ENVIRONMENTAL DYNAMICS INC.

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January 28, 2014

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 – Trip 9

In response to an urgent request by Assessment and Abandoned Mines (AAM), EDI Environmental Dynamics Inc. (EDI) has been conducting on-going water quality sampling and fish telemetry surveys at the Faro Mine Site since November 2013. Table 1, attached, summarizes the field trips completed. The intent of this memo is to summarize field data obtained during the January 21, 2014 field program, referred to as Trip 9.

The objective of Trip 9 was to complete the following task:

- Surface water sampling in Rose Creek at 11 sites, including QA/QC samples.

Weather conditions on January 21, 2014 were relatively mild, with air temperatures near -8˚C and overcast with sunny periods. The crew was able to collect in-situ data at all sites. There was no overflow at NF1 Pond at the time of sampling; therefor, the crew was able to walk on the ice and collect samples away from the shore.

Field data collected at each surface water sampling site is summarized in Table 2, attached. Figure 1 provides the locations of all water quality sampling. Representative photos of each site and the ALS laboratory analytical reports for all water chemistry samples submitted during this field trip are also attached.

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:

- Table 1. Summary of Trips 1 to 9, Faro Mine Site.
- Table 2. Surface water sampling field data, Trip 9, January 21, 2014.
- Figure 1. Location of surface water sampling, Faro Mine Site, January 21, 2014.
- Photos 1 – 11. Representative site photos.
- ALS Laboratory Analytical Reports

Table 1. Summary of Trips 1 to 9, Faro Mine Site.

Trip No.	Dates	General Tasks
1	Nov 12 – 14, 2013	• Fish telemetry • Piezometer water depth measurements • Ground water sampling • Surface water sampling
2	Nov 27 – 30, 2013	• Fish telemetry • Surface water sampling
3	Dec 10, 2013	• Fish telemetry
4	Dec 19 – 20, 2013	• Surface water sampling
5	Dec 27, 2013	• Surface water sampling
6	Jan 2, 2014	• Surface water sampling
7	Jan 7 – 8, 2014	• Fish telemetry • Surface water sampling
8	Jan 14 – 15, 2014	• Surface water sampling • Fish telemetry
9	Jan 21, 2014	• Surface water sampling

Table 2. Surface water sampling field data, January 21, 2014.

Site Name	UTM Location (NAD83/ Zone 8)		Sample		QA/ QC Rep. ID	In-situ Parameters			
	Easting	Northing	Date	Time		Temp (°C)	SPC (µS/cm)	pH	Turbidity (NTU)
X14	579343	6915079	21-Jan-14	13:00	X14-r	0.1	533.3	7.28	3.95
X10	579447	6914885	21-Jan-14	13:25	-	0	259.1	7.69	2.68
X3A	583152	6912540	21-Jan-14	13:40	-	0	168.8	7.53	1.66
X2	584069	6912770	21-Jan-14	13:55	-	0	240.4	7.35	2.05
NF2-A	584709	6913035	21-Jan-14	14:10	-	0	384.4	7.22	83.2
NF2-B	584726	6913025	21-Jan-14	14:20	-	0	227.2	7.45	2.6
NF2	584691	6913015	21-Jan-14	14:30	-	0	240.2	7.33	1.42
NF1	584962	6913277	21-Jan-14	15:10	-	0	242.8	7.06	4.33
R10	585106	6913480	21-Jan-14	15:20	-	0	224.5	7.56	1.32
R9	585226	6913663	21-Jan-14	15:30	-	0	222.8	7.78	1.78
R8	586298	6914405	21-Jan-14	15:55	-	0	198.6	7.78	1.71

Where, UTM = Universal Transverse Mercator;
QA/QC Rep = Quality Assurance/ Quality Control Replicate;
Temp = water temperature;
SPC = specific conductance;

Location of surface water sampling, Faro Mine Site, January 21, 2014

Legend

- Surface Water Sampling Site
- Road (Mine Access/Haul)
- Topographic Contour (30 m Interval)

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.

