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

Date Received: 20-AUG-15
Report Date: 01-SEP-15 10:42 (MT)
Version: FINAL

Client Phone: 867-393-4882

Certificate of Analysis

Lab Work Order #: L1660964

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: 1, 2, 3, 4, 5, 6
Legal Site Desc:

Can Dang
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-1 Water 19-AUG-15 18:45 WQ-DC-12	L1660964-2 Water 19-AUG-15 19:00 WQ-DC-DX+105	L1660964-3 Water 18-AUG-15 13:57 WQ-VC-R	L1660964-4 Water 18-AUG-15 17:40 WQ-DC-R	L1660964-5 Water 18-AUG-15 13:57 WQ-VC-RR
WATER						
Physical Tests	Conductivity (uS/cm)	777	767	226	903	230
	Hardness (as CaCO3) (mg/L)	448	443	117	523	115
	pH (pH)	7.67	7.55	7.98	7.87	8.01
	Total Suspended Solids (mg/L)	6.0	<3.0	14.0	4.7	<3.0
	Total Dissolved Solids (mg/L)	522	521	129	638	129
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	175	174	79.3	138	80.8
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	175	174	79.3	138	80.8
	Ammonia, Total (as N) (mg/L)	0.0086	0.0097	<0.0050	0.202	<0.0050
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.129	0.126	0.055	0.081	0.053
	Nitrate (as N) (mg/L)	<0.0050	<0.0050	0.0619	0.324	0.0635
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	0.0114	<0.0010
	Sulfate (SO4) (mg/L)	252	254	36.5	360	36.6
	Anion Sum (meq/L)	8.76	8.78	2.35	10.3	2.38
	Cation Sum (meq/L)	9.28	9.16	2.51	11.0	2.46
	Cation - Anion Balance (%)	2.9	2.2	3.2	3.6	1.5
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	<2.0 DLA	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.0994	0.0129	0.295	0.0876	0.276
	Antimony (Sb)-Total (mg/L)	0.00564	0.00543	0.00028	0.00113	0.00028
	Arsenic (As)-Total (mg/L)	0.0244	0.0156	0.00216	0.0147	0.00201
	Barium (Ba)-Total (mg/L)	0.0251	0.0244	0.0641	0.0488	0.0645
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	0.020	<0.010
	Cadmium (Cd)-Total (mg/L)	0.00127	0.000995	0.0000404	0.0000557	0.0000446
	Calcium (Ca)-Total (mg/L)	113	113	30.1	128	30.7
	Chromium (Cr)-Total (mg/L)	0.00023	0.00013	0.00057	0.00037	0.00053
	Cobalt (Co)-Total (mg/L)	0.00041	0.00037	0.00028	0.00106	0.00027
	Copper (Cu)-Total (mg/L)	0.00159	0.00122	0.00201	0.00160	0.00190
	Iron (Fe)-Total (mg/L)	0.603	0.256	0.567	2.25	0.599
	Lead (Pb)-Total (mg/L)	0.00127	0.000190	0.000887	0.000278	0.000913
	Lithium (Li)-Total (mg/L)	0.0048	0.0048	<0.0010	0.0018	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-6 Water 18-AUG-15 14:45 WQ-VC-UMN	L1660964-7 Water 19-AUG-15 19:50 WQ-DC-DX	L1660964-8 Water 19-AUG-15 19:30 WQ-DC-14	L1660964-9 Water 19-AUG-15 14:40 WQ-TP	L1660964-10 Water 19-AUG-15 16:30 WQ-CH-P-13-01
WATER						
Physical Tests	Conductivity (uS/cm)	244	444	316	1430	1520
	Hardness (as CaCO3) (mg/L)	126	225	158	823	967
	pH (pH)	8.03	7.64	7.65	7.99	6.35
	Total Suspended Solids (mg/L)	9.3	163	6.7	17.3	4.0
	Total Dissolved Solids (mg/L)	139	283	193	1140	1270
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	86.3	79.4	67.2	66.0	5.2
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	86.3	79.4	67.2	66.0	5.2
	Ammonia, Total (as N) (mg/L)	<0.0050	0.0181	<0.0050	0.0189	0.0058
	Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<1.0 DLA	<2.5 DLA
	Fluoride (F) (mg/L)	0.055	0.058	0.053	0.252	0.14
	Nitrate (as N) (mg/L)	0.0628	0.0090	<0.0050	0.024	0.099
	Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0020 DLA	<0.0050 DLA
	Sulfate (SO4) (mg/L)	39.4	147	89.9	767	924
	Anion Sum (meq/L)	2.55	4.64	3.22	17.3	19.4
	Cation Sum (meq/L)	2.68	4.82	3.39	17.7	19.8
	Cation - Anion Balance (%)	2.4	1.9	2.6	1.2	1.1
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.291	3.16	0.0329	0.0845	0.182
	Antimony (Sb)-Total (mg/L)	0.00030	0.00244	0.00188	0.0415	0.00011
	Arsenic (As)-Total (mg/L)	0.00198	0.0339	0.00588	0.142	0.00063
	Barium (Ba)-Total (mg/L)	0.0653	0.0916	0.0417	0.0131	0.00982
	Beryllium (Be)-Total (mg/L)	<0.000020	0.000140	<0.000020	<0.000020	0.000042
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000509	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	0.084	<0.010
	Cadmium (Cd)-Total (mg/L)	0.0000374	0.000193	0.0000882	0.00117	0.0130
	Calcium (Ca)-Total (mg/L)	32.5	61.6	43.4	240	229
	Chromium (Cr)-Total (mg/L)	0.00049	0.00418	0.00016	0.00024	0.00013
	Cobalt (Co)-Total (mg/L)	0.00023	0.00201	<0.00010	0.00039	<0.00010
	Copper (Cu)-Total (mg/L)	0.00183	0.00954	0.00231	0.0321	0.00099
	Iron (Fe)-Total (mg/L)	0.461	5.40	0.035	0.712	0.033
	Lead (Pb)-Total (mg/L)	0.000962	0.00653	0.000532	0.0392	<0.000050
	Lithium (Li)-Total (mg/L)	<0.0010	0.0025	<0.0010	0.0095	0.0021

