.

Photo 18. Sampling site NF1-X-15, November 27, 2013.

Photo 19. Sampling site NF1-X-16, November 27, 2013.

Photo 20. Sampling site NF1-X-17, November 27, 2013.

Photo 21. Sampling site NF1-X-18, November 27, 2013.

Photo 22. Sampling site NF1-X-19, November 27, 2013.

Photo 23. Sampling site NF1-X-20, November 27, 2013.

Photo 24. Sampling site NF1-X-21, November 27, 2013.

Photo 25. Sampling site NF1-X-22, November 27, 2013.

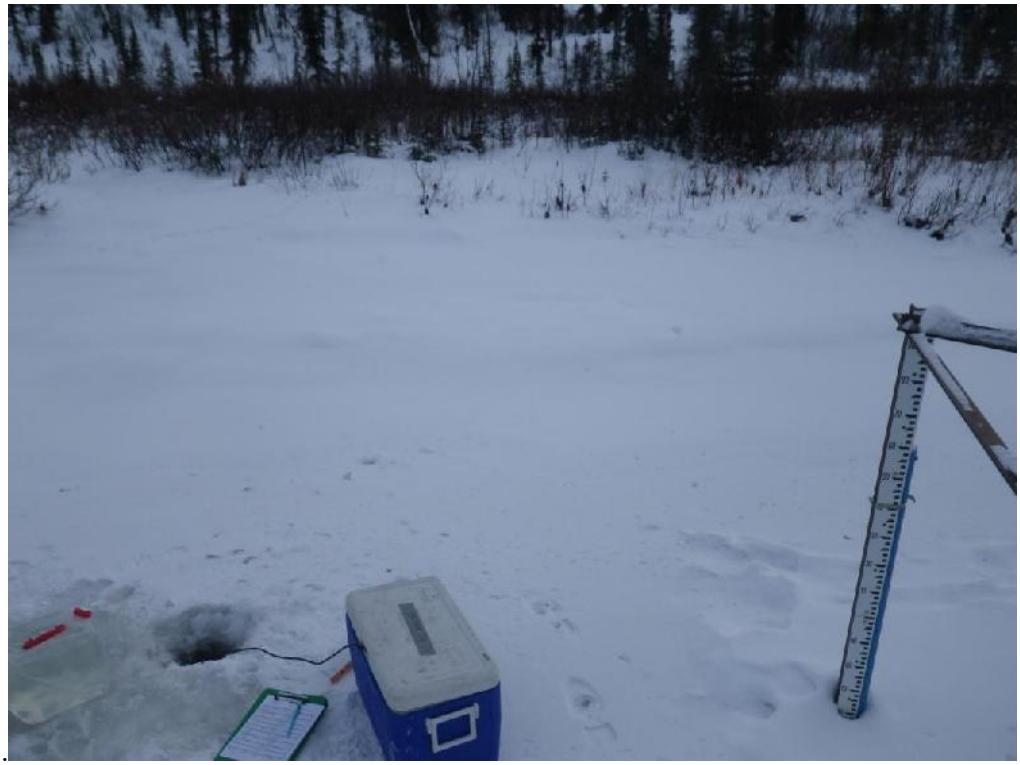

Photo 26. View of sampling site NF2 looking towards the left downstream bank, November 25, 2013.

Photo 27. Downstream view from sampling site NF2-A, November 26, 2013.

Photo 28. Upstream view of sampling site NF2-B towards the left downstream bank, November 26, 2013.

Photo 29. Upstream view at sampling site R8, November 26, 2013.

Photo 30. View of sampling site R9 from the right downstream bank, November 26, 2013.

Photo 31. Upstream view from sampling site R10, November 25, 2013.

Photo 32. Downstream view of sampling site R10, November 26, 2013.

Photo 33. Downstream view of sampling site X1, November 25, 2013.

Photo 34. Downstream view of sampling site X2, November 26, 2013.

Photo 35. Downstream view of sampling site X3A, November 25, 2013.

Photo 36. Downstream view of sampling site X10, November 26, 2013.

Photo 37. View of sampling site X14 from right downstream bank, November 26, 2013.

Photo 38. Location of radio-tag 180 in the South Fork of Rose Creek, December 3, 2013.

Photo 39. Upstream view of location of radio-tags 173 and 184 in the Rose Creek diversion near X1, December 3, 2013.

Photo 40. Upstream view of NF1 Pond during telemetry survey, December 3, 2013.

ENVIRONMENTAL DYNAMICS INC.
ATTN: Meighan Kearns
2195 - 2nd Avenue
Whitehorse YT Y1A 3T8

Date Received: 26-NOV-13
Report Date: 16-DEC-13 17:05 (MT)
Version: FINAL REV. 2

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1396028

Project P.O. #: NOT SUBMITTED
Job Reference: 13-Y-0452
C of C Numbers: 1
Legal Site Desc:

Comments:

16-DEC-2013 Revision 2: This revision replaces and supersedes previous revision of this report. This revision includes Client Sample ID modification for the sample ALS identify as L1396028-1 as requested.

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396028-1 Surface Water 25-NOV-13 09:30 NF1-E	L1396028-2 Surface Water 25-NOV-13 11:30 R10	L1396028-3 Surface Water 25-NOV-13 13:30 NF2	L1396028-4 Surface Water 25-NOV-13 12:20 X3A	L1396028-5 Surface Water 25-NOV-13 13:30 X1
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (uS/cm)	215	215	236	256	251
	Hardness (as CaCO3) (mg/L)	112	110	121	129	133
	pH (pH)	7.47	7.62	7.21	7.52	7.59
	Total Suspended Solids (mg/L)	3.8	2.2	3.8	1.0	1.2
	Total Dissolved Solids (mg/L)	132	131	146	154	157
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	112	112	111	121	120
	Ammonia, Total (as N) (mg/L)	0.0147	0.0104	0.0113	0.0174	0.0172
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.145	0.145	0.159	0.152	0.152
	Nitrate (as N) (mg/L)	0.200	0.201	0.212	0.182	0.184
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	0.0014	0.0011	0.0015
	Phosphorus (P)-Total (mg/L)	0.0064	0.0065	0.0052	0.0032	0.0035
	Sulfate (SO4) (mg/L)	18.7	18.5	28.7	27.8	30.2
	Anion Sum (meq/L)	2.64	2.65	2.85	3.02	3.05
	Cation Sum (meq/L)	2.38	2.33	2.59	2.74	2.84
	Cation - Anion Balance (%)	-5.3	-6.5	-4.6	-4.9	-3.6
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.75	1.75	1.66	1.79	1.87
	Total Organic Carbon (mg/L)	1.89	1.63	1.70	1.70	1.66
Total Metals	Aluminum (Al)-Total (mg/L)	0.0956	0.0423	0.0870	0.0289	0.0144
	Antimony (Sb)-Total (mg/L)	0.00011	0.00013	0.00014	0.00019	0.00014
	Arsenic (As)-Total (mg/L)	0.00076	0.00067	0.00065	0.00048	0.00040
	Barium (Ba)-Total (mg/L)	0.0631	0.0647	0.0669	0.0662	0.0688
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000024	0.000021	0.000414	0.000152	0.000154
	Calcium (Ca)-Total (mg/L)	34.3	34.1	35.4	39.5	39.8
	Chromium (Cr)-Total (mg/L)	0.00031	0.00016	0.00026	0.00014	0.00010
	Cobalt (Co)-Total (mg/L)	0.00016	<0.00010	0.00324	0.00098	0.00107
	Copper (Cu)-Total (mg/L)	0.00067	0.00058	0.00068	0.00070	0.00054
	Iron (Fe)-Total (mg/L)	0.300	0.194	0.421	0.269	0.605
	Lead (Pb)-Total (mg/L)	0.00111	0.000162	0.00151	0.000610	0.000442
	Lithium (Li)-Total (mg/L)	0.00548	0.00508	0.00558	0.00439	0.00448
	Magnesium (Mg)-Total (mg/L)	7.72	6.88	8.62	8.56	8.74
	Manganese (Mn)-Total (mg/L)	0.0492	0.0298	0.198	0.115	0.146
	Molybdenum (Mo)-Total (mg/L)	0.000721	0.000718	0.000691	0.000588	0.000554

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396028-1 Surface Water 25-NOV-13 09:30 NF1-E	L1396028-2 Surface Water 25-NOV-13 11:30 R10	L1396028-3 Surface Water 25-NOV-13 13:30 NF2	L1396028-4 Surface Water 25-NOV-13 12:20 X3A	L1396028-5 Surface Water 25-NOV-13 13:30 X1
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00078	0.00052	0.00517	0.00218	0.00228
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.841	0.787	0.837	0.989	0.985
	Selenium (Se)-Total (mg/L)	0.00031	0.00037	0.00037	0.00035	0.00033
	Silicon (Si)-Total (mg/L)	6.13	5.77	5.97	5.66	5.61
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.67	2.46	2.65	2.56	2.64
	Strontium (Sr)-Total (mg/L)	0.152	0.150	0.157	0.179	0.183
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00194	0.00192	0.00194	0.00220	0.00223
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0164	0.0135	0.674	0.243	0.276
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0029	0.0030	0.0066	0.0024	0.0023
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00047	0.00043	0.00033	0.00028	0.00023
	Barium (Ba)-Dissolved (mg/L)	0.0652	0.0613	0.0629	0.0659	0.0654
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000019	0.000018	0.000403	0.000141	0.000145
	Calcium (Ca)-Dissolved (mg/L)	33.4	32.7	34.6	37.9	39.3
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	0.00305	0.00092	0.00099
	Copper (Cu)-Dissolved (mg/L)	0.00037	0.00038	0.00035	0.00037	0.00037
	Iron (Fe)-Dissolved (mg/L)	0.068	0.048	0.121	0.127	0.446
	Lead (Pb)-Dissolved (mg/L)	0.000064	<0.000050	0.000116	0.000084	0.000081
	Lithium (Li)-Dissolved (mg/L)	0.00504	0.00504	0.00542	0.00434	0.00437
	Magnesium (Mg)-Dissolved (mg/L)	6.98	6.84	8.49	8.44	8.56
	Manganese (Mn)-Dissolved (mg/L)	0.0426	0.0261	0.185	0.107	0.137
	Molybdenum (Mo)-Dissolved (mg/L)	0.000670	0.000645	0.000634	0.000524	0.000542
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	0.00481	0.00204	0.00209
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.774	0.760	0.806	0.949	0.950

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396028-1 Surface Water 25-NOV-13 09:30 NF1-E	L1396028-2 Surface Water 25-NOV-13 11:30 R10	L1396028-3 Surface Water 25-NOV-13 13:30 NF2	L1396028-4 Surface Water 25-NOV-13 12:20 X3A	L1396028-5 Surface Water 25-NOV-13 13:30 X1
Sample ID **Description** **Sampled Date** **Sampled Time** **Client ID**						
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00039	0.00039	0.00040	0.00031	0.00034
	Silicon (Si)-Dissolved (mg/L)	5.75	5.73	5.67	5.32	5.43
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.47	2.40	2.57	2.52	2.49
	Strontium (Sr)-Dissolved (mg/L)	0.144	0.141	0.150	0.172	0.178
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00189	0.00179	0.00181	0.00205	0.00209
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0139	0.0132	0.682	0.243	0.273
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

* 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	Antimony (Sb)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Arsenic (As)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Sulfate (SO4)	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Iron (Fe)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1396028-1, -2, -3, -4, -5

Qualifiers for Individual Parameters Listed:

Qualifier	Description
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-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.