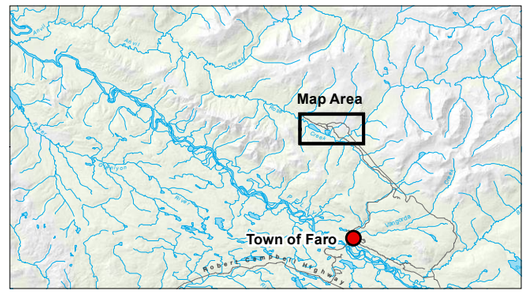
National Road Network courtesy of Her Majesty the Queen in Right of Canada, Department of Natural Resources. All Rights Reserved.

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 1	Date: 27/01/2014



EDI

Map Prepared by
EDI Environmental Dynamics Inc.

Path: J:\Yukon\Projects\2013\13_Y_0452_AAM_NF_Sampling\Mapping\January2014\Fig1_WaterSamplingSites_Jan21.mxd

Site Photos

Photo 1. Upstream view at surface water sampling site X14, January 21, 2014.

Photo 2. Downstream view at surface water sampling site at X10, January 21, 2014.

Photo 3. Upstream view at surface water sampling site at X3A, January 21, 2014.

Photo 4. Downstream view at surface water sampling site at X2, January 21, 2014.

Photo 5. Upstream view at surface water sampling site at NF2-A, January 21, 2014.

Photo 6. Downstream view at surface water sampling site at NF2-B, January 21, 2014.

Photo 7. Upstream view at surface water sampling site at NF2, January 21, 2014.

Photo 8. Upstream view at surface water sampling site at NF1, January 21, 2014.

Photo 9. Downstream view at surface water sampling site R10, January 21, 2014.

Photo 10. Downstream view at surface water sampling site R9, January 21, 2014.

Photo 11. Overview at surface water sampling site R8, January 21, 2014.

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

Date Received: 22-JAN-14
Report Date: 28-JAN-14 15:13 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1414468

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

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1414468-1	L1414468-2	L1414468-3	L1414468-4	L1414468-5
	Description	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
	Sampled Date	21-JAN-14	21-JAN-14	21-JAN-14	21-JAN-14	21-JAN-14
	Sampled Time	14:20	15:55	15:30	15:20	14:10
	Client ID	NF2-B	R8	R9	R10	NF2-A
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	270	234	265	267	450
	Hardness (as CaCO3) (mg/L)	130	115	128	127	211
	pH (pH)	7.91	8.08	8.10	8.00	7.77
	Total Suspended Solids (mg/L)	<1.0	<1.0	<1.0	<1.0	69.5
	Total Dissolved Solids (mg/L)	149	128	147	146	281
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	126	120	125	124	127
	Ammonia, Total (as N) (mg/L)	<0.0050	0.0051	<0.0050	<0.0050	0.0138
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.163	0.162	0.164	0.162	0.315
	Nitrate (as N) (mg/L)	0.245	0.155	0.240	0.237	0.324
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0033
	Phosphorus (P)-Total (mg/L)	0.0072	0.0063	0.0067	0.0058	0.0685
	Sulfate (SO4) (mg/L)	20.6	9.43	19.6	19.9	118
	Anion Sum (meq/L)	2.97	2.60	2.92	2.93	5.03
	Cation Sum (meq/L)	2.75	2.44	2.70	2.69	4.74
	Cation - Anion Balance (%)	-3.7	-3.3	-3.9	-4.2	-3.0
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.17	1.09	1.10	0.99	1.84
	Total Organic Carbon (mg/L)	1.22	1.10	1.25	1.07	2.29
Total Metals	Aluminum (Al)-Total (mg/L)	0.0166	0.0124	0.0216	0.0151	1.37
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00016
	Arsenic (As)-Total (mg/L)	0.00052	0.00066	0.00063	0.00058	0.00295
	Barium (Ba)-Total (mg/L)	0.0693	0.0687	0.0698	0.0686	0.0956
	Beryllium (Be)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00018
	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	<0.000010	<0.000010	0.000017	0.00644
	Calcium (Ca)-Total (mg/L)	39.7	35.5	38.1	38.4	42.1
	Chromium (Cr)-Total (mg/L)	0.00014	0.00014	0.00015	0.00012	0.00302
	Cobalt (Co)-Total (mg/L)	0.00013	<0.00010	<0.00010	<0.00010	0.0391
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00377
	Iron (Fe)-Total (mg/L)	0.129	0.166	0.157	0.143	6.08
	Lead (Pb)-Total (mg/L)	0.000511	<0.000050	0.000084	0.000062	0.0249
	Lithium (Li)-Total (mg/L)	0.00653	0.00599	0.00597	0.00624	0.0113
	Magnesium (Mg)-Total (mg/L)	8.28	6.85	8.19	8.16	24.1
	Manganese (Mn)-Total (mg/L)	0.0219	0.0234	0.0241	0.0258	1.83
	Molybdenum (Mo)-Total (mg/L)	0.000805	0.000845	0.000836	0.000806	0.000914