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-11 Water 19-AUG-15 15:10 WQ-DC-B	L1660964-12 Water 19-AUG-15 18:00 WQ-DC-10	L1660964-13 Water 19-AUG-15 18:30 WQ-DC-11	L1660964-14 Water 19-AUG-15 19:20 WQ-DC-13	L1660964-15 Water 19-AUG-15 17:40 WQ-DC-8
WATER						
Physical Tests	Conductivity (uS/cm)	927	1170	755	319	1460
	Hardness (as CaCO3) (mg/L)	548	731	434	159	901
	pH (pH)	7.95	8.01	7.95	7.76	7.90
	Total Suspended Solids (mg/L)	72.7	4.0	<3.0	<3.0	10.7
	Total Dissolved Solids (mg/L)	661	858	510	194	1120
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	134	268	169	67.6	267
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	134	268	169	67.6	267
	Ammonia, Total (as N) (mg/L)	0.0926	0.0248	<0.0050	<0.0050	0.661
	Chloride (Cl) (mg/L)	<0.50	<1.0 DLA	<0.50	<0.50	<2.5 DLA
	Fluoride (F) (mg/L)	0.075	0.205	0.127	0.050	0.13
	Nitrate (as N) (mg/L)	0.0409	<0.010 DLA	<0.0050	<0.0050	0.117
	Nitrite (as N) (mg/L)	0.0017	<0.0020 DLA	<0.0010	<0.0010	<0.0050 DLA
	Sulfate (SO4) (mg/L)	387	431	249	89.9	632
	Anion Sum (meq/L)	10.7	14.3	8.56	3.22	18.5
	Cation Sum (meq/L)	11.3	15.1	8.96	3.40	18.9
	Cation - Anion Balance (%)	2.7	2.5	2.3	2.7	1.2
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	<0.20	<0.20	0.51	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	1.11	0.0354	0.0626	0.0232	0.0513
	Antimony (Sb)-Total (mg/L)	0.00168	0.0124	0.00949	0.00197	0.00287
	Arsenic (As)-Total (mg/L)	0.0151	0.0717	0.0160	0.00620	0.0677
	Barium (Ba)-Total (mg/L)	0.0641	0.0166	0.0207	0.0441	0.0509
	Beryllium (Be)-Total (mg/L)	0.000055	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	0.016	<0.010	<0.010	<0.010	0.060
	Cadmium (Cd)-Total (mg/L)	0.000151	0.00191	0.000986	0.0000829	0.000476
	Calcium (Ca)-Total (mg/L)	123	189	114	46.7	214
	Chromium (Cr)-Total (mg/L)	0.00228	<0.00010	0.00018	0.00018	0.00022
	Cobalt (Co)-Total (mg/L)	0.00095	0.00099	0.00018	<0.00010	0.00090
	Copper (Cu)-Total (mg/L)	0.00477	0.00117	0.00152	0.00246	0.00085
	Iron (Fe)-Total (mg/L)	3.45	1.86	0.218	0.025	5.76
	Lead (Pb)-Total (mg/L)	0.00129	0.00208	0.000484	0.000433	0.000603
	Lithium (Li)-Total (mg/L)	0.0028	0.0091	0.0048	<0.0010	0.0039

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-16 Water 19-AUG-15 17:15 WQ-DC-D1B	L1660964-17 Water 19-AUG-15 13:15 WQ-DC-U	L1660964-18 Water 19-AUG-15 14:15 WQ-SEEP	L1660964-19 Water 19-AUG-15 15:15 WQ-DC-B-R	L1660964-20 Water 20-AUG-15 08:00 WQ-DESS-01
WATER						
Physical Tests	Conductivity (uS/cm)	1410	997	1580	933	1030
	Hardness (as CaCO3) (mg/L)	874	576	890	544	601
	pH (pH)	8.22	8.08	7.37	7.97	6.08
	Total Suspended Solids (mg/L)	15.3	58.0	23.3	66.7	<3.0
	Total Dissolved Solids (mg/L)	1070	722	1250	662	777
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	259	150	240	137	3.4
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	259	150	240	137	3.4
	Ammonia, Total (as N) (mg/L)	0.250	0.498	4.48	0.104	0.0053
	Chloride (Cl) (mg/L)	<1.0 DLA	<1.0 DLA	<2.5 DLA	<0.50	<1.0 DLA
	Fluoride (F) (mg/L)	0.128	0.084	0.12	0.075	0.054
	Nitrate (as N) (mg/L)	0.105	0.169	0.395	0.0411	0.035
	Nitrite (as N) (mg/L)	0.0023	0.0089	0.0142	0.0018	<0.0020 DLA
	Sulfate (SO4) (mg/L)	610	419	714	386	561
	Anion Sum (meq/L)	17.9	11.7	19.7	10.8	11.7
	Cation Sum (meq/L)	18.0	12.2	20.7	11.3	12.3
	Cation - Anion Balance (%)	0.2	1.8	2.6	2.3	2.4
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	0.0138	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	0.0630	<0.0050	<0.0050
	Cyanate (mg/L)	<2.0 DLA	0.24	0.75	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	4.39	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.272	0.891	0.0219	1.08	0.142
	Antimony (Sb)-Total (mg/L)	0.00468	0.00137	0.00047	0.00168	0.00018
	Arsenic (As)-Total (mg/L)	0.0244	0.0229	0.0677	0.0158	0.00075
	Barium (Ba)-Total (mg/L)	0.0381	0.0641	0.0699	0.0676	0.0151
	Beryllium (Be)-Total (mg/L)	<0.000020	0.000039	<0.000020	0.000056	0.000033
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	0.038	0.021	0.057	0.017	<0.010
	Cadmium (Cd)-Total (mg/L)	0.000291	0.000125	0.000411	0.000160	0.00469
	Calcium (Ca)-Total (mg/L)	201	140	268	125	146
	Chromium (Cr)-Total (mg/L)	0.00055	0.00198	0.00054	0.00227	0.00023
	Cobalt (Co)-Total (mg/L)	0.00054	0.00172	0.00847	0.00100	0.00026
	Copper (Cu)-Total (mg/L)	0.00141	0.00489	0.00270	0.00544	0.00158
	Iron (Fe)-Total (mg/L)	1.59	3.47	12.5	3.47	0.115
	Lead (Pb)-Total (mg/L)	0.000626	0.00114	0.000063	0.00128	0.000069
	Lithium (Li)-Total (mg/L)	0.0072	0.0028	0.0012	0.0031	0.0017