ANIONS-CL-IC-WR	Water	Chloride by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

ANIONS-F-IC-WR	Water	Fluoride by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

ANIONS-NO2-IC-WR	Water	Nitrite Nitrogen by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-NO3-IC-WR	Water	Nitrate Nitrogen by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-SO4-IC-WR	Water	Sulphate by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

CARBONS-DOC-VA	Water	Dissolved organic carbon by combustion	APHA 5310 TOTAL ORGANIC CARBON (TOC)

Reference Information

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". Dissolved carbon (DOC) fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.

CARBONS-TOC-VA Water Total organic carbon by combustion APHA 5310 TOTAL ORGANIC CARBON (TOC)

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)".

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.

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 CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

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 3030 B&E / EPA SW-846 6020A

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS APHA 3030 B&E / EPA SW-846 6020A

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

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.

P-T-COL-VA Water Total P in Water by Colour APHA 4500-P Phosphorous

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-MAN-WR Water pH by Meter APHA 4500-H (B)

"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."

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-LOW-WR Water Total Suspended Solids by Grav. (1 mg/L) 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.

ZR-D-MS-VA Water Dissolved Zr in Water by ICPMS EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

ZR-T-MS-VA Water Total Zr in Water by ICPMS EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

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

Reference Information

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
WR	ALS ENVIRONMENTAL - WHITEHORSE, YUKON, CANADA
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.

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

Page 1 of 2

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2: Adrienne.Turcotte@gov.yk.ca	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-COL-VA,P-T-COL-VA	ANIONS-ALL-IC-WR	CARBONS-DOC-VA	CARBONS-TOC-VA,NH3-F-VA	EC-MAN-WR,PH-MAN-WR	MET-D-CCMS-VA,ZR-D-MS-VA	MET-T-CCMS-VA,ZR-T-MS-VA	IONBALANCE-VA	TDS-CALC-VA	TSS-LOW-WR	HARDNESS-CALC-VA		Number of Containers
	NF1	25-NOV-13	930	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	R10	25-NOV-13	1130		X	X	X	X	X	X	X	X	X	X	X		5
	NF2	25-NOV-13	1330		X	X	X	X	X	X	X	X	X	X	X		5
	X3A	25-NOV-13	1220		X	X	X	X	X	X	X	X	X	X	X		5
	X1	25-NOV-13	130		X	X	X	X	X	X	X	X	X	X	X		5

L1396028-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				26-NOV-13	8:20	3.5 °C				

GENF 18.01 Front

ENVIRONMENTAL DYNAMICS INC.
ATTN: Meighan Kearns
2195 - 2nd Avenue
Whitehorse YT Y1A 3T8

Date Received: 27-NOV-13
Report Date: 13-DEC-13 12:38 (MT)
Version: FINAL REV. 3

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1396670

Project P.O. #: NOT SUBMITTED
Job Reference: 13-Y-0452
C of C Numbers: 1, 2
Legal Site Desc:

Comments: 5-DEC-2013 This report replaces and supersedes previously sent report. This report includes modified sample id for ALS identified sample L1396670-8.

13-DEC-2013 Revision 2: This revision replaces and supersedes previous revision of this report. This revision includes Client Sample ID modification for the samples ALS identify as L1396670-3 and L1396670-6 as requested.

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1396670-1	L1396670-2	L1396670-3	L1396670-4	L1396670-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13
	Sampled Time	08:48	10:10	10:00	10:30	08:11
	Client ID	X10	NF2	NF2-B	X2	X14
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	249	237	215	233	390
	Hardness (as CaCO3) (mg/L)	137	124	116	125	227
	pH (pH)	7.70	7.40	7.60	7.52	7.59
	Total Suspended Solids (mg/L)	<1.0	4.0	3.6	10.0	1.0
	Total Dissolved Solids (mg/L)	160	150	134	149	290
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	126	116	113	117	147
	Ammonia, Total (as N) (mg/L)	0.0131	0.0100	0.0075	0.0104	0.0455
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.151	0.158	0.145	0.155	0.147
	Nitrate (as N) (mg/L)	0.187	0.212	0.207	0.206	0.186
	Nitrite (as N) (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0020	0.0052	0.0055	0.0089	<0.0020
	Sulfate (SO4) (mg/L)	29.6	29.4	18.7	27.1	111
	Anion Sum (meq/L)	3.15	2.95	2.68	2.92	5.27
	Cation Sum (meq/L)	2.88	2.65	2.46	2.65	4.83
	Cation - Anion Balance (%)	-4.5	-5.2	-4.3	-4.9	-4.3
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.59	1.45	1.47	1.74	1.54
	Total Organic Carbon (mg/L)	1.44	1.44	1.45	1.80	1.55
Total Metals	Aluminum (Al)-Total (mg/L)	0.0104	0.0922	0.105	0.202	0.0201
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00010
	Arsenic (As)-Total (mg/L)	0.00028	0.00062	0.00065	0.00087	0.00035
	Barium (Ba)-Total (mg/L)	0.0633	0.0634	0.0636	0.0652	0.0613
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000114	0.000416	0.000026	0.000261	0.000117
	Calcium (Ca)-Total (mg/L)	39.3	34.5	34.2	35.3	67.1
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00026	0.00028	0.00054	0.00013
	Cobalt (Co)-Total (mg/L)	0.00075	0.00309	0.00015	0.00203	0.00169
	Copper (Cu)-Total (mg/L)	<0.00050	0.00057	0.00057	0.00086	<0.00050
	Iron (Fe)-Total (mg/L)	0.240	0.392	0.278	0.745	0.439
	Lead (Pb)-Total (mg/L)	0.000276	0.00133	0.00121	0.00405	0.000304
	Lithium (Li)-Total (mg/L)	0.00485	0.00629	0.00595	0.00646	0.00572
	Magnesium (Mg)-Total (mg/L)	9.35	8.88	7.48	8.71	14.9
	Manganese (Mn)-Total (mg/L)	0.105	0.188	0.0392	0.157	1.61
	Molybdenum (Mo)-Total (mg/L)	0.000549	0.000683	0.000695	0.000678	0.000577

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396670-6 Surface Water 26-NOV-13 09:45 NF2-A	L1396670-7 Surface Water 26-NOV-13 09:17 X3A	L1396670-8 Surface Water 26-NOV-13 08:11 X14-R	L1396670-9 Surface Water 26-NOV-13 11:50 R8	L1396670-10 Surface Water 26-NOV-13 11:30 R10
Sample ID / Description / Sampled Date / Sampled Time / Client ID						
WATER						
Physical Tests	Conductivity (uS/cm)	248	243	397	191	211
	Hardness (as CaCO3) (mg/L)	131	136	230	103	115
	pH (pH)	7.35	7.62	7.61	7.81	7.71
	Total Suspended Solids (mg/L)	3.4	1.2	1.8	6.6	5.8
	Total Dissolved Solids (mg/L)	159	157	289	118	132
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	114	124	144	110	111
	Ammonia, Total (as N) (mg/L)	0.0119	0.0157	0.0457	0.0096	0.0100
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.169	0.149	0.146	0.141	0.144
	Nitrate (as N) (mg/L)	0.212	0.183	0.183	0.125	0.198
	Nitrite (as N) (mg/L)	0.0020	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0046	0.0033	<0.0020	0.0106	0.0077
	Sulfate (SO4) (mg/L)	36.4	27.6	110	9.32	18.0
	Anion Sum (meq/L)	3.06	3.08	5.20	2.40	2.61
	Cation Sum (meq/L)	2.83	2.87	4.89	2.18	2.42
	Cation - Anion Balance (%)	-4.0	-3.5	-3.0	-4.9	-3.7
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.65	1.60	1.44	1.53	1.58
	Total Organic Carbon (mg/L)	1.50	1.67	1.53	1.86	1.77
Total Metals	Aluminum (Al)-Total (mg/L)	0.0758	0.0296	0.0184	0.118	0.107
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00056	0.00041	0.00037	0.00086	0.00070
	Barium (Ba)-Total (mg/L)	0.0638	0.0629	0.0631	0.0623	0.0625
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000783	0.000141	0.000135	0.000015	0.000022
	Calcium (Ca)-Total (mg/L)	35.7	38.1	70.1	31.0	32.5
	Chromium (Cr)-Total (mg/L)	0.00030	0.00014	0.00014	0.00030	0.00038
	Cobalt (Co)-Total (mg/L)	0.00602	0.00099	0.00174	0.00011	0.00012
	Copper (Cu)-Total (mg/L)	0.00053	<0.00050	0.00078	0.00053	0.00051
	Iron (Fe)-Total (mg/L)	0.472	0.289	0.479	0.409	0.324
	Lead (Pb)-Total (mg/L)	0.00139	0.000793	0.000360	0.000187	0.000388
	Lithium (Li)-Total (mg/L)	0.00644	0.00497	0.00587	0.00564	0.00572
	Magnesium (Mg)-Total (mg/L)	10.4	8.77	16.0	6.30	7.43
	Manganese (Mn)-Total (mg/L)	0.320	0.108	1.64	0.0421	0.0363
	Molybdenum (Mo)-Total (mg/L)	0.000659	0.000560	0.000933	0.000726	0.000681

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396670-11 Surface Water 26-NOV-13 11:15 NF1	L1396670-12 Surface Water 26-NOV-13 11:40 R9	L1396670-13 Surface Water 26-NOV-13 13:30 FB1	L1396670-14 Surface Water 27-NOV-13 09:25 TRIP BLANK
WATER					
Physical Tests	Conductivity (uS/cm)	217	213	<2.0	<2.0
	Hardness (as CaCO3) (mg/L)	115	114	<0.50	<0.50
	pH (pH)	7.58	7.80	5.88	5.98
	Total Suspended Solids (mg/L)	15.6	4.6	<1.0	<1.0
	Total Dissolved Solids (mg/L)	135	133	<1.0	<1.0
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	115	113	<2.0	<2.0
	Ammonia, Total (as N) (mg/L)	0.0147	0.0107	<0.0050	0.0233 RRV
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.144	0.144	<0.020	<0.020
	Nitrate (as N) (mg/L)	0.199	0.203	<0.0050	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0150	0.0113	<0.0020	<0.0020
	Sulfate (SO4) (mg/L)	18.4	17.8	<0.50	<0.50
	Anion Sum (meq/L)	2.69	2.64	<0.10	<0.10
	Cation Sum (meq/L)	2.44	2.41	<0.10	<0.10
	Cation - Anion Balance (%)	-4.9	-4.5	0.0	0.0
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.52	1.60	<0.50	
	Total Organic Carbon (mg/L)	1.94	2.00	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.283	0.0852	<0.0030	<0.0030
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00101	0.00071	<0.00010	<0.00010
	Barium (Ba)-Total (mg/L)	0.0684	0.0614	<0.000050	<0.000050
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000032	0.000015	<0.000010	<0.000010
	Calcium (Ca)-Total (mg/L)	34.8	32.9	<0.020	<0.020
	Chromium (Cr)-Total (mg/L)	0.00073	0.00024	<0.00010	<0.00010
	Cobalt (Co)-Total (mg/L)	0.00031	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.00096	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.641	0.298	<0.010	<0.010
	Lead (Pb)-Total (mg/L)	0.00499	0.000368	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	0.00646	0.00578	<0.00050	<0.00050
	Magnesium (Mg)-Total (mg/L)	7.78	7.24	<0.0050	<0.0050
	Manganese (Mn)-Total (mg/L)	0.0619	0.0359	<0.000050	<0.000050
	Molybdenum (Mo)-Total (mg/L)	0.000749	0.000705	<0.000050	<0.000050