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1414468-6 Surface Water 21-JAN-14 15:10 NF1	L1414468-7 Surface Water 21-JAN-14 19:30 FIELD BLANK	L1414468-8 Surface Water 22-JAN-14 12:30 TRAVEL BLANK	L1414468-9 Surface Water 21-JAN-14 13:00 X14-R	L1414468-10 Surface Water 21-JAN-14 13:00 X14
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (uS/cm)	276	<2.0	<2.0	626	627
	Hardness (as CaCO3) (mg/L)	129	<0.50	<0.50	308	307
	pH (pH)	7.93	5.52	5.48	7.99	8.01
	Total Suspended Solids (mg/L)	1.8	<1.0	<1.0	1.4	1.6
	Total Dissolved Solids (mg/L)	154	<1.0	<1.0	404	404
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	130	<2.0	<2.0	169	168
	Ammonia, Total (as N) (mg/L)	0.0064	<0.0050	<0.0050	0.0609	0.0618
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.164	<0.020	<0.020	0.155	0.156
	Nitrate (as N) (mg/L)	0.279	<0.0050	<0.0050	0.199	0.198
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Phosphorus (P)-Total (mg/L)	0.0062	<0.0020	<0.0020	0.0199	<0.0020
	Sulfate (SO4) (mg/L)	22.4	<0.50	<0.50	179	179
	Anion Sum (meq/L)	3.10	<0.10	<0.10	7.13	7.11
	Cation Sum (meq/L)	2.73	<0.10	<0.10	6.59	6.57
	Cation - Anion Balance (%)	-6.4	0.0	0.0	-4.0	-4.0
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.19	<0.50		1.14	1.09
	Total Organic Carbon (mg/L)	1.32	<0.50	<0.50	0.99	1.21
Total Metals	Aluminum (Al)-Total (mg/L)	0.0161	<0.0030	<0.0030	0.0142	0.0178
	Antimony (Sb)-Total (mg/L)	0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00062	<0.00010	<0.00010	0.00039	0.00040
	Barium (Ba)-Total (mg/L)	0.0725	<0.000050	<0.000050	0.0665	0.0669
	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)	0.000033	<0.000010	<0.000010	0.000224	0.000218
	Calcium (Ca)-Total (mg/L)	40.9	<0.020	<0.020	92.2	92.4
	Chromium (Cr)-Total (mg/L)	0.00018	<0.00010	<0.00010	0.00012	0.00013
	Cobalt (Co)-Total (mg/L)	0.00054	<0.00010	<0.00010	0.00292	0.00292
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Iron (Fe)-Total (mg/L)	0.523	<0.010	<0.010	0.690	0.695
	Lead (Pb)-Total (mg/L)	0.000154	<0.000050	<0.000050	0.000185	0.000201
	Lithium (Li)-Total (mg/L)	0.00675	<0.00050	<0.00050	0.00689	0.00670
	Magnesium (Mg)-Total (mg/L)	8.66	<0.0050	<0.0050	20.3	20.4
	Manganese (Mn)-Total (mg/L)	0.0736	<0.000050	<0.000050	3.13	3.11
	Molybdenum (Mo)-Total (mg/L)	0.000826	<0.000050	<0.000050	0.000676	0.000694