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-21 Water 20-AUG-15 08:05 WQ-DESS-01R	L1660964-22 Water 20-AUG-15 08:30 WQ-DESS-02	L1660964-23 Water 20-AUG-15 08:15 WQ-DESS-03	L1660964-24 Water 19-AUG-15 09:45 WQ-BC	L1660964-25 Water 20-AUG-15 07:25 WQ-PC-D
WATER						
Physical Tests	Conductivity (uS/cm)	1030	1620	89.7	359	588
	Hardness (as CaCO3) (mg/L)	599	1050	38.4	179	287
	pH (pH)	6.00	7.96	6.72	8.23	7.04
	Total Suspended Solids (mg/L)	7.3	<3.0	<3.0	165	32.7
	Total Dissolved Solids (mg/L)	776	1350	48.4	215	388
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	2.9	134	11.5	111	63.4
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Alkalinity, Total (as CaCO3) (mg/L)	2.9	134	11.5	111	63.4
	Ammonia, Total (as N) (mg/L)	0.0076	<0.0050	<0.0050	0.0054	0.0419
	Chloride (Cl) (mg/L)	<1.0 DLA	<2.5 DLA	<0.50	<0.50	<0.50
	Fluoride (F) (mg/L)	0.051	0.10	0.028	0.091	0.034
	Nitrate (as N) (mg/L)	0.033	1.38	<0.0050	0.170	0.140
	Nitrite (as N) (mg/L)	<0.0020 DLA	<0.0050 DLA	<0.0010	0.0021	0.0085
	Sulfate (SO4) (mg/L)	561	872	24.5	78.8	238
	Anion Sum (meq/L)	11.8	20.9	0.74	3.87	6.23
	Cation Sum (meq/L)	12.3	21.4	0.91	3.79	6.02
	Cation - Anion Balance (%)	2.2	1.0	10.3	-1.1	-1.7
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals	Aluminum (Al)-Total (mg/L)	0.177	0.0339	0.180	5.03	0.833
	Antimony (Sb)-Total (mg/L)	0.00018	0.00027	0.00030	0.00114	0.00788
	Arsenic (As)-Total (mg/L)	0.00086	0.00230	0.00086	0.0210	0.0114
	Barium (Ba)-Total (mg/L)	0.0152	0.0182	0.0409	0.165	0.0676
	Beryllium (Be)-Total (mg/L)	0.000034	<0.000040 DLA	<0.000020	0.000216	0.000068
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.00010 DLA	<0.000050	0.000167	0.000095
	Boron (B)-Total (mg/L)	<0.010	<0.020 DLA	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	0.00466	0.000064	0.0000369	0.000485	0.0151
	Calcium (Ca)-Total (mg/L)	144	322	10.9	55.7	93.4
	Chromium (Cr)-Total (mg/L)	0.00026	<0.00020 DLA	0.00033	0.00757	0.00128
	Cobalt (Co)-Total (mg/L)	0.00025	<0.00020 DLA	<0.00010	0.00311	0.00088
	Copper (Cu)-Total (mg/L)	0.00171	<0.0010 DLA	0.00254	0.0100	0.0420
	Iron (Fe)-Total (mg/L)	0.181	0.025	0.082	7.49	1.23
	Lead (Pb)-Total (mg/L)	0.000088	<0.00010 DLA	<0.000050	0.0200	0.00946
	Lithium (Li)-Total (mg/L)	0.0016	<0.0020 DLA	<0.0010	0.0043	0.0037

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-26	L1660964-27	L1660964-28	L1660964-29	L1660964-30
Description	Water	Water	Water	Water	Water
Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15		20-AUG-15
Sampled Time	08:25	08:45	11:15		10:00
Client ID	WQ-VC-DBC	WQ-VCU	FIELD BLANK	TRAVEL BLANK	WQ-MS-S-03
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (uS/cm)	212	187	<2.0	<2.0	1240
Hardness (as CaCO3) (mg/L)	111	91.7	<0.50	<0.50	764
pH (pH)	8.02	8.00	5.52	5.51	7.77
Total Suspended Solids (mg/L)	12.7	<3.0	<3.0	<3.0	4.7
Total Dissolved Solids (mg/L)	120	101	<1.0	<1.0	911
Anions and Nutrients					
Alkalinity, Bicarbonate (as CaCO3) (mg/L)	84.4	79.9	<1.0	<1.0	286
Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3) (mg/L)	84.4	79.9	<1.0	<1.0	286
Ammonia, Total (as N) (mg/L)	<0.0050	<0.0050	<0.0050	0.0253 RRV	0.0239
Chloride (Cl) (mg/L)	<0.50	<0.50	<0.50	<0.50	<1.0 DLA
Fluoride (F) (mg/L)	0.055	0.050	<0.020	<0.020	0.221
Nitrate (as N) (mg/L)	0.0822	0.0704	<0.0050	<0.0050	0.018
Nitrite (as N) (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020 DLA
Sulfate (SO4) (mg/L)	26.2	17.8	<0.30	<0.30	460
Anion Sum (meq/L)	2.24	1.98	<0.10	<0.10	15.3
Cation Sum (meq/L)	2.36	1.96	<0.10	<0.10	15.8
Cation - Anion Balance (%)	2.7	-0.3	0.0	0.0	1.5
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide, Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
Thiocyanate (SCN) (mg/L)	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals					
Aluminum (Al)-Total (mg/L)	0.531	0.0542	<0.0030	<0.0030	0.0379
Antimony (Sb)-Total (mg/L)	0.00023	0.00012	<0.00010	<0.00010	0.0148
Arsenic (As)-Total (mg/L)	0.00239	0.00051	<0.00010	<0.00010	0.113
Barium (Ba)-Total (mg/L)	0.0697	0.0632	<0.000050	<0.000050	0.0147
Beryllium (Be)-Total (mg/L)	0.000032	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total (mg/L)	0.0000617	0.0000182	<0.0000050	<0.0000050	0.00299
Calcium (Ca)-Total (mg/L)	30.0	23.6	<0.050	<0.050	203
Chromium (Cr)-Total (mg/L)	0.00082	0.00027	<0.00010	<0.00010	0.00017
Cobalt (Co)-Total (mg/L)	0.00036	<0.00010	<0.00010	<0.00010	0.00119
Copper (Cu)-Total (mg/L)	0.00237	0.00158	<0.00050	<0.00050	0.00124
Iron (Fe)-Total (mg/L)	0.760	0.122	<0.010	<0.010	1.89
Lead (Pb)-Total (mg/L)	0.00179	0.000093	<0.000050	<0.000050	0.00269
Lithium (Li)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0105