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1396670-1	L1396670-2	L1396670-3	L1396670-4	L1396670-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13
	Sampled Time	08:48	10:10	10:00	10:30	08:11
	Client ID	X10	NF2	NF2-B	X2	X14
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00209	0.00506	0.00072	0.00378	0.00432
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.956	0.841	0.821	0.899	1.28
	Selenium (Se)-Total (mg/L)	0.00036	0.00040	0.00039	0.00036	0.00035
	Silicon (Si)-Total (mg/L)	5.36	5.88	5.88	5.96	5.54
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	0.000011	<0.000010
	Sodium (Na)-Total (mg/L)	2.54	2.64	2.57	2.64	4.18
	Strontium (Sr)-Total (mg/L)	0.184	0.157	0.152	0.159	0.244
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00210	0.00188	0.00186	0.00190	0.00235
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.233	0.656	0.0160	0.398	0.205
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0015	0.0062	0.0026	0.0040	0.0015
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00018	0.00034	0.00041	0.00029	0.00020
	Barium (Ba)-Dissolved (mg/L)	0.0640	0.0623	0.0612	0.0626	0.0625
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000102	0.000432	0.000020	0.000228	0.000116
	Calcium (Ca)-Dissolved (mg/L)	39.4	35.0	34.5	35.8	65.9
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00073	0.00335	<0.00010	0.00176	0.00167
	Copper (Cu)-Dissolved (mg/L)	0.00034	0.00032	0.00031	0.00032	0.00031
	Iron (Fe)-Dissolved (mg/L)	0.074	0.133	0.047	0.081	0.243
	Lead (Pb)-Dissolved (mg/L)	0.000062	0.000127	0.000073	0.000096	0.000054
	Lithium (Li)-Dissolved (mg/L)	0.00495	0.00603	0.00583	0.00621	0.00573
	Magnesium (Mg)-Dissolved (mg/L)	9.30	8.93	7.33	8.63	15.1
	Manganese (Mn)-Dissolved (mg/L)	0.103	0.195	0.0315	0.139	1.62
	Molybdenum (Mo)-Dissolved (mg/L)	0.000527	0.000667	0.000639	0.000646	0.000549
	Nickel (Ni)-Dissolved (mg/L)	0.00203	0.00524	<0.00050	0.00314	0.00407
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.955	0.826	0.779	0.828	1.30

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1396670-6	L1396670-7	L1396670-8	L1396670-9	L1396670-10
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13
	Sampled Time	09:45	09:17	08:11	11:50	11:30
	Client ID	NF2-A	X3A	X14-R	R8	R10
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00928	0.00215	0.00426	<0.00050	0.00056
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.881	0.949	1.33	0.734	0.801
	Selenium (Se)-Total (mg/L)	0.00040	0.00033	0.00036	0.00041	0.00038
	Silicon (Si)-Total (mg/L)	5.91	5.37	5.67	5.95	5.82
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.73	2.55	4.34	2.46	2.54
	Strontium (Sr)-Total (mg/L)	0.160	0.180	0.250	0.137	0.143
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00183	0.00207	0.00254	0.00164	0.00177
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	1.27	0.247	0.215	<0.0030	0.0144
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0094	0.0027	0.0022	0.0038	0.0029
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00029	0.00027	0.00022	0.00045	0.00043
	Barium (Ba)-Dissolved (mg/L)	0.0635	0.0646	0.0629	0.0589	0.0612
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000768	0.000146	0.000113	<0.000010	0.000018
	Calcium (Ca)-Dissolved (mg/L)	35.5	39.2	67.4	30.9	34.0
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00588	0.00097	0.00163	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00034	0.00030	0.00030	0.00027	0.00029
	Iron (Fe)-Dissolved (mg/L)	0.180	0.115	0.227	0.063	0.052
	Lead (Pb)-Dissolved (mg/L)	0.000136	0.000080	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.00630	0.00506	0.00573	0.00541	0.00575
	Magnesium (Mg)-Dissolved (mg/L)	10.4	9.15	15.0	6.20	7.20
	Manganese (Mn)-Dissolved (mg/L)	0.307	0.108	1.59	0.0263	0.0265
	Molybdenum (Mo)-Dissolved (mg/L)	0.000646	0.000502	0.000581	0.000669	0.000654
	Nickel (Ni)-Dissolved (mg/L)	0.00902	0.00216	0.00400	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.865	0.997	1.31	0.703	0.764

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396670-11 Surface Water 26-NOV-13 11:15 NF1	L1396670-12 Surface Water 26-NOV-13 11:40 R9	L1396670-13 Surface Water 26-NOV-13 13:30 FB1	L1396670-14 Surface Water 27-NOV-13 09:25 TRIP BLANK	
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00121	<0.00050	<0.00050	<0.00050	
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	
	Potassium (K)-Total (mg/L)	0.866	0.772	<0.050	<0.050	
	Selenium (Se)-Total (mg/L)	0.00043	0.00039	<0.00010	<0.00010	
	Silicon (Si)-Total (mg/L)	6.40	5.79	<0.050	<0.050	
	Silver (Ag)-Total (mg/L)	0.000011	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	2.63	2.44	<0.050	<0.050	
	Strontium (Sr)-Total (mg/L)	0.154	0.148	<0.00020	<0.00020	
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Total (mg/L)	0.00193	0.00182	<0.000010	<0.000010	
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Total (mg/L)	0.0189	<0.0030	<0.0030	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	0.0034	0.0031	<0.0010		
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Arsenic (As)-Dissolved (mg/L)	0.00049	0.00044	<0.00010		
	Barium (Ba)-Dissolved (mg/L)	0.0625	0.0614	<0.000050		
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Cadmium (Cd)-Dissolved (mg/L)	0.000020	<0.000010	<0.000010		
	Calcium (Ca)-Dissolved (mg/L)	33.9	33.6	<0.020		
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Copper (Cu)-Dissolved (mg/L)	0.00030	0.00027	<0.00020		
	Iron (Fe)-Dissolved (mg/L)	0.076	0.051	<0.010		
	Lead (Pb)-Dissolved (mg/L)	0.000086	<0.000050	<0.000050		
	Lithium (Li)-Dissolved (mg/L)	0.00585	0.00569	<0.00050		
	Magnesium (Mg)-Dissolved (mg/L)	7.46	7.34	<0.0050		
	Manganese (Mn)-Dissolved (mg/L)	0.0438	0.0262	<0.000050		
	Molybdenum (Mo)-Dissolved (mg/L)	0.000670	0.000647	<0.000050		
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30		
	Potassium (K)-Dissolved (mg/L)	0.794	0.785	<0.050		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1396670-1	L1396670-2	L1396670-3	L1396670-4	L1396670-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13	26-NOV-13
	Sampled Time	08:48	10:10	10:00	10:30	08:11
	Client ID	X10	NF2	NF2-B	X2	X14
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00035	0.00038	0.00039	0.00037	0.00037
	Silicon (Si)-Dissolved (mg/L)	5.24	5.73	5.72	5.70	5.49
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.49	2.62	2.50	2.61	4.20
	Strontium (Sr)-Dissolved (mg/L)	0.182	0.155	0.153	0.156	0.245
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00201	0.00179	0.00179	0.00180	0.00234
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.233	0.721	0.0142	0.392	0.209
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1396670-6 Surface Water 26-NOV-13 09:45 NF2-A	L1396670-7 Surface Water 26-NOV-13 09:17 X3A	L1396670-8 Surface Water 26-NOV-13 08:11 X14-R	L1396670-9 Surface Water 26-NOV-13 11:50 R8	L1396670-10 Surface Water 26-NOV-13 11:30 R10
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00039	0.00033	0.00037	0.00037	0.00041
	Silicon (Si)-Dissolved (mg/L)	5.71	5.54	5.59	5.69	5.69
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.73	2.60	4.14	2.39	2.44
	Strontium (Sr)-Dissolved (mg/L)	0.158	0.182	0.245	0.133	0.153
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00177	0.00198	0.00239	0.00161	0.00179
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	1.26	0.254	0.208	<0.0010	0.0133
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1396670-11	L1396670-12	L1396670-13	L1396670-14	
	Description	Surface Water	Surface Water	Surface Water	Surface Water	
	Sampled Date	26-NOV-13	26-NOV-13	26-NOV-13	27-NOV-13	
	Sampled Time	11:15	11:40	13:30	09:25	
	Client ID	NF1	R9	FB1	TRIP BLANK	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00039	0.00040	<0.00010		
	Silicon (Si)-Dissolved (mg/L)	5.78	5.74	<0.050		
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Sodium (Na)-Dissolved (mg/L)	2.51	2.47	<0.050		
	Strontium (Sr)-Dissolved (mg/L)	0.153	0.147	<0.00020		
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	0.00183	0.00180	<0.000010		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	0.0140	<0.0010	<0.0010		
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080		

* 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)
Duplicate	Beryllium (Be)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Bismuth (Bi)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cobalt (Co)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Iron (Fe)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Nickel (Ni)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Phosphorus (P)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Silver (Ag)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Thallium (Tl)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Tin (Sn)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Vanadium (V)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Zinc (Zn)-Total	DLA	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cadmium (Cd)-Total	DLM	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cadmium (Cd)-Dissolved	DLM	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Method Blank	Calcium (Ca)-Total	MB-LOR	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Method Blank	Magnesium (Mg)-Total	MB-LOR	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Method Blank	Manganese (Mn)-Total	MB-LOR	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfate (SO4)	MS-B	L1396670-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Titanium (Ti)-Total	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L1396670-14
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1396670-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -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.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

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.

ANIONS-CL-IC-WR	Water	Chloride by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

Reference Information

ANIONS-F-IC-WR	Water	Fluoride by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

ANIONS-NO2-IC-WR	Water	Nitrite Nitrogen by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-NO3-IC-WR	Water	Nitrate Nitrogen by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-SO4-IC-WR	Water	Sulphate by Ion Chromatography	EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

CARBONS-DOC-VA	Water	Dissolved organic carbon by combustion	APHA 5310 TOTAL ORGANIC CARBON (TOC)

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". Dissolved carbon (DOC) fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.

CARBONS-TOC-VA	Water	Total organic carbon by combustion	APHA 5310 TOTAL ORGANIC CARBON (TOC)

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)".

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.

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 CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

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 3030 B&E / EPA SW-846 6020A

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

MET-T-CCMS-VA	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

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.

P-T-COL-VA	Water	Total P in Water by Colour	APHA 4500-P Phosphorous

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-MAN-WR	Water	pH by Meter	APHA 4500-H (B)

"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."

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".

TSS-LOW-WR	Water	Total Suspended Solids by Grav. (1 mg/L)	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.

ZR-D-MS-VA	Water	Dissolved Zr in Water by ICPMS	EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

ZR-T-MS-VA	Water	Total Zr in Water by ICPMS	EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

** 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
WR	ALS ENVIRONMENTAL - WHITEHORSE, YUKON, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1 2

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.