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1414468-11	L1414468-12	L1414468-13	L1414468-14	
	Description	Surface Water	Surface Water	Surface Water	Surface Water	
	Sampled Date	21-JAN-14	21-JAN-14	21-JAN-14	21-JAN-14	
	Sampled Time	13:25	13:40	14:30	13:54	
	Client ID	X10	X3A	NF2	X2	
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	306	300	290	294	
	Hardness (as CaCO3) (mg/L)	146	142	136	140	
	pH (pH)	8.09	8.01	7.92	7.94	
	Total Suspended Solids (mg/L)	<1.0	<1.0	<1.0	<1.0	
	Total Dissolved Solids (mg/L)	174	168	160	165	
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	138	131	126	127	
	Ammonia, Total (as N) (mg/L)	0.0090	0.0106	<0.0050	<0.0050	
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	
	Fluoride (F) (mg/L)	0.165	0.169	0.178	0.176	
	Nitrate (as N) (mg/L)	0.228	0.231	0.244	0.240	
	Nitrite (as N) (mg/L)	<0.0010	0.0011	<0.0010	<0.0010	
	Phosphorus (P)-Total (mg/L)	0.0034	0.0043	0.0052	0.0044	
	Sulfate (SO4) (mg/L)	32.4	31.6	30.0	32.1	
	Anion Sum (meq/L)	3.46	3.30	3.16	3.24	
	Cation Sum (meq/L)	3.09	3.02	2.90	2.97	
	Cation - Anion Balance (%)	-5.6	-4.5	-4.4	-4.3	
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	1.11	1.11	1.01	1.25	
	Total Organic Carbon (mg/L)	1.21	1.17	1.01	1.23	
Total Metals	Aluminum (Al)-Total (mg/L)	0.0088	0.0151	0.0217	0.0181	
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Total (mg/L)	0.00032	0.00043	0.00054	0.00050	
	Barium (Ba)-Total (mg/L)	0.0683	0.0703	0.0693	0.0695	
	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)	0.000195	0.000282	0.000550	0.000415	
	Calcium (Ca)-Total (mg/L)	42.5	42.2	38.6	39.8	
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00012	0.00013	0.00011	
	Cobalt (Co)-Total (mg/L)	0.00090	0.00158	0.00343	0.00263	
	Copper (Cu)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Iron (Fe)-Total (mg/L)	0.285	0.309	0.201	0.234	
	Lead (Pb)-Total (mg/L)	0.000138	0.000202	0.000324	0.000306	
	Lithium (Li)-Total (mg/L)	0.00535	0.00556	0.00658	0.00680	
	Magnesium (Mg)-Total (mg/L)	10.2	9.71	9.75	10.2	
	Manganese (Mn)-Total (mg/L)	0.0925	0.146	0.180	0.173	
	Molybdenum (Mo)-Total (mg/L)	0.000679	0.000684	0.000793	0.000785	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1414468-1 Surface Water 21-JAN-14 14:20 NF2-B	L1414468-2 Surface Water 21-JAN-14 15:55 R8	L1414468-3 Surface Water 21-JAN-14 15:30 R9	L1414468-4 Surface Water 21-JAN-14 15:20 R10	L1414468-5 Surface Water 21-JAN-14 14:10 NF2-A
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00051	<0.00050	<0.00050	<0.00050	0.0537
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	0.935	0.863	0.931	0.931	1.34
	Selenium (Se)-Total (mg/L)	0.00045	0.00043	0.00044	0.00043	0.00053
	Silicon (Si)-Total (mg/L)	5.96	5.85	5.74	5.78	7.94
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000054
	Sodium (Na)-Total (mg/L)	2.87	2.78	2.86	2.87	3.53
	Strontium (Sr)-Total (mg/L)	0.173	0.153	0.171	0.167	0.200
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000041
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00017
	Titanium (Ti)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	0.030
	Uranium (U)-Total (mg/L)	0.00223	0.00202	0.00222	0.00225	0.00247
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0031
	Zinc (Zn)-Total (mg/L)	0.0231	<0.0030	<0.0030	0.0107	8.40
	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)	0.0025	0.0023	0.0026	0.0022	0.0179
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00038	0.00047	0.00040	0.00043	0.00017
	Barium (Ba)-Dissolved (mg/L)	0.0676	0.0680	0.0675	0.0694	0.0705
	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)	0.000023	<0.000010	<0.000010	0.000014	0.00549
	Calcium (Ca)-Dissolved (mg/L)	38.6	34.9	37.8	37.5	42.5
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	0.00018	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00011	<0.00010	<0.00010	<0.00010	0.0351
	Copper (Cu)-Dissolved (mg/L)	0.00027	0.00025	0.00024	0.00025	0.00032
	Iron (Fe)-Dissolved (mg/L)	0.029	0.055	0.036	0.032	0.482
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	0.000147
	Lithium (Li)-Dissolved (mg/L)	0.00641	0.00612	0.00624	0.00642	0.0100
	Magnesium (Mg)-Dissolved (mg/L)	8.24	6.75	8.09	8.14	25.4
	Manganese (Mn)-Dissolved (mg/L)	0.0202	0.0211	0.0215	0.0235	1.62
	Molybdenum (Mo)-Dissolved (mg/L)	0.000754	0.000777	0.000767	0.000752	0.000757
	Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.0494
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.942	0.846	0.926	0.931	1.16