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1660964-31				
	Description	Water				
	Sampled Date	20-AUG-15				
	Sampled Time	10:20				
	Client ID	WQ-PC-U				
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (uS/cm)	333				
	Hardness (as CaCO3) (mg/L)	166				
	pH (pH)	7.55				
	Total Suspended Solids (mg/L)	1540				
	Total Dissolved Solids (mg/L)	204				
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	63.5				
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Total (as CaCO3) (mg/L)	63.5				
	Ammonia, Total (as N) (mg/L)	1.10				
	Chloride (Cl) (mg/L)	<0.50				
	Fluoride (F) (mg/L)	0.077				
	Nitrate (as N) (mg/L)	0.0460				
	Nitrite (as N) (mg/L)	0.0022				
	Sulfate (SO4) (mg/L)	98.2				
	Anion Sum (meq/L)	3.32				
	Cation Sum (meq/L)	3.67				
	Cation - Anion Balance (%)	5.0				
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0050				
	Cyanide, Total (mg/L)	<0.0050				
	Cyanate (mg/L)	0.69				
	Thiocyanate (SCN) (mg/L)	<0.50				
Total Metals	Aluminum (Al)-Total (mg/L)	24.0				
	Antimony (Sb)-Total (mg/L)	0.00761				
	Arsenic (As)-Total (mg/L)	0.184				
	Barium (Ba)-Total (mg/L)	0.692				
	Beryllium (Be)-Total (mg/L)	0.00115				
	Bismuth (Bi)-Total (mg/L)	0.00140				
	Boron (B)-Total (mg/L)	<0.010				
	Cadmium (Cd)-Total (mg/L)	0.00524				
	Calcium (Ca)-Total (mg/L)	69.5				
	Chromium (Cr)-Total (mg/L)	0.0366				
	Cobalt (Co)-Total (mg/L)	0.0137				
	Copper (Cu)-Total (mg/L)	0.0718				
	Iron (Fe)-Total (mg/L)	33.9				
	Lead (Pb)-Total (mg/L)	0.144				
	Lithium (Li)-Total (mg/L)	0.0175				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-1 Water 19-AUG-15 18:45 WQ-DC-12	L1660964-2 Water 19-AUG-15 19:00 WQ-DC-DX+105	L1660964-3 Water 18-AUG-15 13:57 WQ-VC-R	L1660964-4 Water 18-AUG-15 17:40 WQ-DC-R	L1660964-5 Water 18-AUG-15 13:57 WQ-VC-RR
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	35.1	35.4	8.89	45.0	9.06
	Manganese (Mn)-Total (mg/L)	0.635	0.648	0.0556	0.777	0.0532
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000224	0.000219	0.000394	0.000314	0.000405
	Nickel (Ni)-Total (mg/L)	0.00098	0.00099	0.00076	0.00109	0.00073
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	3.58	3.34	0.77	2.30	0.80
	Selenium (Se)-Total (mg/L)	0.000055	<0.000050	<0.000050	0.000101	<0.000050
	Silicon (Si)-Total (mg/L)	6.06	5.86	6.46	6.22	6.51
	Silver (Ag)-Total (mg/L)	0.000023	<0.000010	0.000013	<0.000010	0.000012
	Sodium (Na)-Total (mg/L)	3.90	4.13	2.99	10.2	2.89
	Strontium (Sr)-Total (mg/L)	0.265	0.270	0.248	0.408	0.251
	Sulfur (S)-Total (mg/L)	80.1	82.0	11.4	119	11.8
	Thallium (Tl)-Total (mg/L)	0.000047	0.000046	<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)	0.00495	<0.00090 DLM	<0.018 DLM	0.00317	0.00901
	Uranium (U)-Total (mg/L)	0.00209	0.00216	0.000532	0.00111	0.000533
	Vanadium (V)-Total (mg/L)	0.00085	<0.00050	0.00124	0.00117	0.00120
	Zinc (Zn)-Total (mg/L)	0.292	0.290	0.0044	0.0062	0.0043
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0081	0.0091	0.0263	0.0211	0.0259
	Antimony (Sb)-Dissolved (mg/L)	0.00553	0.00561	0.00020	0.00117	0.00022
	Arsenic (As)-Dissolved (mg/L)	0.00933	0.0101	0.00106	0.00683	0.00110
	Barium (Ba)-Dissolved (mg/L)	0.0242	0.0251	0.0613	0.0453	0.0612
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	0.017	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000469	0.000395	0.0000263	0.0000477	0.0000244
	Calcium (Ca)-Dissolved (mg/L)	119	117	31.8	133	31.3
	Chromium (Cr)-Dissolved (mg/L)	<0.00010	<0.00010	0.00014	0.00022	0.00014
	Cobalt (Co)-Dissolved (mg/L)	0.00035	0.00038	0.00013	0.00101	0.00012
	Copper (Cu)-Dissolved (mg/L)	0.00116	0.00115	0.00156	0.00131	0.00143
	Iron (Fe)-Dissolved (mg/L)	0.172	0.210	0.115	0.711	0.113
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	0.0046	0.0046	<0.0010	0.0017	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-6 Water 18-AUG-15 14:45 WQ-VC-UMN	L1660964-7 Water 19-AUG-15 19:50 WQ-DC-DX	L1660964-8 Water 19-AUG-15 19:30 WQ-DC-14	L1660964-9 Water 19-AUG-15 14:40 WQ-TP	L1660964-10 Water 19-AUG-15 16:30 WQ-CH-P-13-01
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	9.67	16.3	10.1	47.3	88.9
	Manganese (Mn)-Total (mg/L)	0.0493	0.176	0.00305	0.143	0.647
	Mercury (Hg)-Total (mg/L)	<0.0000050	0.0000467	<0.0000050	0.0000106	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000442	0.000102	<0.000050	0.00150	<0.000050
	Nickel (Ni)-Total (mg/L)	0.00058	0.00269	<0.00050	0.00061	0.00887
	Phosphorus (P)-Total (mg/L)	<0.050	0.325	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	0.79	4.98	3.44	15.8	0.34
	Selenium (Se)-Total (mg/L)	0.000054	0.000095	0.000065	0.000077	<0.000050
	Silicon (Si)-Total (mg/L)	6.36	9.08	5.42	1.99	8.14
	Silver (Ag)-Total (mg/L)	0.000013	0.000104	0.000016	0.000961	<0.000010
	Sodium (Na)-Total (mg/L)	3.07	3.78	2.97	18.8	6.52
	Strontium (Sr)-Total (mg/L)	0.277	0.194	0.129	0.622	0.522
	Sulfur (S)-Total (mg/L)	12.7	45.0	27.9	243	292
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000085	<0.000010	0.000236	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.0110	0.159	0.00093	<0.0012 DLM	<0.00030
	Uranium (U)-Total (mg/L)	0.000569	0.000444	0.000033	0.000926	<0.000010
	Vanadium (V)-Total (mg/L)	0.00111	0.0151	<0.00050	0.00051	<0.00050
	Zinc (Zn)-Total (mg/L)	0.0040	0.0239	0.0114	0.0600	4.60
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0196	0.0121	0.0200	0.0052	0.178
	Antimony (Sb)-Dissolved (mg/L)	0.00022	0.00138	0.00191	0.0371	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00102	0.00393	0.00553	0.0836	0.00050
	Barium (Ba)-Dissolved (mg/L)	0.0598	0.0478	0.0427	0.0114	0.00992
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	0.000041
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	0.082	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0000248	0.0000213	0.0000874	0.000601	0.0135
	Calcium (Ca)-Dissolved (mg/L)	34.0	64.2	46.0	250	235
	Chromium (Cr)-Dissolved (mg/L)	0.00011	<0.00010	0.00014	<0.00010	0.00011
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00024	<0.00010	0.00030	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00138	0.00132	0.00235	0.0159	0.00101
	Iron (Fe)-Dissolved (mg/L)	0.047	0.324	0.016	<0.010	0.030
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	0.000106	0.000536	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0099	0.0020