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

Page 1 of 2

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)	L1396670	ALS Contact:	Sampler:

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample # (lab use only)	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-COL-VA,P-T-COL-VA	ANIONS-ALL-IC-WR	CARBONS-DOC-VA	CARBONS-TOC-VA,NH3-F-VA	EC-MAN-WR,PH-MAN-WR	MET-D-CCMS-VA,ZR-D-MS	MET-T-CCMS-VA,ZR-T-MS	IONBALANCE-VA	TDS-CALC-VA	TSS-LOW-WR	HARDNESS-CALC-VA		Number of Containers
		26-NOV-13	8:48	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
1	X10	26-NOV-13	1010	SW	X	X	X	X	X	X	X	X	X	X	X		5
2	NF2	26-NOV-13	1000	SW	X	X	X	X	X	X	X	X	X	X	X		5
3	NF2-A	26-NOV-13	1030	SW	X	X	X	X	X	X	X	X	X	X	X		5
4	X2	26-NOV-13	811	SW	X	X	X	X	X	X	X	X	X	X	X		5
5	X14	26-NOV-13	945	SW	X	X	X	X	X	X	X	X	X	X	X		5
6	NF2-B	26-NOV-13	917	SW	X	X	X	X	X	X	X	X	X	X	X		5
7	X3A	26-NOV-13	811	SW	X	X	X	X	X	X	X	X	X	X	X		5
8	R1																

L1396670-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				27-Nov-13	9:25	0.8,0.5°C				

GENF 18.01 Front

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # _____

Page 2 of 2

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)	L1396670	ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-COL-VA,P-T-COL-VA	ANIONS-ALL-IC-WR	CARBONS-DOC-VA	CARBONS-TOC-VA,NH3-F-VA	EC-MAN-WR,PH-MAN-WR	MET-D-CCMS-VA,ZR-D-MS	MET-T-CCMS-VA,ZR-T-MS-VA	IONBALANCE-VA	TDS-CALC-VA	TSS-LOW-WR	HARDNESS-CALC-VA		Number of Containers
9	RB	26-NOV-13	1150	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
10	R10	26 NOV 13	1130		X	X	X	X	X	X	X	X	X	X	X		5
11	NF1	26 -NOV 13	1115		X	X	X	X	X	X	X	X	X	X	X		5
12	R9	26 NOV 13	1140		X	X	X	X	X	X	X	X	X	X	X		5
13	FB1	26 NOV 13	1330		X	X	X	X	X	X	X	X	X	X	X		5
14	Trip Blank	26 NOV 13	—		X	X	X	X	X	X	V	X	X	X	V		4

L1396670-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				27-Nov-13	9:25	0.8, 0.5 °C				

GENF 18.01 Front

ENVIRONMENTAL DYNAMICS INC.
ATTN: Meighan Kearns
2195 - 2nd Avenue
Whitehorse YT Y1A 3T8

Date Received: 28-NOV-13
Report Date: 13-DEC-13 12:31 (MT)
Version: FINAL REV. 4

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1397452

Project P.O. #: NOT SUBMITTED
Job Reference: 13-Y-0452
C of C Numbers: 1, 2, 3, 4, 5
Legal Site Desc:

Comments:

5-DEC-2013 This report replaces and supersedes previously sent report. This report includes modified sample id for ALS identified sample L1397452-35.

12-DEC-2013 Revision 3: This revision replaces and supersedes all previous revisions of this report. This revision includes Client Sample ID edit for the samples ALS identify as L1397452-25 and L1397452-27.

13-DEC-2013 Revision 4: This revision replaces and supersedes all previous revision of this report. The sample ALS identify as L1397452-20 has its Client ID changed from "NF1-X-12" to "NF1-X-22" as requested.

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-1	L1397452-2	L1397452-3	L1397452-4	L1397452-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	09:10	09:30	09:45	08:30	09:00
	Client ID	NF1-X-4	NF1-X-5	NF1-X-6	NF1-X-1	NF1-X-3
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	200	212	207	221	212
	Hardness (as CaCO3) (mg/L)	114	113	114	116	115
	pH (pH)	7.59	7.31	7.45	7.42	7.58
	Total Suspended Solids (mg/L)	67.8	8.2	61.0	24.2	24.4
	Total Dissolved Solids (mg/L)	129	128	129	133	133
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	106	105	106	109	111
	Ammonia, Total (as N) (mg/L)	0.0098	0.0096	0.0123	0.0181	0.0126
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.141	0.141	0.140	0.143	0.143
	Nitrate (as N) (mg/L)	0.191	0.192	0.191	0.199	0.193
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0678	0.0072	0.0334	0.0162	0.0245
	Sulfate (SO4) (mg/L)	17.7	17.9	17.6	19.1	18.2
	Anion Sum (meq/L)	2.51	2.50	2.52	2.59	2.62
	Cation Sum (meq/L)	2.42	2.39	2.41	2.47	2.44
	Cation - Anion Balance (%)	-1.9	-2.1	-2.2	-2.3	-3.6
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.71	1.70	1.63	1.76	1.65
	Total Organic Carbon (mg/L)	1.74	1.68	1.83	1.77	1.99
Total Metals	Aluminum (Al)-Total (mg/L)	0.851	0.153	0.443	0.242	0.461
	Antimony (Sb)-Total (mg/L)	0.00018	<0.00010	0.00012	0.00012	0.00016
	Arsenic (As)-Total (mg/L)	0.00165	0.00084	0.00117	0.00092	0.00116
	Barium (Ba)-Total (mg/L)	0.0790	0.0681	0.0704	0.0678	0.0734
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000073	0.000033	0.000051	0.000040	0.000052
	Calcium (Ca)-Total (mg/L)	31.7	34.1	33.0	33.0	32.5
	Chromium (Cr)-Total (mg/L)	0.00215	0.00054	0.00116	0.00070	0.00128
	Cobalt (Co)-Total (mg/L)	0.00077	0.00018	0.00043	0.00043	0.00046
	Copper (Cu)-Total (mg/L)	0.00279	0.00122	0.00224	0.00160	0.00213
	Iron (Fe)-Total (mg/L)	1.70	0.446	0.957	0.727	0.986
	Lead (Pb)-Total (mg/L)	0.0120	0.00150	0.00525	0.00564	0.00958
	Lithium (Li)-Total (mg/L)	0.00638	0.00509	0.00541	0.00516	0.00545
	Magnesium (Mg)-Total (mg/L)	7.42	7.37	7.11	7.18	7.10
	Manganese (Mn)-Total (mg/L)	0.0776	0.0493	0.0588	0.0974	0.0653
	Molybdenum (Mo)-Total (mg/L)	0.000655	0.000703	0.000692	0.000675	0.000705

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-6	L1397452-7	L1397452-8	L1397452-9	L1397452-10
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	08:45	10:15	10:00	11:15	10:30
	Client ID	NF1-X-2	NF1-X-8	NF1-X-7	NF1-X-11	NF1-X-9
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	211	211	213	214	216
	Hardness (as CaCO3) (mg/L)	115	116	115	116	115
	pH (pH)	7.52	7.54	7.62	7.56	7.59
	Total Suspended Solids (mg/L)	13.0	59.6	8.8	2.6	5.4
	Total Dissolved Solids (mg/L)	131	134	131	133	129
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	108	112	110	111	106
	Ammonia, Total (as N) (mg/L)	0.0122	0.0195	0.0097	0.0169	0.0098
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.146	0.141	0.142	0.143	0.143
	Nitrate (as N) (mg/L)	0.196	0.210	0.205	0.193	0.194
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0105	0.0554	0.0102	0.0055	0.0072
	Sulfate (SO4) (mg/L)	18.2	17.8	18.1	18.1	18.0
	Anion Sum (meq/L)	2.56	2.64	2.59	2.61	2.52
	Cation Sum (meq/L)	2.44	2.47	2.44	2.46	2.44
	Cation - Anion Balance (%)	-2.4	-3.3	-3.1	-3.0	-1.5
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.63	1.76	1.72	1.61	1.57
	Total Organic Carbon (mg/L)	1.81	1.97	1.62	1.67	1.76
Total Metals	Aluminum (Al)-Total (mg/L)	0.182	0.402	0.123	0.0500	0.108
	Antimony (Sb)-Total (mg/L)	0.00012	0.00017	<0.00010	<0.00010	0.00010
	Arsenic (As)-Total (mg/L)	0.00087	0.00107	0.00075	0.00067	0.00075
	Barium (Ba)-Total (mg/L)	0.0674	0.0695	0.0659	0.0651	0.0655
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000032	0.000046	0.000026	0.000025	0.000027
	Calcium (Ca)-Total (mg/L)	34.6	33.3	33.6	33.6	34.5
	Chromium (Cr)-Total (mg/L)	0.00053	0.00109	0.00041	0.00021	0.00034
	Cobalt (Co)-Total (mg/L)	0.00024	0.00038	0.00016	0.00017	0.00015
	Copper (Cu)-Total (mg/L)	0.00125	0.00160	0.00093	0.00064	0.00078
	Iron (Fe)-Total (mg/L)	0.469	0.894	0.376	0.289	0.336
	Lead (Pb)-Total (mg/L)	0.00241	0.00483	0.000933	0.000623	0.000769
	Lithium (Li)-Total (mg/L)	0.00538	0.00540	0.00508	0.00498	0.00523
	Magnesium (Mg)-Total (mg/L)	7.40	7.28	7.31	7.21	7.36
	Manganese (Mn)-Total (mg/L)	0.0574	0.0669	0.0428	0.0666	0.0455
	Molybdenum (Mo)-Total (mg/L)	0.000702	0.000724	0.000688	0.000678	0.000691

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-11	L1397452-12	L1397452-13	L1397452-14	L1397452-15
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	10:45	11:30	00:15		12:45
	Client ID	NF1-X-10	NF1-X-12	NF1-X-14	NF1-X-13	NF1-X-16
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	215	216	228	216	209
	Hardness (as CaCO3) (mg/L)	116	116	129	116	116
	pH (pH)	7.55	7.41	7.24	7.48	7.75
	Total Suspended Solids (mg/L)	4.6	30.4	1.8	1.2	5.4
	Total Dissolved Solids (mg/L)	131	132	147	132	131
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	108	108	111	109	109
	Ammonia, Total (as N) (mg/L)	0.0106	0.0144	0.0216	0.0223	0.0111
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.143	0.144	0.145	0.143	0.143
	Nitrate (as N) (mg/L)	0.193	0.191	0.184	0.192	0.195
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0058	0.0301	0.0029	0.0047	0.0065
	Sulfate (SO4) (mg/L)	18.1	19.0	26.8	18.3	18.1
	Anion Sum (meq/L)	2.55	2.58	2.80	2.59	2.58
	Cation Sum (meq/L)	2.46	2.47	2.78	2.47	2.45
	Cation - Anion Balance (%)	-1.6	-2.1	-0.4	-2.4	-2.7
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.60	1.70	1.76	1.63	1.66
	Total Organic Carbon (mg/L)	1.56	1.93	1.63	1.68	1.65
Total Metals	Aluminum (Al)-Total (mg/L)	0.0755	0.435	0.0221	0.0356	0.114
	Antimony (Sb)-Total (mg/L)	<0.00010	0.00011	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00069	0.00114	0.00057	0.00069	0.00074
	Barium (Ba)-Total (mg/L)	0.0648	0.0720	0.0684	0.0658	0.0651
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000023	0.000060	0.000084	0.000023	0.000026
	Calcium (Ca)-Total (mg/L)	34.3	30.7	36.7	34.2	34.3
	Chromium (Cr)-Total (mg/L)	0.00025	0.00112	0.00017	0.00017	0.00038
	Cobalt (Co)-Total (mg/L)	0.00015	0.00057	0.00182	0.00019	0.00018
	Copper (Cu)-Total (mg/L)	0.00073	0.00229	0.00082	0.00052	0.00176
	Iron (Fe)-Total (mg/L)	0.286	1.05	0.834	0.380	0.349
	Lead (Pb)-Total (mg/L)	0.000699	0.0102	0.000840	0.000383	0.00153
	Lithium (Li)-Total (mg/L)	0.00509	0.00515	0.00540	0.00491	0.00508
	Magnesium (Mg)-Total (mg/L)	7.25	7.35	8.58	7.35	7.17
	Manganese (Mn)-Total (mg/L)	0.0480	0.110	0.300	0.0890	0.0502
	Molybdenum (Mo)-Total (mg/L)	0.000705	0.000632	0.000641	0.000686	0.000705