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1414468-6 Surface Water 21-JAN-14 15:10 NF1	L1414468-7 Surface Water 21-JAN-14 19:30 FIELD BLANK	L1414468-8 Surface Water 22-JAN-14 12:30 TRAVEL BLANK	L1414468-9 Surface Water 21-JAN-14 13:00 X14-R	L1414468-10 Surface Water 21-JAN-14 13:00 X14
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00074	<0.00050	<0.00050	0.00671	0.00689
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Total (mg/L)	1.02	<0.050	<0.050	1.66	1.68
	Selenium (Se)-Total (mg/L)	0.00043	<0.00010	<0.00010	0.00038	0.00039
	Silicon (Si)-Total (mg/L)	6.17	<0.050	<0.050	5.78	5.97
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	3.03	<0.050	<0.050	5.72	5.73
	Strontium (Sr)-Total (mg/L)	0.184	<0.00020	<0.00020	0.306	0.302
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.000010	0.000014	0.000040
	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)	0.00239	<0.000010	<0.000010	0.00293	0.00296
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0279	<0.0030	<0.0030	0.313	0.311
	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
	Aluminum (Al)-Dissolved (mg/L)	0.0022	<0.0010		0.0018	0.0021
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010		<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00035	<0.00010		0.00021	0.00022
	Barium (Ba)-Dissolved (mg/L)	0.0678	<0.000050		0.0655	0.0651
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010		<0.00010	<0.00010
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050		<0.00050	<0.00050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010		<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000020	<0.000010		0.000202	0.000199
	Calcium (Ca)-Dissolved (mg/L)	38.2	<0.020		90.2	89.8
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010		<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00027	<0.00010		0.00278	0.00287
	Copper (Cu)-Dissolved (mg/L)	0.00027	<0.00020		0.00024	0.00025
	Iron (Fe)-Dissolved (mg/L)	0.033	<0.010		0.384	0.394
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050		<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.00670	<0.00050		0.00683	0.00688
	Magnesium (Mg)-Dissolved (mg/L)	8.14	<0.0050		20.0	20.0
	Manganese (Mn)-Dissolved (mg/L)	0.0418	<0.000050		3.06	3.10
	Molybdenum (Mo)-Dissolved (mg/L)	0.000773	<0.000050		0.000651	0.000669
	Nickel (Ni)-Dissolved (mg/L)	0.00051	<0.00050		0.00643	0.00650
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30		<0.30	<0.30
	Potassium (K)-Dissolved (mg/L)	0.937	<0.050		1.65	1.67