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-11	L1660964-12	L1660964-13	L1660964-14	L1660964-15
Description	Water	Water	Water	Water	Water
Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15
Sampled Time	15:10	18:00	18:30	19:20	17:40
Client ID	WQ-DC-B	WQ-DC-10	WQ-DC-11	WQ-DC-13	WQ-DC-8
Grouping / **Analyte**					
WATER					
Total Metals					
Magnesium (Mg)-Total (mg/L)	51.5	59.2	34.0	10.7	78.7
Manganese (Mn)-Total (mg/L)	0.496	1.39	0.237	0.00133	3.86
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total (mg/L)	0.000338	0.000320	0.000243	<0.000050	0.000208
Nickel (Ni)-Total (mg/L)	0.00221	0.00175	0.00076	0.00051	0.00095
Phosphorus (P)-Total (mg/L)	0.061	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total (mg/L)	2.07	3.46	3.54	3.59	3.34
Selenium (Se)-Total (mg/L)	0.000154	<0.000050	<0.000050	0.000055	0.000079
Silicon (Si)-Total (mg/L)	7.47	6.53	6.11	5.75	7.20
Silver (Ag)-Total (mg/L)	0.000036	0.000030	0.000012	0.000013	<0.000010
Sodium (Na)-Total (mg/L)	5.95	5.26	4.37	3.18	8.34
Strontium (Sr)-Total (mg/L)	0.386	0.428	0.269	0.137	0.545
Sulfur (S)-Total (mg/L)	122	142	81.6	30.1	198
Thallium (Tl)-Total (mg/L)	0.000019	0.000087	0.000031	<0.000010	<0.000010
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	0.0498	0.00161	0.00294	0.00041	0.00249
Uranium (U)-Total (mg/L)	0.00154	0.00356	0.00182	0.000037	0.000549
Vanadium (V)-Total (mg/L)	0.00626	0.00058	0.00069	<0.00050	0.00074
Zinc (Zn)-Total (mg/L)	0.0176	0.834	0.237	0.0115	0.168
Zirconium (Zr)-Total (mg/L)	0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals					
Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)	0.0662	0.0015	0.0058	0.0179	0.0049
Antimony (Sb)-Dissolved (mg/L)	0.00142	0.0119	0.00954	0.00185	0.00277
Arsenic (As)-Dissolved (mg/L)	0.00630	0.0497	0.00942	0.00562	0.0590
Barium (Ba)-Dissolved (mg/L)	0.0466	0.0156	0.0202	0.0426	0.0514
Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)	0.013	<0.010	<0.010	<0.010	0.059
Cadmium (Cd)-Dissolved (mg/L)	0.0000216	0.000578	0.000763	0.0000819	0.000233
Calcium (Ca)-Dissolved (mg/L)	129	193	117	46.2	224
Chromium (Cr)-Dissolved (mg/L)	0.00020	<0.00010	<0.00010	0.00013	<0.00010
Cobalt (Co)-Dissolved (mg/L)	0.00044	0.00094	0.00014	<0.00010	0.00093
Copper (Cu)-Dissolved (mg/L)	0.00120	0.00030	0.00126	0.00238	0.00050
Iron (Fe)-Dissolved (mg/L)	0.868	1.39	0.041	0.017	5.25
Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000056	<0.000050	0.000115	0.000064
Lithium (Li)-Dissolved (mg/L)	0.0024	0.0095	0.0049	<0.0010	0.0041