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-16	L1397452-17	L1397452-18	L1397452-19	L1397452-20
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	13:20	12:30	13:30	14:21	15:00
	Client ID	NF1-X-17	NF1-X-15	NF1-X-18	NF1-X-21	NF1-X-22
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	213	211	210	218	262
	Hardness (as CaCO3) (mg/L)	115	115	114	118	135
	pH (pH)	7.65	7.59	7.59	7.63	7.14
	Total Suspended Solids (mg/L)	15.6	2.4	5.8	2.4	<1.0
	Total Dissolved Solids (mg/L)	130	130	129	135	166
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	107	107	107	111	121
	Ammonia, Total (as N) (mg/L)	0.0115	0.0113	0.0099	0.0146	0.0408
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.143	0.143	0.143	0.145	0.148
	Nitrate (as N) (mg/L)	0.196	0.194	0.194	0.194	0.168
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0133	0.0051	0.0085	0.0071	<0.0020
	Sulfate (SO4) (mg/L)	18.1	18.1	18.0	19.6	35.1
	Anion Sum (meq/L)	2.54	2.53	2.54	2.65	3.16
	Cation Sum (meq/L)	2.43	2.44	2.41	2.52	3.02
	Cation - Anion Balance (%)	-2.3	-1.9	-2.6	-2.5	-2.2
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.66	1.55	1.62	1.71	1.76
	Total Organic Carbon (mg/L)	1.87	1.61	1.68	1.72	1.87
Total Metals	Aluminum (Al)-Total (mg/L)	0.285	0.0622	0.0868	0.0485	0.0189
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00011
	Arsenic (As)-Total (mg/L)	0.00095	0.00071	0.00076	0.00066	0.00059
	Barium (Ba)-Total (mg/L)	0.0714	0.0654	0.0639	0.0690	0.0689
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000040	0.000027	0.000024	0.000037	0.000166
	Calcium (Ca)-Total (mg/L)	33.7	34.4	33.0	36.4	40.0
	Chromium (Cr)-Total (mg/L)	0.00079	0.00028	0.00035	0.00023	0.00016
	Cobalt (Co)-Total (mg/L)	0.00030	0.00014	0.00015	0.00046	0.00659
	Copper (Cu)-Total (mg/L)	0.00114	0.00084	0.00070	0.00058	0.00079
	Iron (Fe)-Total (mg/L)	0.648	0.261	0.297	0.440	2.62
	Lead (Pb)-Total (mg/L)	0.00367	0.00104	0.00115	0.000545	0.00253
	Lithium (Li)-Total (mg/L)	0.00531	0.00505	0.00494	0.00538	0.00649
	Magnesium (Mg)-Total (mg/L)	7.52	7.32	7.15	7.81	9.36
	Manganese (Mn)-Total (mg/L)	0.0584	0.0463	0.0430	0.120	0.793
	Molybdenum (Mo)-Total (mg/L)	0.000670	0.000689	0.000653	0.000683	0.000526

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-21	L1397452-22	L1397452-23	L1397452-24	L1397452-25
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	14:10	13:45	08:20	09:15	08:55
	Client ID	NF1-X-20	NF1-X-19	X3A-R	NF2	NF2-A
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	230	217	235	225	241
	Hardness (as CaCO3) (mg/L)	119	116	133	125	131
	pH (pH)	7.72	7.63	7.56	7.31	7.20
	Total Suspended Solids (mg/L)	11.4	3.4	2.8	3.4	3.4
	Total Dissolved Solids (mg/L)	135	133	154	146	154
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	112	112	121	111	106
	Ammonia, Total (as N) (mg/L)	0.0139	0.0151	0.0139	0.0086	0.0109
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.145	0.144	0.152	0.162	0.173
	Nitrate (as N) (mg/L)	0.200	0.222	0.193	0.205	0.209
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	0.0012	0.0017
	Phosphorus (P)-Total (mg/L)	0.0108	0.0058	0.0043	0.0055	0.0034
	Sulfate (SO4) (mg/L)	18.8	18.2	27.4	28.5	36.6
	Anion Sum (meq/L)	2.65	2.64	3.02	2.83	2.90
	Cation Sum (meq/L)	2.51	2.46	2.81	2.67	2.82
	Cation - Anion Balance (%)	-2.6	-3.4	-3.6	-2.9	-1.5
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.79	1.84	1.73	1.69	1.68
	Total Organic Carbon (mg/L)	1.92	1.77	1.76	1.79	1.59
Total Metals	Aluminum (Al)-Total (mg/L)	0.167	0.0639	0.0566	0.0747	0.0764
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00090	0.00067	0.00049	0.00061	0.00055
	Barium (Ba)-Total (mg/L)	0.0692	0.0652	0.0664	0.0651	0.0652
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000036	0.000024	0.000157	0.000486	0.000862
	Calcium (Ca)-Total (mg/L)	34.3	34.4	39.1	34.7	34.8
	Chromium (Cr)-Total (mg/L)	0.00054	0.00030	0.00027	0.00025	0.00024
	Cobalt (Co)-Total (mg/L)	0.00029	0.00017	0.00110	0.00375	0.00662
	Copper (Cu)-Total (mg/L)	0.00092	0.00061	0.00053	0.00067	0.00060
	Iron (Fe)-Total (mg/L)	0.621	0.291	0.356	0.404	0.487
	Lead (Pb)-Total (mg/L)	0.00561	0.000908	0.00103	0.00130	0.00120
	Lithium (Li)-Total (mg/L)	0.00518	0.00501	0.00428	0.00540	0.00560
	Magnesium (Mg)-Total (mg/L)	7.52	7.33	9.12	9.20	10.9
	Manganese (Mn)-Total (mg/L)	0.0858	0.0602	0.115	0.209	0.336
	Molybdenum (Mo)-Total (mg/L)	0.000688	0.000697	0.000557	0.000688	0.000644

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1397452-26 Surface Water 28-NOV-13 08:40 X2	L1397452-27 Surface Water 28-NOV-13 09:00 NF2-B	L1397452-28 Surface Water 28-NOV-13 08:20 X3A	L1397452-29 Surface Water 28-NOV-13 08:00 X10	L1397452-30 Surface Water 28-NOV-13 07:45 X14
Sample ID / Description / Sampled Date / Sampled Time / Client ID						
WATER						
Physical Tests	Conductivity (uS/cm)	226	213	247	250	406
	Hardness (as CaCO3) (mg/L)	124	116	133	136	228
	pH (pH)	7.53	7.60	7.63	7.74	7.69
	Total Suspended Solids (mg/L)	8.2	3.8	2.4	<1.0	9.6
	Total Dissolved Solids (mg/L)	146	133	152	155	286
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	114	111	118	119	138
	Ammonia, Total (as N) (mg/L)	0.0099	0.0068	0.0142	0.0119	0.0476
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.155	0.143	0.150	0.148	0.146
	Nitrate (as N) (mg/L)	0.201	0.198	0.178	0.179	0.173
	Nitrite (as N) (mg/L)	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0094	0.0063	0.0043	0.0029	<0.0020
	Sulfate (SO4) (mg/L)	26.9	18.5	27.4	29.4	111
	Anion Sum (meq/L)	2.86	2.63	2.95	3.01	5.09
	Cation Sum (meq/L)	2.63	2.45	2.80	2.86	4.86
	Cation - Anion Balance (%)	-4.2	-3.6	-2.6	-2.5	-2.3
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.74	1.77	1.90	1.81	1.68
	Total Organic Carbon (mg/L)	1.71	1.85	1.59	1.70	1.83
Total Metals	Aluminum (Al)-Total (mg/L)	0.148	0.0871	0.0530	0.0317	0.183
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00078	0.00062	0.00048	0.00032	0.00066
	Barium (Ba)-Total (mg/L)	0.0684	0.0665	0.0680	0.0669	0.0686
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000281	0.000030	0.000163	0.000123	0.000138
	Calcium (Ca)-Total (mg/L)	35.6	35.5	38.9	38.9	69.5
	Chromium (Cr)-Total (mg/L)	0.00043	0.00029	0.00021	0.00016	0.00055
	Cobalt (Co)-Total (mg/L)	0.00221	0.00023	0.00114	0.00088	0.00197
	Copper (Cu)-Total (mg/L)	0.00082	0.00057	0.00054	0.00059	0.00087
	Iron (Fe)-Total (mg/L)	0.649	0.317	0.366	0.374	0.876
	Lead (Pb)-Total (mg/L)	0.00290	0.00122	0.000991	0.000404	0.00119
	Lithium (Li)-Total (mg/L)	0.00557	0.00510	0.00423	0.00400	0.00535
	Magnesium (Mg)-Total (mg/L)	8.84	7.40	9.18	9.50	15.9
	Manganese (Mn)-Total (mg/L)	0.166	0.0527	0.119	0.124	1.86
	Molybdenum (Mo)-Total (mg/L)	0.000674	0.000701	0.000557	0.000547	0.000602

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1397452-31 Surface Water 26-NOV-13 13:30 NF1-F	L1397452-32 Surface Water 26-NOV-13 13:00 NF1-E	L1397452-33 Surface Water 28-NOV-13 10:45 FIELD BLANK	L1397452-34 Surface Water 28-NOV-13 10:10 R8	L1397452-35 Surface Water 28-NOV-13 09:30 NF1-E
Sample ID		L1397452-31	L1397452-32	L1397452-33	L1397452-34	L1397452-35
Description		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sampled Date		26-NOV-13	26-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
Sampled Time		13:30	13:00	10:45	10:10	09:30
Client ID		NF1-F	NF1-E	FIELD BLANK	R8	NF1-E
WATER						
Physical Tests	Conductivity (uS/cm)	219	220	<2.0	190	209
	Hardness (as CaCO3) (mg/L)	116	116	<0.50	100	115
	pH (pH)	7.74	7.69	5.96	7.90	7.70
	Total Suspended Solids (mg/L)	7.0	9.8	<1.0	3.0	2.4
	Total Dissolved Solids (mg/L)	132	132	<1.0	113	132
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	109	109	<2.0	104	111
	Ammonia, Total (as N) (mg/L)	0.0100	0.0123	<0.0050	0.0095	0.0102
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.144	0.144	<0.020	0.140	0.143
	Nitrate (as N) (mg/L)	0.198	0.198	<0.0050	0.119	0.205
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0089	0.0108	<0.0020	0.0070	0.0069
	Sulfate (SO4) (mg/L)	18.2	18.3	<0.50	9.00	18.0
	Anion Sum (meq/L)	2.57	2.58	<0.10	2.27	2.61
	Cation Sum (meq/L)	2.46	2.45	<0.10	2.13	2.44
	Cation - Anion Balance (%)	-2.3	-2.4	0.0	-3.2	-3.4
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.81	1.68	<0.50	2.40	1.90
	Total Organic Carbon (mg/L)	2.02	1.81	<0.50	2.01	2.09
Total Metals	Aluminum (Al)-Total (mg/L)	0.163	0.0521	<0.0030	0.0564	0.0455
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00075	0.00072	<0.00010	0.00073	0.00068
	Barium (Ba)-Total (mg/L)	0.0663	0.0669	<0.000050	0.0608	0.0639
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000026	0.000020	<0.000010	<0.000010	0.000023
	Calcium (Ca)-Total (mg/L)	34.4	35.5	<0.020	30.0	33.6
	Chromium (Cr)-Total (mg/L)	0.00063	0.00021	<0.00010	0.00021	0.00019
	Cobalt (Co)-Total (mg/L)	0.00019	0.00013	<0.00010	<0.00010	0.00013
	Copper (Cu)-Total (mg/L)	0.00070	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.428	0.248	<0.010	0.280	0.243
	Lead (Pb)-Total (mg/L)	0.00119	0.000863	<0.000050	0.000117	0.000565
	Lithium (Li)-Total (mg/L)	0.00504	0.00498	<0.00050	0.00434	0.00480
	Magnesium (Mg)-Total (mg/L)	7.34	7.50	<0.0050	5.95	7.19
	Manganese (Mn)-Total (mg/L)	0.0447	0.0506	<0.000050	0.0338	0.0432
	Molybdenum (Mo)-Total (mg/L)	0.000701	0.000715	<0.000050	0.000666	0.000665