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1414468-11	L1414468-12	L1414468-13	L1414468-14	
	Description	Surface Water	Surface Water	Surface Water	Surface Water	
	Sampled Date	21-JAN-14	21-JAN-14	21-JAN-14	21-JAN-14	
	Sampled Time	13:25	13:40	14:30	13:54	
	Client ID	X10	X3A	NF2	X2	
Grouping	**Analyte**					
WATER						
Total Metals	Nickel (Ni)-Total (mg/L)	0.00270	0.00311	0.00515	0.00412	
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30	<0.30	<0.30	
	Potassium (K)-Total (mg/L)	1.06	1.09	0.968	0.992	
	Selenium (Se)-Total (mg/L)	0.00039	0.00036	0.00042	0.00042	
	Silicon (Si)-Total (mg/L)	5.36	5.59	5.77	5.90	
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Total (mg/L)	2.82	2.91	2.95	3.01	
	Strontium (Sr)-Total (mg/L)	0.194	0.196	0.175	0.179	
	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)	0.00245	0.00250	0.00214	0.00227	
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Total (mg/L)	0.371	0.432	0.782	0.608	
	Zirconium (Zr)-Total (mg/L)	<0.00080	<0.00080	<0.00080	<0.00080	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.0019	0.0030	0.0049	0.0038	
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Arsenic (As)-Dissolved (mg/L)	0.00013	0.00023	0.00035	0.00026	
	Barium (Ba)-Dissolved (mg/L)	0.0678	0.0683	0.0678	0.0676	
	Beryllium (Be)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	0.000185	0.000273	0.000458	0.000390	
	Calcium (Ca)-Dissolved (mg/L)	42.0	41.1	38.3	39.5	
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Cobalt (Co)-Dissolved (mg/L)	0.00085	0.00151	0.00287	0.00247	
	Copper (Cu)-Dissolved (mg/L)	0.00028	0.00027	0.00028	0.00026	
	Iron (Fe)-Dissolved (mg/L)	0.038	0.130	0.084	0.068	
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	
	Lithium (Li)-Dissolved (mg/L)	0.00549	0.00573	0.00677	0.00708	
	Magnesium (Mg)-Dissolved (mg/L)	10.1	9.59	9.74	9.96	
	Manganese (Mn)-Dissolved (mg/L)	0.0881	0.137	0.153	0.166	
	Molybdenum (Mo)-Dissolved (mg/L)	0.000623	0.000603	0.000735	0.000744	
	Nickel (Ni)-Dissolved (mg/L)	0.00263	0.00293	0.00442	0.00400	
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30	<0.30	<0.30	
	Potassium (K)-Dissolved (mg/L)	1.05	1.06	0.971	0.983	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1414468-1 Surface Water 21-JAN-14 14:20 NF2-B	L1414468-2 Surface Water 21-JAN-14 15:55 R8	L1414468-3 Surface Water 21-JAN-14 15:30 R9	L1414468-4 Surface Water 21-JAN-14 15:20 R10	L1414468-5 Surface Water 21-JAN-14 14:10 NF2-A
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00044	0.00044	0.00043	0.00042	0.00043
	Silicon (Si)-Dissolved (mg/L)	5.87	5.89	5.71	6.03	5.92
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.84	2.72	2.82	2.83	3.53
	Strontium (Sr)-Dissolved (mg/L)	0.170	0.148	0.163	0.159	0.191
	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)	0.00224	0.00196	0.00214	0.00211	0.00228
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0229	<0.0010	<0.0010	0.0096	8.38
	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	L1414468-6 Surface Water 21-JAN-14 15:10 NF1	L1414468-7 Surface Water 21-JAN-14 19:30 FIELD BLANK	L1414468-8 Surface Water 22-JAN-14 12:30 TRAVEL BLANK	L1414468-9 Surface Water 21-JAN-14 13:00 X14-R	L1414468-10 Surface Water 21-JAN-14 13:00 X14
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00043	<0.00010		0.00039	0.00039
	Silicon (Si)-Dissolved (mg/L)	5.97	<0.050		5.75	5.93
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010		<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	2.85	<0.050		5.81	5.80
	Strontium (Sr)-Dissolved (mg/L)	0.167	<0.00020		0.305	0.296
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010		<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010		<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010		<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	0.00209	<0.000010		0.00284	0.00281
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010		<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0191	<0.0010		0.306	0.309
	Zirconium (Zr)-Dissolved (mg/L)	<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	L1414468-11 Surface Water 21-JAN-14 13:25 X10	L1414468-12 Surface Water 21-JAN-14 13:40 X3A	L1414468-13 Surface Water 21-JAN-14 14:30 NF2	L1414468-14 Surface Water 21-JAN-14 13:54 X2	
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00042	0.00038	0.00044	0.00044	
	Silicon (Si)-Dissolved (mg/L)	5.32	5.63	5.78	5.84	
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Sodium (Na)-Dissolved (mg/L)	2.77	2.84	2.92	2.96	
	Strontium (Sr)-Dissolved (mg/L)	0.190	0.187	0.170	0.171	
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Titanium (Ti)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	0.00232	0.00230	0.00213	0.00213	
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Dissolved (mg/L)	0.368	0.429	0.679	0.602	
	Zirconium (Zr)-Dissolved (mg/L)	<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	Calcium (Ca)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Total Organic Carbon	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1414468-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -9
Matrix Spike	Sulfate (SO4)	MS-B	L1414468-10, -5, -9
Matrix Spike	Sulfate (SO4)	MS-B	L1414468-10, -5, -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-VA	Water	Chloride by Ion Chromatography	APHA 4110 B.