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-16	L1660964-17	L1660964-18	L1660964-19	L1660964-20
Description	Water	Water	Water	Water	Water
Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15	20-AUG-15
Sampled Time	17:15	13:15	14:15	15:15	08:00
Client ID	WQ-DC-D1B	WQ-DC-U	WQ-SEEP	WQ-DC-B-R	WQ-DESS-01
Grouping / **Analyte**					
WATER					
Total Metals Magnesium (Mg)-Total (mg/L)	83.5	49.0	52.9	52.4	53.2
Manganese (Mn)-Total (mg/L)	1.29	1.25	6.44	0.534	0.117
Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total (mg/L)	0.000263	0.000408	0.00105	0.000330	<0.000050
Nickel (Ni)-Total (mg/L)	0.00088	0.00216	0.00315	0.00241	0.00556
Phosphorus (P)-Total (mg/L)	<0.050	0.052	<0.050	0.052	<0.050
Potassium (K)-Total (mg/L)	3.60	2.52	6.11	2.06	0.27
Selenium (Se)-Total (mg/L)	0.000067	0.000142	0.000179	0.000129	<0.000050
Silicon (Si)-Total (mg/L)	6.10	7.07	7.25	7.44	8.47
Silver (Ag)-Total (mg/L)	0.000012	0.000031	0.000028	0.000034	<0.000010
Sodium (Na)-Total (mg/L)	7.11	10.2	38.1	6.47	4.88
Strontium (Sr)-Total (mg/L)	0.510	0.431	0.775	0.397	0.336
Sulfur (S)-Total (mg/L)	194	133	236	126	183
Thallium (Tl)-Total (mg/L)	0.000026	0.000015	<0.000010	0.000018	<0.000010
Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total (mg/L)	0.0142	0.0410	<0.0018 DLM	0.0512	<0.0015 DLM
Uranium (U)-Total (mg/L)	0.00228	0.00147	0.00172	0.00157	0.000011
Vanadium (V)-Total (mg/L)	0.00161	0.00530	0.00228	0.00633	0.00054
Zinc (Zn)-Total (mg/L)	0.127	0.0145	0.0196	0.0170	2.33
Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	0.00058	0.00032	<0.00030
Dissolved Metals Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
Aluminum (Al)-Dissolved (mg/L)	0.0061	0.0558	0.0102	0.0690	0.118
Antimony (Sb)-Dissolved (mg/L)	0.00497	0.00110	0.00042	0.00139	0.00016
Arsenic (As)-Dissolved (mg/L)	0.0159	0.0116	0.0604	0.00640	0.00051
Barium (Ba)-Dissolved (mg/L)	0.0347	0.0478	0.0676	0.0477	0.0149
Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	0.000030
Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved (mg/L)	0.035	0.018	0.052	0.014	<0.010
Cadmium (Cd)-Dissolved (mg/L)	0.0000908	0.0000193	0.000361	0.0000172	0.00490
Calcium (Ca)-Dissolved (mg/L)	211	145	270	130	153
Chromium (Cr)-Dissolved (mg/L)	<0.00010	0.00021	0.00039	0.00022	0.00019
Cobalt (Co)-Dissolved (mg/L)	0.00045	0.00121	0.00839	0.00046	0.00030
Copper (Cu)-Dissolved (mg/L)	0.00062	0.00132	0.00194	0.00128	0.00156
Iron (Fe)-Dissolved (mg/L)	0.245	0.848	11.0	0.840	0.078
Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved (mg/L)	0.0072	0.0021	<0.0010	0.0028	0.0017

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-21 Water 20-AUG-15 08:05 WQ-DESS-01R	L1660964-22 Water 20-AUG-15 08:30 WQ-DESS-02	L1660964-23 Water 20-AUG-15 08:15 WQ-DESS-03	L1660964-24 Water 19-AUG-15 09:45 WQ-BC	L1660964-25 Water 20-AUG-15 07:25 WQ-PC-D
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	51.8	49.9	2.37	13.8	19.3
	Manganese (Mn)-Total (mg/L)	0.114	0.00774	0.00340	0.601	0.463
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.00015	<0.000050	0.00128	0.000102
	Nickel (Ni)-Total (mg/L)	0.00567	<0.0010 DLA	0.00088	0.00547	0.00400
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	0.107	<0.050
	Potassium (K)-Total (mg/L)	0.28	0.48	0.51	2.42	1.31
	Selenium (Se)-Total (mg/L)	<0.000050	<0.00010 DLA	0.000059	0.000085	0.000058
	Silicon (Si)-Total (mg/L)	8.13	5.42	9.49	16.2	8.64
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000020 DLA	<0.000010	0.000271	0.000122
	Sodium (Na)-Total (mg/L)	4.77	8.29	2.39	4.71	4.48
	Strontium (Sr)-Total (mg/L)	0.331	0.589	0.0550	0.364	0.543
	Sulfur (S)-Total (mg/L)	179	274	7.97	25.6	79.5
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000020 DLA	<0.000010	0.000135	0.000037
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00020 DLA	<0.00010	0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00231	<0.0015 DLM	0.00073	0.162	0.0280
	Uranium (U)-Total (mg/L)	0.000011	0.00142	0.000021	0.00202	0.000350
	Vanadium (V)-Total (mg/L)	0.00062	<0.0010 DLA	0.00056	0.0145	0.00289
	Zinc (Zn)-Total (mg/L)	2.34	<0.0060 DLA	0.0050	0.0630	1.96
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00060 DLA	0.00049	0.00097	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.120	0.0127	0.176	0.0131	0.0391
	Antimony (Sb)-Dissolved (mg/L)	0.00015	0.00025	0.00029	0.00021	0.00895
	Arsenic (As)-Dissolved (mg/L)	0.00051	0.00215	0.00083	0.00173	0.00409
	Barium (Ba)-Dissolved (mg/L)	0.0149	0.0185	0.0431	0.0578	0.0475
	Beryllium (Be)-Dissolved (mg/L)	0.000032	<0.000040 DLA	<0.000020	<0.000020	0.000023
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.00010 DLA	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.020 DLA	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.00480	0.000059	0.0000416	0.000107	0.0116
	Calcium (Ca)-Dissolved (mg/L)	152	335	11.3	52.0	86.4
	Chromium (Cr)-Dissolved (mg/L)	0.00013	<0.00020 DLA	0.00029	0.00010	0.00017
	Cobalt (Co)-Dissolved (mg/L)	0.00024	<0.00020 DLA	<0.00010	0.00020	0.00041
	Copper (Cu)-Dissolved (mg/L)	0.00155	0.00067	0.00252	0.00130	0.0409
	Iron (Fe)-Dissolved (mg/L)	0.075	<0.010	0.080	0.024	0.049
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.00010 DLA	<0.000050	0.000074	0.00220
	Lithium (Li)-Dissolved (mg/L)	0.0015	<0.0020 DLA	<0.0010	0.0016	0.0029