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-36	L1397452-37			
	Description	Surface Water	Surface Water			
	Sampled Date	28-NOV-13	28-NOV-13			
	Sampled Time	10:00	09:45			
	Client ID	R9	R10			
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	209	214			
	Hardness (as CaCO3) (mg/L)	113	114			
	pH (pH)	7.89	7.74			
	Total Suspended Solids (mg/L)	5.2	4.8			
	Total Dissolved Solids (mg/L)	127	127			
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	105	104			
	Ammonia, Total (as N) (mg/L)	0.0086	0.0078			
	Chloride (Cl) (mg/L)	<0.50	<0.50			
	Fluoride (F) (mg/L)	0.143	0.143			
	Nitrate (as N) (mg/L)	0.193	0.193			
	Nitrite (as N) (mg/L)	<0.0010	<0.0010			
	Phosphorus (P)-Total (mg/L)	0.0081	0.0082			
	Sulfate (SO4) (mg/L)	17.2	17.6			
	Anion Sum (meq/L)	2.49	2.46			
	Cation Sum (meq/L)	2.39	2.41			
	Cation - Anion Balance (%)	-1.9	-1.0			
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.80	1.77			
	Total Organic Carbon (mg/L)	1.80	1.77			
Total Metals	Aluminum (Al)-Total (mg/L)	0.0786	0.0862			
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010			
	Arsenic (As)-Total (mg/L)	0.00071	0.00070			
	Barium (Ba)-Total (mg/L)	0.0632	0.0641			
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010			
	Bismuth (Bi)-Total (mg/L)	<0.00050	<0.00050			
	Boron (B)-Total (mg/L)	<0.010	<0.010			
	Cadmium (Cd)-Total (mg/L)	<0.000010	0.000020			
	Calcium (Ca)-Total (mg/L)	32.7	34.0			
	Chromium (Cr)-Total (mg/L)	0.00031	0.00027			
	Cobalt (Co)-Total (mg/L)	<0.00010	<0.00010			
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050			
	Iron (Fe)-Total (mg/L)	0.294	0.313			
	Lead (Pb)-Total (mg/L)	0.000280	0.000317			
	Lithium (Li)-Total (mg/L)	0.00457	0.00492			
	Magnesium (Mg)-Total (mg/L)	7.15	7.26			
	Manganese (Mn)-Total (mg/L)	0.0355	0.0368			
	Molybdenum (Mo)-Total (mg/L)	0.000665	0.000674			

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-1	L1397452-2	L1397452-3	L1397452-4	L1397452-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	09:10	09:30	09:45	08:30	09:00
	Client ID	NF1-X-4	NF1-X-5	NF1-X-6	NF1-X-1	NF1-X-3
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00259	0.00091	0.00148	0.00132	0.00174
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.935	0.828	0.841	0.852	0.849
	Selenium (Se)-Total (mg/L)	0.00042	0.00039	0.00040	0.00035	0.00038
	Silicon (Si)-Total (mg/L)	6.72	5.94	6.13	5.84	6.07
	Silver (Ag)-Total (mg/L)	0.000033	0.000010	0.000018	0.000016	0.000043
	Sodium (Na)-Total (mg/L)	2.52	2.58	2.44	2.48	2.43
	Strontium (Sr)-Total (mg/L)	0.137	0.148	0.145	0.144	0.140
	Thallium (Tl)-Total (mg/L)	0.000022	<0.000010	0.000012	<0.000010	0.000020
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.037	<0.010	0.017	<0.010	0.019
	Uranium (U)-Total (mg/L)	0.00187	0.00191	0.00184	0.00179	0.00183
	Vanadium (V)-Total (mg/L)	0.0027	<0.0010	0.0015	<0.0010	0.0015
	Zinc (Zn)-Total (mg/L)	0.0256	0.0158	0.0203	0.0257	0.0221
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0030	0.0036	0.0031	0.0031	0.0025
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00046	0.00048	0.00045	0.00048	0.00047
	Barium (Ba)-Dissolved (mg/L)	0.0640	0.0641	0.0631	0.0652	0.0641
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000017	0.000020	0.000016	0.000021	0.000019
	Calcium (Ca)-Dissolved (mg/L)	33.8	33.2	33.6	34.3	34.0
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00010	<0.00010	<0.00010	0.00025	0.00013
	Copper (Cu)-Dissolved (mg/L)	0.00027	0.00031	0.00025	0.00029	0.00025
	Iron (Fe)-Dissolved (mg/L)	0.078	0.064	0.058	0.226	0.088
	Lead (Pb)-Dissolved (mg/L)	0.000085	0.000065	0.000057	0.000117	0.000077
	Lithium (Li)-Dissolved (mg/L)	0.00501	0.00494	0.00496	0.00513	0.00511
	Magnesium (Mg)-Dissolved (mg/L)	7.24	7.28	7.23	7.42	7.31
	Manganese (Mn)-Dissolved (mg/L)	0.0458	0.0402	0.0358	0.0902	0.0501
	Molybdenum (Mo)-Dissolved (mg/L)	0.000642	0.000636	0.000640	0.000654	0.000644
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00066	0.00052
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.782	0.798	0.774	0.821	0.790

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-6	L1397452-7	L1397452-8	L1397452-9	L1397452-10
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	08:45	10:15	10:00	11:15	10:30
	Client ID	NF1-X-2	NF1-X-8	NF1-X-7	NF1-X-11	NF1-X-9
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00092	0.00142	0.00065	0.00063	0.00065
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.823	0.835	0.806	0.790	0.807
	Selenium (Se)-Total (mg/L)	0.00036	0.00036	0.00041	0.00034	0.00037
	Silicon (Si)-Total (mg/L)	6.01	6.22	5.82	5.74	5.88
	Silver (Ag)-Total (mg/L)	0.000012	0.000017	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.54	2.51	2.54	2.51	2.54
	Strontium (Sr)-Total (mg/L)	0.153	0.149	0.147	0.150	0.150
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000011	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	0.00011	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	0.015	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00190	0.00188	0.00189	0.00182	0.00193
	Vanadium (V)-Total (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0177	0.0196	0.0160	0.0145	0.0153
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0026	0.0030	0.0026	0.0029	0.0028
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00046	0.00052	0.00041	0.00051	0.00044
	Barium (Ba)-Dissolved (mg/L)	0.0640	0.0653	0.0632	0.0647	0.0633
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000018	0.000018	0.000020	0.000019	0.000017
	Calcium (Ca)-Dissolved (mg/L)	33.9	34.4	34.1	34.4	34.1
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00012	<0.00010	<0.00010	0.00014	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00027	0.00024	0.00027	0.00022	0.00021
	Iron (Fe)-Dissolved (mg/L)	0.084	0.075	0.058	0.126	0.065
	Lead (Pb)-Dissolved (mg/L)	0.000062	0.000068	<0.000050	0.000070	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.00514	0.00523	0.00513	0.00524	0.00522
	Magnesium (Mg)-Dissolved (mg/L)	7.38	7.45	7.28	7.33	7.34
	Manganese (Mn)-Dissolved (mg/L)	0.0499	0.0535	0.0331	0.0648	0.0383
	Molybdenum (Mo)-Dissolved (mg/L)	0.000654	0.000675	0.000630	0.000659	0.000647
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00054	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.806	0.818	0.802	0.800	0.794

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-11	L1397452-12	L1397452-13	L1397452-14	L1397452-15
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	10:45	11:30	00:15		12:45
	Client ID	NF1-X-10	NF1-X-12	NF1-X-14	NF1-X-13	NF1-X-16
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00061	0.00181	0.00275	0.00064	0.00071
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.788	0.874	0.932	0.806	0.793
	Selenium (Se)-Total (mg/L)	0.00038	0.00035	0.00036	0.00039	0.00038
	Silicon (Si)-Total (mg/L)	5.77	6.07	5.93	5.83	5.82
	Silver (Ag)-Total (mg/L)	<0.000010	0.000024	<0.000010	<0.000010	0.000013
	Sodium (Na)-Total (mg/L)	2.51	2.53	2.83	2.55	2.48
	Strontium (Sr)-Total (mg/L)	0.152	0.138	0.166	0.149	0.152
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000015	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	0.017	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00192	0.00167	0.00178	0.00180	0.00186
	Vanadium (V)-Total (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0148	0.0288	0.0923	0.0154	0.0164
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0032	0.0029	0.0035	0.0027	0.0035
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00046	0.00043	0.00044	0.00052	0.00046
	Barium (Ba)-Dissolved (mg/L)	0.0627	0.0651	0.0675	0.0650	0.0634
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000021	0.000027	0.000082	0.000019	0.000018
	Calcium (Ca)-Dissolved (mg/L)	34.5	34.3	37.9	34.5	34.3
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00010	0.00028	0.00178	0.00016	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00022	0.00024	0.00030	<0.00020	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.072	0.215	0.709	0.232	0.066
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000127	0.000259	0.000074	0.000069
	Lithium (Li)-Dissolved (mg/L)	0.00519	0.00520	0.00574	0.00520	0.00513
	Magnesium (Mg)-Dissolved (mg/L)	7.37	7.38	8.35	7.33	7.30
	Manganese (Mn)-Dissolved (mg/L)	0.0440	0.0964	0.294	0.0845	0.0436
	Molybdenum (Mo)-Dissolved (mg/L)	0.000653	0.000633	0.000610	0.000653	0.000633
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	0.00079	0.00257	0.00056	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.794	0.804	0.914	0.796	0.782

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1397452-16 Surface Water 27-NOV-13 13:20 NF1-X-17	L1397452-17 Surface Water 27-NOV-13 12:30 NF1-X-15	L1397452-18 Surface Water 27-NOV-13 13:30 NF1-X-18	L1397452-19 Surface Water 27-NOV-13 14:21 NF1-X-21	L1397452-20 Surface Water 27-NOV-13 15:00 NF1-X-22
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00111	0.00059	0.00061	0.00106	0.00513
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.858	0.798	0.777	0.850	1.12
	Selenium (Se)-Total (mg/L)	0.00037	0.00036	0.00036	0.00037	0.00027
	Silicon (Si)-Total (mg/L)	6.09	5.71	5.60	5.99	6.20
	Silver (Ag)-Total (mg/L)	0.000012	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.60	2.53	2.47	2.70	3.15
	Strontium (Sr)-Total (mg/L)	0.149	0.150	0.145	0.161	0.188
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000028
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00191	0.00183	0.00181	0.00187	0.00140
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0175	0.0150	0.0144	0.0302	0.143
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0027	0.0031	0.0031	0.0028	0.0057
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00046	0.00047	0.00046	0.00043	0.00049
	Barium (Ba)-Dissolved (mg/L)	0.0628	0.0638	0.0635	0.0660	0.0671
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000017	0.000019	0.000017	0.000030	0.000140
	Calcium (Ca)-Dissolved (mg/L)	34.0	34.2	33.8	34.9	39.1
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	0.00042	0.00608
	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00020	<0.00020	0.00022	0.00034
	Iron (Fe)-Dissolved (mg/L)	0.063	0.064	0.062	0.248	2.49
	Lead (Pb)-Dissolved (mg/L)	0.000051	0.000071	<0.000050	0.000102	0.00104
	Lithium (Li)-Dissolved (mg/L)	0.00517	0.00515	0.00501	0.00531	0.00652
	Magnesium (Mg)-Dissolved (mg/L)	7.23	7.28	7.21	7.57	9.01
	Manganese (Mn)-Dissolved (mg/L)	0.0414	0.0425	0.0390	0.112	0.758
	Molybdenum (Mo)-Dissolved (mg/L)	0.000643	0.000639	0.000632	0.000654	0.000473
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00093	0.00464
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.777	0.783	0.780	0.816	1.09