This analysis is carried out using procedures adapted from APHA Method 4110 B. "Ion Chromatography with Chemical Suppression of Eluent Conductivity" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography".

ANIONS-F-IC-VA	Water	Fluoride by Ion Chromatography	APHA 4110 B.

This analysis is carried out using procedures adapted from APHA Method 4110 B. "Ion Chromatography with Chemical Suppression of Eluent Conductivity" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography".

ANIONS-NO2-IC-VA	Water	Nitrite in Water by Ion Chromatography	EPA 300.0

This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Nitrite is detected by UV absorbance.

ANIONS-NO3-IC-VA	Water	Nitrate in Water by Ion Chromatography	EPA 300.0

This analysis is carried out using procedures adapted from EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Nitrate is detected by UV absorbance.

ANIONS-SO4-IC-VA	Water	Sulfate by Ion Chromatography	APHA 4110 B.

This analysis is carried out using procedures adapted from APHA Method 4110 B. "Ion Chromatography with Chemical Suppression of Eluent Conductivity" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography".

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-PCT-VA	Water	Conductivity (Automated)	APHA 2510 Auto. Conduc.

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

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.

Reference Information

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

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

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

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

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

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

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-VA Water Total Suspended Solids by Grav. (1 mg/L) APHA 2540 Gravimetric

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by 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
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

1 2

Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
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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		Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☑ No	Job #:	13-Y-0452	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q38556	
Lab Work Order # (lab use only)	L1414468	ALS Contact:	Sampler: LG, JM	

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
	NF2-B	21 Jan 14	14:20	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	R8	21 Jan 14	15 55	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	R9	21 Jan 14	15:30	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	R10	21 Jan 14	15:20	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NF2-A	21 Jan 14	14:10	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	NF1	21 Jan 14	15:10	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	/	/	/	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
	/	/	/	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5

RUSH

L1414468-COFC

Special Inst... ...ME-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
				22-JAN-14	12:30	23, 1.8 °C				

PR 23 JAN 9:40 2 °C

GENF 18.01 Front

ALS Environmental

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COC # _____

Page 2 of 2

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	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:		**Analysis Request**
Invoice To	Same as Report ? ☑ Yes ☐ No	**Client / Project Information**		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☑ No	Job #:	13-Y-0452	
Company:		PO / AFE:		
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Address:				
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Lab Work Order # (lab use only)	L1414468	ALS Contact:	Sampler: LG / JM	

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1	Field Blank	21-Jan-14	19:30	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
2	Trip Blank	10-Jan-14	NA	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
3	X 14-1	21-Jan-14	13:00	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
4	X 14	21-Jan-14	13:00	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
5	X 10	21-Jan-14	13:25	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
6	X 3A	21-Jan-14	13:45	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
7	NFL	21-Jan-14	14:30	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
8	X2	21 Jan 14	13:54	Surface Water	X	X	X	X	X	X	X	X	X	X	X		5
9																	
10																	
11																	
12																	

L1414468-COFC

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

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				22-JAN-14	12:30	2.3, 1.8 °C				
			PR	23 JAN	9:40	2 °C				

GENF 18.01 Front