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1660964-26	L1660964-27	L1660964-28	L1660964-29	L1660964-30
	Description	Water	Water	Water	Water	Water
	Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15		20-AUG-15
	Sampled Time	08:25	08:45	11:15		10:00
	Client ID	WQ-VC-DBC	WQ-VCU	FIELD BLANK	TRAVEL BLANK	WQ-MS-S-03
Grouping	**Analyte**					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	8.23	7.36	<0.10	<0.10	62.8
	Manganese (Mn)-Total (mg/L)	0.0973	0.0263	<0.00010	<0.00010	1.45
	Mercury (Hg)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Total (mg/L)	0.000500	0.000403	<0.000050	<0.000050	0.000382
	Nickel (Ni)-Total (mg/L)	0.00080	<0.00050	<0.00050	<0.00050	0.00212
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	0.75	0.50	<0.10	<0.10	3.42
	Selenium (Se)-Total (mg/L)	0.000051	<0.000050	<0.000050	<0.000050	<0.000050
	Silicon (Si)-Total (mg/L)	6.85	5.82	<0.050	<0.050	6.35
	Silver (Ag)-Total (mg/L)	0.000028	<0.000010	<0.000010	<0.000010	0.000026
	Sodium (Na)-Total (mg/L)	2.82	2.47	<0.050	<0.050	5.35
	Strontium (Sr)-Total (mg/L)	0.270	0.258	<0.00020	<0.00020	0.441
	Sulfur (S)-Total (mg/L)	8.68	5.89	<0.50	<0.50	152
	Thallium (Tl)-Total (mg/L)	0.000016	<0.000010	<0.000010	<0.000010	0.000104
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.0182	0.00119	<0.00030	<0.00030	0.00187
	Uranium (U)-Total (mg/L)	0.000653	0.000455	<0.000010	<0.000010	0.00411
	Vanadium (V)-Total (mg/L)	0.00170	0.00051	<0.00050	<0.00050	0.00059
	Zinc (Zn)-Total (mg/L)	0.0074	<0.0030	<0.0030	<0.0030	1.02
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD		FIELD
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD		FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.0223	0.0249	<0.0010		0.0011
	Antimony (Sb)-Dissolved (mg/L)	0.00012	0.00010	<0.00010		0.0143
	Arsenic (As)-Dissolved (mg/L)	0.00057	0.00037	<0.00010		0.0929
	Barium (Ba)-Dissolved (mg/L)	0.0602	0.0622	<0.000050		0.0136
	Beryllium (Be)-Dissolved (mg/L)	<0.000020	<0.000020	<0.000020		<0.000020
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010		<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.0000316	0.0000145	<0.0000050		0.000495
	Calcium (Ca)-Dissolved (mg/L)	30.8	24.3	<0.050		205
	Chromium (Cr)-Dissolved (mg/L)	0.00010	0.00012	<0.00010		<0.00010
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		0.00113
	Copper (Cu)-Dissolved (mg/L)	0.00138	0.00145	<0.00020		<0.00020
	Iron (Fe)-Dissolved (mg/L)	0.052	0.057	<0.010		1.62
	Lead (Pb)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		0.000124
	Lithium (Li)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		0.0104