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-21	L1397452-22	L1397452-23	L1397452-24	L1397452-25
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	14:10	13:45	08:20	09:15	08:55
	Client ID	NF1-X-20	NF1-X-19	X3A-R	NF2	NF2-A
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00100	0.00061	0.00223	0.00576	0.0100
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.838	0.787	0.953	0.836	0.857
	Selenium (Se)-Total (mg/L)	0.00039	0.00036	0.00035	0.00036	0.00039
	Silicon (Si)-Total (mg/L)	5.90	5.72	5.40	5.77	5.78
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.57	2.50	2.55	2.62	2.72
	Strontium (Sr)-Total (mg/L)	0.152	0.151	0.186	0.153	0.155
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00192	0.00188	0.00213	0.00189	0.00186
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0190	0.0155	0.249	0.757	1.36
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0036	0.0029	0.0029	0.0077	0.0090
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00044	0.00046	0.00027	0.00032	0.00027
	Barium (Ba)-Dissolved (mg/L)	0.0658	0.0645	0.0651	0.0637	0.0648
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000022	0.000021	0.000154	0.000489	0.000815
	Calcium (Ca)-Dissolved (mg/L)	35.2	34.3	38.4	34.7	35.1
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00016	0.00012	0.00103	0.00369	0.00627
	Copper (Cu)-Dissolved (mg/L)	0.00025	<0.00020	<0.00020	<0.00020	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.159	0.104	0.123	0.138	0.188
	Lead (Pb)-Dissolved (mg/L)	0.000114	0.000080	0.000066	0.000093	0.000109
	Lithium (Li)-Dissolved (mg/L)	0.00531	0.00519	0.00437	0.00546	0.00570
	Magnesium (Mg)-Dissolved (mg/L)	7.45	7.43	8.98	9.32	10.5
	Manganese (Mn)-Dissolved (mg/L)	0.0759	0.0567	0.112	0.206	0.318
	Molybdenum (Mo)-Dissolved (mg/L)	0.000681	0.000655	0.000504	0.000618	0.000613
	Nickel (Ni)-Dissolved (mg/L)	0.00063	0.00050	0.00209	0.00559	0.00926
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.816	0.802	0.959	0.794	0.831

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-26	L1397452-27	L1397452-28	L1397452-29	L1397452-30
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	28-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	08:40	09:00	08:20	08:00	07:45
	Client ID	X2	NF2-B	X3A	X10	X14
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00375	0.00077	0.00231	0.00220	0.00472
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.878	0.796	0.967	0.953	1.37
	Selenium (Se)-Total (mg/L)	0.00038	0.00037	0.00034	0.00033	0.00037
	Silicon (Si)-Total (mg/L)	5.98	5.88	5.59	5.22	5.92
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.71	2.55	2.58	2.52	4.39
	Strontium (Sr)-Total (mg/L)	0.158	0.158	0.178	0.179	0.257
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00193	0.00193	0.00210	0.00202	0.00251
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.426	0.0196	0.258	0.239	0.219
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0040	0.0028	0.0029	0.0019	0.0014
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00027	0.00037	0.00026	0.00015	0.00020
	Barium (Ba)-Dissolved (mg/L)	0.0636	0.0638	0.0648	0.0654	0.0649
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000252	0.000023	0.000149	0.000107	0.000126
	Calcium (Ca)-Dissolved (mg/L)	35.4	34.0	38.2	38.8	66.1
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00190	0.00016	0.00103	0.00080	0.00177
	Copper (Cu)-Dissolved (mg/L)	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.094	0.060	0.093	0.072	0.243
	Lead (Pb)-Dissolved (mg/L)	0.000078	0.000077	0.000080	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.00540	0.00505	0.00429	0.00421	0.00503
	Magnesium (Mg)-Dissolved (mg/L)	8.65	7.48	9.05	9.43	15.2
	Manganese (Mn)-Dissolved (mg/L)	0.144	0.0450	0.109	0.115	1.79
	Molybdenum (Mo)-Dissolved (mg/L)	0.000622	0.000627	0.000497	0.000505	0.000552
	Nickel (Ni)-Dissolved (mg/L)	0.00319	0.00059	0.00207	0.00197	0.00410
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.815	0.813	0.955	0.936	1.30

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-31	L1397452-32	L1397452-33	L1397452-34	L1397452-35
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	26-NOV-13	26-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	13:30	13:00	10:45	10:10	09:30
	Client ID	NF1-F	NF1-E	FIELD BLANK	R8	NF1-E
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00078	0.00061	<0.00050	<0.00050	0.00055
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.801	0.810	<0.050	0.699	0.818
	Selenium (Se)-Total (mg/L)	0.00035	0.00040	<0.00010	0.00037	0.00037
	Silicon (Si)-Total (mg/L)	5.58	5.92	<0.050	5.73	5.61
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	2.52	2.59	<0.050	2.39	2.52
	Strontium (Sr)-Total (mg/L)	0.152	0.158	<0.00020	0.132	0.151
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	0.00186	0.00190	<0.000010	0.00161	0.00180
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0165	0.0149	<0.0030	<0.0030	0.0163
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0033	0.0026	<0.0010	0.0029	0.0032
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00041	0.00049	<0.00010	0.00050	0.00043
	Barium (Ba)-Dissolved (mg/L)	0.0632	0.0650	<0.000050	0.0599	0.0627
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000019	0.000020	<0.000010	<0.000010	0.000020
	Calcium (Ca)-Dissolved (mg/L)	34.5	34.3	<0.020	30.4	33.9
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00010	<0.00010	<0.00010	0.00011
	Copper (Cu)-Dissolved (mg/L)	<0.00020	0.00030	<0.00020	<0.00020	<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.051	0.087	<0.010	0.072	0.066
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000081	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.00512	0.00504	<0.00050	0.00458	0.00502
	Magnesium (Mg)-Dissolved (mg/L)	7.34	7.34	<0.0050	5.93	7.39
	Manganese (Mn)-Dissolved (mg/L)	0.0345	0.0466	<0.000050	0.0284	0.0409
	Molybdenum (Mo)-Dissolved (mg/L)	0.000664	0.000650	<0.000050	0.000650	0.000659
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.784	0.796	<0.050	0.677	0.799

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-36	L1397452-37			
	Description	Surface Water	Surface Water			
	Sampled Date	28-NOV-13	28-NOV-13			
	Sampled Time	10:00	09:45			
	Client ID	R9	R10			
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	<0.00050	<0.00050			
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30			
	Potassium (K)-Total (mg/L)	0.761	0.776			
	Selenium (Se)-Total (mg/L)	0.00037	0.00035			
	Silicon (Si)-Total (mg/L)	5.65	5.72			
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010			
	Sodium (Na)-Total (mg/L)	2.46	2.49			
	Strontium (Sr)-Total (mg/L)	0.145	0.151			
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010			
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010			
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010			
	Uranium (U)-Total (mg/L)	0.00185	0.00188			
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010			
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0124			
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080			
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD			
	Aluminum (Al)-Dissolved (mg/L)	0.0031	0.0029			
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010			
	Arsenic (As)-Dissolved (mg/L)	0.00045	0.00044			
	Barium (Ba)-Dissolved (mg/L)	0.0625	0.0626			
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010			
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050			
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010			
	Cadmium (Cd)-Dissolved (mg/L)	<0.000010	0.000015			
	Calcium (Ca)-Dissolved (mg/L)	33.5	33.8			
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010			
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010			
	Copper (Cu)-Dissolved (mg/L)	<0.00020	<0.00020			
	Iron (Fe)-Dissolved (mg/L)	0.054	0.054			
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050			
	Lithium (Li)-Dissolved (mg/L)	0.00491	0.00501			
	Magnesium (Mg)-Dissolved (mg/L)	7.17	7.22			
	Manganese (Mn)-Dissolved (mg/L)	0.0282	0.0290			
	Molybdenum (Mo)-Dissolved (mg/L)	0.000634	0.000644			
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050			
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30			
	Potassium (K)-Dissolved (mg/L)	0.761	0.768			

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-1	L1397452-2	L1397452-3	L1397452-4	L1397452-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	09:10	09:30	09:45	08:30	09:00
	Client ID	NF1-X-4	NF1-X-5	NF1-X-6	NF1-X-1	NF1-X-3
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00042	0.00040	0.00039	0.00038	0.00037
	Silicon (Si)-Dissolved (mg/L)	5.75	5.72	5.76	5.70	5.77
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.52	2.54	2.51	2.57	2.53
	Strontium (Sr)-Dissolved (mg/L)	0.144	0.146	0.144	0.147	0.149
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00181	0.00184	0.00181	0.00182	0.00183
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0139	0.0149	0.0138	0.0208	0.0147
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-6	L1397452-7	L1397452-8	L1397452-9	L1397452-10
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	08:45	10:15	10:00	11:15	10:30
	Client ID	NF1-X-2	NF1-X-8	NF1-X-7	NF1-X-11	NF1-X-9
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00038	0.00039	0.00038	0.00037	0.00037
	Silicon (Si)-Dissolved (mg/L)	5.72	5.82	5.72	5.74	5.69
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.57	2.60	2.56	2.55	2.56
	Strontium (Sr)-Dissolved (mg/L)	0.148	0.149	0.149	0.145	0.146
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00180	0.00187	0.00182	0.00182	0.00183
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0147	0.0143	0.0139	0.0146	0.0138
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-11	L1397452-12	L1397452-13	L1397452-14	L1397452-15
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	10:45	11:30	00:15		12:45
	Client ID	NF1-X-10	NF1-X-12	NF1-X-14	NF1-X-13	NF1-X-16
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00036	0.00037	0.00038	0.00040	0.00038
	Silicon (Si)-Dissolved (mg/L)	5.69	5.73	5.91	5.72	5.66
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.55	2.55	2.77	2.53	2.52
	Strontium (Sr)-Dissolved (mg/L)	0.150	0.148	0.166	0.150	0.148
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00181	0.00177	0.00176	0.00185	0.00185
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0144	0.0213	0.0917	0.0147	0.0139
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-16	L1397452-17	L1397452-18	L1397452-19	L1397452-20
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13	27-NOV-13
	Sampled Time	13:20	12:30	13:30	14:21	15:00
	Client ID	NF1-X-17	NF1-X-15	NF1-X-18	NF1-X-21	NF1-X-22
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00038	0.00038	0.00038	0.00038	0.00030
	Silicon (Si)-Dissolved (mg/L)	5.69	5.67	5.68	5.84	6.02
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.50	2.51	2.49	2.60	3.04
	Strontium (Sr)-Dissolved (mg/L)	0.148	0.146	0.144	0.153	0.180
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000027
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00183	0.00177	0.00180	0.00182	0.00135
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0133	0.0136	0.0130	0.0288	0.138
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-21	L1397452-22	L1397452-23	L1397452-24	L1397452-25
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	27-NOV-13	27-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	14:10	13:45	08:20	09:15	08:55
	Client ID	NF1-X-20	NF1-X-19	X3A-R	NF2	NF2-A
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00039	0.00039	0.00034	0.00038	0.00036
	Silicon (Si)-Dissolved (mg/L)	5.85	5.79	5.44	5.73	5.80
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.58	2.55	2.54	2.57	2.67
	Strontium (Sr)-Dissolved (mg/L)	0.152	0.147	0.176	0.149	0.154
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00182	0.00178	0.00205	0.00181	0.00181
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0163	0.0138	0.253	0.792	1.35
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-26	L1397452-27	L1397452-28	L1397452-29	L1397452-30
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	28-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
	Sampled Time	08:40	09:00	08:20	08:00	07:45
	Client ID	X2	NF2-B	X3A	X10	X14
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00036	0.00038	0.00033	0.00036	0.00036
	Silicon (Si)-Dissolved (mg/L)	5.79	5.73	5.38	5.34	5.45
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.62	2.57	2.54	2.49	4.35
	Strontium (Sr)-Dissolved (mg/L)	0.154	0.148	0.175	0.177	0.239
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00178	0.00180	0.00201	0.00207	0.00242
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.406	0.0191	0.250	0.231	0.208
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1397452-31 Surface Water 26-NOV-13 13:30 NF1-F	L1397452-32 Surface Water 26-NOV-13 13:00 NF1-E	L1397452-33 Surface Water 28-NOV-13 10:45 FIELD BLANK	L1397452-34 Surface Water 28-NOV-13 10:10 R8	L1397452-35 Surface Water 28-NOV-13 09:30 NF1-E
Sample ID		L1397452-31	L1397452-32	L1397452-33	L1397452-34	L1397452-35
Description		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sampled Date		26-NOV-13	26-NOV-13	28-NOV-13	28-NOV-13	28-NOV-13
Sampled Time		13:30	13:00	10:45	10:10	09:30
Client ID		NF1-F	NF1-E	FIELD BLANK	R8	NF1-E
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00040	0.00037	<0.00010	0.00037	0.00037
	Silicon (Si)-Dissolved (mg/L)	5.79	5.81	<0.050	5.82	5.69
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.53	2.54	<0.050	2.37	2.54
	Strontium (Sr)-Dissolved (mg/L)	0.152	0.152	<0.00020	0.131	0.145
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00185	0.00183	<0.000010	0.00156	0.00183
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0139	0.0136	<0.0010	<0.0010	0.0148
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	<0.00080

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1397452-36	L1397452-37			
	Description	Surface Water	Surface Water			
	Sampled Date	28-NOV-13	28-NOV-13			
	Sampled Time	10:00	09:45			
	Client ID	R9	R10			
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00038	0.00037			
	Silicon (Si)-Dissolved (mg/L)	5.66	5.65			
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010			
	Sodium (Na)-Dissolved (mg/L)	2.47	2.50			
	Strontium (Sr)-Dissolved (mg/L)	0.144	0.149			
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010			
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010			
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010			
	Uranium (U)-Dissolved (mg/L)	0.00179	0.00177			
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0111			
	Zirconium (Zr)-Dissolved (mg/L)	<0.00080	<0.00080			

* 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	Barium (Ba)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1397452-19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -34, -35, -36, -37
Matrix Spike	Calcium (Ca)-Total	MS-B	L1397452-19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -34, -35, -36, -37
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1397452-19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -34, -35, -36, -37
Matrix Spike	Sodium (Na)-Total	MS-B	L1397452-19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -34, -35, -36, -37
Matrix Spike	Strontium (Sr)-Total	MS-B	L1397452-19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -34, -35, -36, -37
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1397452-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -3, -30, -

Reference Information

Parameter	Qualifier	Applies to Sample Number(s)
		31, -32, -33, -34, -35, -36, -37, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
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-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.

ANIONS-CL-IC-WR Water Chloride by Ion Chromatography EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

ANIONS-F-IC-WR Water Fluoride by Ion Chromatography EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

ANIONS-NO2-IC-WR Water Nitrite Nitrogen by Ion Chromatography EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-NO3-IC-WR Water Nitrate Nitrogen by Ion Chromatography EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003. Nitrate is detected by UV absorbance.

ANIONS-SO4-IC-WR Water Sulphate by Ion Chromatography EPA 300.1

This analysis is carried out using procedures adapted from EPA Method 300.1, "Determination of Inorganic Anions by Ion Chromatography", Revision 1.0, April 1999 and from "Determination of Inorganic Anions in Environmental Waters Using a Hydroxide-Selective Column", Application Note 154 v.19, Dionex 2003.

CARBONS-DOC-VA Water Dissolved organic carbon by combustion APHA 5310 TOTAL ORGANIC CARBON (TOC)

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". Dissolved carbon (DOC) fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.

CARBONS-TOC-VA Water Total organic carbon by combustion APHA 5310 TOTAL ORGANIC CARBON (TOC)

This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)".

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.

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 CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

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 3030 B&E / EPA SW-846 6020A

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS APHA 3030 B&E / EPA SW-846 6020A

Reference Information

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 hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).

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.

P-T-COL-VA	Water	Total P in Water by Colour	APHA 4500-P Phosphorous

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-MAN-WR	Water	pH by Meter	APHA 4500-H (B)

"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."

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-LOW-WR	Water	Total Suspended Solids by Grav. (1 mg/L)	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.

ZR-D-MS-VA	Water	Dissolved Zr in Water by ICPMS	EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

ZR-T-MS-VA	Water	Total Zr in Water by ICPMS	EPA SW-846 3005A/6020A

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 - mass spectrometry (EPA Method 6020A).

** 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
WR	ALS ENVIRONMENTAL - WHITEHORSE, YUKON, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1 2 3 4 5

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.

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

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COC # _____

Page 1 of 1

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-COL-VA,P-T-COL-VA	ANIONS-ALL-IC-WR	CARBONS-DOC-VA	CARBONS-TOC-VA,NH3-F-VA	EC-MAN-WR,PH-MAN-WR	MET-D-CCMS-VA,ZR-D-MS-VA	MET-T-CCMS-VA,ZR-T-MS-VA	IONBALANCE-VA	TDS-CALC-VA	TSS-LOW-WR	HARDNESS-CALC-VA		Number of Containers
	NFI-X-4	27-Nov-13	9:10	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-5	27-Nov-13	9:30	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-6	27-Nov-13	9:45	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-1	27-Nov-13	8:30	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-3	27-Nov-13	9:00	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-2	27-Nov-13	8:45	SW	X	X	X	X	X	X	X	X	X	X	X		5

L1397452-COFC

Special Instr... ...E-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				28-Nov-13	4:00	1.5 °C				

GENF 18.01 Front

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

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COC # _____

Page 1 of 1

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK, P-T-COL	ANIONS-AUTO IC	CARBONS-DOC	CARBONS-TOC-NH3	EC-MAN, PH-MAN	MET-D-CCMS	MET-T-CCMS	ION BALANCE	TDS-CALC	TSS-LOW	HARDNESS-CALC		Number of Containers
	NFI-X-8	27-Nov-13	0930/1015	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-3		1000	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-11		1115	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-9		1030	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-10		1045	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-12		1130	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-14		1215	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NFI-X-13		1200	SW	X	X	X	X	X	X	X	X	X	X	X		5

L1397452-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				28-Nov-13	4:00	-1.9 °C				

GENF 18.01 Front

COC # ____________

Page 1 of 1

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

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Report To	
Company:	EDI
Contact:	Meighan Kearns
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8
Phone:	867-393-4882 Fax:
Invoice To	Same as Report ? ☐ Yes ☐ No
Hardcopy of Invoice with Report?	☐ Yes ☐ No
Company:	
Contact:	
Address:	
Phone:	Fax:
Lab Work Order # (lab use only)	

Report Format / Distribution	
☑ Standard ☐ Other	
☑ PDF ☑ Excel ☐ Digital ☐ Fax	
Email 1:	mkearns@edynamics.com
Email 2:	
Email 3:	
Client / Project Information	
Job #:	13-Y-0452
PO / AFE:	
LSD:	
Quote #:	Q38556
ALS Contact:	Sampler:

Service Requested (Rush for routine analysis subject to availability)

- ○ Regular (Standard Turnaround Times - Business Days)
- ○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-COL, PT-COL	ANIONS-ALL-IC	CARBONS-DOC (P)	CARBONS-TOC, NH3 (P)	EC-MAN, PH-MAN	MET-D-CCMS, ZR-D (F P)	MET-T-CCMS, ZR-T (P)	IONBALANCE	TDS-CALC	TSS LOW	HARDNESS-CALC		Number of Containers
	NF1-X-16	27-NOV-13	1245	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NF4-X-17	27-NOV-13	1320	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-15	27-NOV-13	1230	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-18	27-NOV-13	1330	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-21	27-NOV-13	1421	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-12	27-NOV-13	1500	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-20	27-NOV-13	1410	SW	X	X	X	X	X	X	X	X	X	X	X		5
	NF1-X-19	27-NOV-13	1345	SW	X	X	X	X	X	X	X	X	X	X	X		5

L1397452-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Use Faro Equis Format to report

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

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SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by: [signature]	Date: 28-Nov-13	Time: 4:00	Temperature: 0.2 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF

GENF 18.01 Front

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

Page ___ of ___

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALKALINITY	ANIONS - ALL	DOC	TOC	EC, PH	D. METALS - CCMS	T. METALS - CCMS	IONBALANCE	TDS	TSS - LOW	HARDNESS		Number of Containers
	~~R1~~ R2	28-NOV-13	~~1430~~ 820	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NF2	28 NOV-13	915	SW													5
	NF2-B	28 NOV-13	855	SW													5
	X2	28 NOV-13	840	SW													5
	NF2-A	28-NOV-13	900	SW													5
	X3A	28-NOV-13	820	SW													5
	X10	28-NOV-13	800	SW													5
	X14	28-NOV-13	745	SW													5
	NF1-F	28-NOV-13	1330	SW													5
	NF1-E	28-NOV-13	1300	SW	↓	↓	↓	↓	↓	↓	↓	↓	X	X	↓		5

L1397452-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

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Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
	28 NOV-13	1605		28-Nov-13	4:00	-2.2 °C				

GENF 18.01 Front

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

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COC # _____

Page 1 of 1

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	EDI	☑ Standard ☐ Other	○ Regular (Standard Turnaround Times - Business Days)
Contact:	Meighan Kearns	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	2195 - 2nd Avenue	Email 1: mkearns@edynamics.com	◉ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Whitehorse, YT Y1A 3T8	Email 2:	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	867-393-4882 Fax:	Email 3:	
Invoice To	Same as Report ? ☐ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 13-Y-0452	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q38556	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK	ANIONS-ALL	DOC (P)	TOC (P)	EC, pH	D. METALS-CCMS (FP)	T METALS-CCMS (P)	IONBALANCE	TDS	TSS-LOW	HARDNESS		Number of Containers
	~~R10~~ FIELD BLANK	28-NOV-13	1095	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	R8	28-NOV-13	10 10	SW	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		5
	NF1	28-NOV-13	9 30	SW	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		5
	R9	28-NOV-13	10 00	SW	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		5
	R10	28-NOV-13	9 45	SW	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		5

L1397452-COFC

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Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
	28NOV13	405 pm		28-Nov-13	4:00	-2.6 °C				

GENF 18.01 Front