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1660964-31				
	Description	Water				
	Sampled Date	20-AUG-15				
	Sampled Time	10:20				
	Client ID	WQ-PC-U				
Grouping	**Analyte**					
WATER						
Total Metals	Magnesium (Mg)-Total (mg/L)	17.3				
	Manganese (Mn)-Total (mg/L)	1.02				
	Mercury (Hg)-Total (mg/L)	<0.0000050				
	Molybdenum (Mo)-Total (mg/L)	0.00130				
	Nickel (Ni)-Total (mg/L)	0.0241				
	Phosphorus (P)-Total (mg/L)	1.34				
	Potassium (K)-Total (mg/L)	2.81				
	Selenium (Se)-Total (mg/L)	0.000598				
	Silicon (Si)-Total (mg/L)	37.5				
	Silver (Ag)-Total (mg/L)	0.00244				
	Sodium (Na)-Total (mg/L)	5.40				
	Strontium (Sr)-Total (mg/L)	0.435				
	Sulfur (S)-Total (mg/L)	34.6				
	Thallium (Tl)-Total (mg/L)	0.000384				
	Tin (Sn)-Total (mg/L)	0.00018				
	Titanium (Ti)-Total (mg/L)	0.431				
	Uranium (U)-Total (mg/L)	0.00581				
	Vanadium (V)-Total (mg/L)	0.0830				
	Zinc (Zn)-Total (mg/L)	0.380				
	Zirconium (Zr)-Total (mg/L)	0.00135				
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD				
	Dissolved Metals Filtration Location	FIELD				
	Aluminum (Al)-Dissolved (mg/L)	0.0285				
	Antimony (Sb)-Dissolved (mg/L)	0.00175				
	Arsenic (As)-Dissolved (mg/L)	0.0106				
	Barium (Ba)-Dissolved (mg/L)	0.0539				
	Beryllium (Be)-Dissolved (mg/L)	<0.000020				
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050				
	Boron (B)-Dissolved (mg/L)	<0.010				
	Cadmium (Cd)-Dissolved (mg/L)	0.0000382				
	Calcium (Ca)-Dissolved (mg/L)	49.6				
	Chromium (Cr)-Dissolved (mg/L)	0.00019				
	Cobalt (Co)-Dissolved (mg/L)	0.00069				
	Copper (Cu)-Dissolved (mg/L)	0.00091				
	Iron (Fe)-Dissolved (mg/L)	0.591				
	Lead (Pb)-Dissolved (mg/L)	0.00125				
	Lithium (Li)-Dissolved (mg/L)	<0.0010				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-1 Water 19-AUG-15 18:45 WQ-DC-12	L1660964-2 Water 19-AUG-15 19:00 WQ-DC-DX+105	L1660964-3 Water 18-AUG-15 13:57 WQ-VC-R	L1660964-4 Water 18-AUG-15 17:40 WQ-DC-R	L1660964-5 Water 18-AUG-15 13:57 WQ-VC-RR
WATER						
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	37.0	36.3	9.24	46.5	8.97
	Manganese (Mn)-Dissolved (mg/L)	0.638	0.681	0.0382	0.753	0.0377
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000220	0.000221	0.000408	0.000312	0.000414
	Nickel (Ni)-Dissolved (mg/L)	0.00096	0.00093	0.00053	0.00106	0.00050
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	3.58	3.46	0.69	2.44	0.66
	Selenium (Se)-Dissolved (mg/L)	0.000053	<0.000050	<0.000050	0.000093	0.000068
	Silicon (Si)-Dissolved (mg/L)	6.21	6.09	6.20	6.22	6.01
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	4.26	4.26	3.01	10.4	3.01
	Strontium (Sr)-Dissolved (mg/L)	0.273	0.276	0.257	0.408	0.255
	Sulfur (S)-Dissolved (mg/L)	84.5	84.2	12.0	124	11.9
	Thallium (Tl)-Dissolved (mg/L)	0.000040	0.000043	<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)	<0.00030	<0.00030	<0.00030	<0.00090 DLM	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.00214	0.00217	0.000526	0.00108	0.000527
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.292	0.301	0.0011	0.0087	0.0020
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-6	L1660964-7	L1660964-8	L1660964-9	L1660964-10
Description	Water	Water	Water	Water	Water
Sampled Date	18-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15
Sampled Time	14:45	19:50	19:30	14:40	16:30
Client ID	WQ-VC-UMN	WQ-DC-DX	WQ-DC-14	WQ-TP	WQ-CH-P-13-01
Grouping / **Analyte**					
WATER					
Dissolved Metals Magnesium (Mg)-Dissolved (mg/L)	9.97	15.8	10.5	48.1	92.4
Manganese (Mn)-Dissolved (mg/L)	0.0322	0.104	0.00203	0.0760	0.636
Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved (mg/L)	0.000432	<0.000050	<0.000050	0.00155	<0.000050
Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00896
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved (mg/L)	0.71	4.69	3.50	16.3	0.36
Selenium (Se)-Dissolved (mg/L)	<0.000050	0.000053	0.000062	0.000053	<0.000050
Silicon (Si)-Dissolved (mg/L)	6.03	4.78	5.62	1.96	8.47
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	0.000035	<0.000010
Sodium (Na)-Dissolved (mg/L)	3.17	3.96	3.07	19.3	6.66
Strontium (Sr)-Dissolved (mg/L)	0.277	0.197	0.134	0.645	0.524
Sulfur (S)-Dissolved (mg/L)	12.9	46.9	28.7	252	298
Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	0.000232	<0.000010
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Uranium (U)-Dissolved (mg/L)	0.000554	0.000106	0.000033	0.000918	<0.000010
Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved (mg/L)	0.0015	0.0010	0.0106	0.0249	4.79
Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-11 Water 19-AUG-15 15:10 WQ-DC-B	L1660964-12 Water 19-AUG-15 18:00 WQ-DC-10	L1660964-13 Water 19-AUG-15 18:30 WQ-DC-11	L1660964-14 Water 19-AUG-15 19:20 WQ-DC-13	L1660964-15 Water 19-AUG-15 17:40 WQ-DC-8
WATER						
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	54.6	60.2	34.4	10.6	83.1
	Manganese (Mn)-Dissolved (mg/L)	0.475	1.36	0.177	0.00099	3.92
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	0.000274	0.000306	0.000239	<0.000050	0.000213
	Nickel (Ni)-Dissolved (mg/L)	0.00090	0.00167	0.00067	<0.00050	0.00093
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	2.00	3.39	3.52	3.50	3.54
	Selenium (Se)-Dissolved (mg/L)	0.000095	<0.000050	0.000058	0.000069	0.000095
	Silicon (Si)-Dissolved (mg/L)	6.34	6.45	6.09	5.68	7.47
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	6.16	5.19	4.32	3.05	8.38
	Strontium (Sr)-Dissolved (mg/L)	0.401	0.426	0.271	0.134	0.571
	Sulfur (S)-Dissolved (mg/L)	129	140	83.3	29.8	205
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	0.000075	0.000027	<0.000010	0.000014
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00083	<0.00030	<0.00030	<0.00030	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.00141	0.00348	0.00181	0.000034	0.000559
	Vanadium (V)-Dissolved (mg/L)	0.00051	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	0.0047	0.793	0.227	0.0105	0.162
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-16	L1660964-17	L1660964-18	L1660964-19	L1660964-20
Description	Water	Water	Water	Water	Water
Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15	19-AUG-15	20-AUG-15
Sampled Time	17:15	13:15	14:15	15:15	08:00
Client ID	WQ-DC-D1B	WQ-DC-U	WQ-SEEP	WQ-DC-B-R	WQ-DESS-01
Grouping **Analyte**					
WATER					
Dissolved Metals Magnesium (Mg)-Dissolved (mg/L)	84.0	51.8	52.6	53.6	53.4
Manganese (Mn)-Dissolved (mg/L)	1.37	1.20	6.36	0.498	0.132
Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved (mg/L)	0.000243	0.000369	0.000980	0.000273	<0.000050
Nickel (Ni)-Dissolved (mg/L)	0.00066	0.00100	0.00312	0.00090	0.00577
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved (mg/L)	3.79	2.47	6.13	1.96	0.27
Selenium (Se)-Dissolved (mg/L)	0.000054	0.000078	0.000213	0.000068	0.000050
Silicon (Si)-Dissolved (mg/L)	5.92	6.16	7.23	6.35	8.57
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium (Na)-Dissolved (mg/L)	7.79	10.4	37.9	6.53	4.99
Strontium (Sr)-Dissolved (mg/L)	0.529	0.445	0.765	0.399	0.341
Sulfur (S)-Dissolved (mg/L)	197	138	233	130	188
Thallium (Tl)-Dissolved (mg/L)	0.000018	<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)	<0.00030	<0.0012 DLM	<0.0012 DLM	<0.0012 DLM	<0.00030
Uranium (U)-Dissolved (mg/L)	0.00232	0.00136	0.00169	0.00145	<0.000010
Vanadium (V)-Dissolved (mg/L)	<0.00050	0.00060	0.00177	0.00054	<0.00050
Zinc (Zn)-Dissolved (mg/L)	0.104	0.0031	0.0187	0.0046	2.45
Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	0.00058	<0.00030	<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1660964-21 Water 20-AUG-15 08:05 WQ-DESS-01R	L1660964-22 Water 20-AUG-15 08:30 WQ-DESS-02	L1660964-23 Water 20-AUG-15 08:15 WQ-DESS-03	L1660964-24 Water 19-AUG-15 09:45 WQ-BC	L1660964-25 Water 20-AUG-15 07:25 WQ-PC-D
WATER						
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	53.5	51.8	2.47	11.9	17.4
	Manganese (Mn)-Dissolved (mg/L)	0.114	0.00504	0.00314	0.335	0.340
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	0.00015	<0.000050	0.00109	<0.000050
	Nickel (Ni)-Dissolved (mg/L)	0.00576	<0.0010 DLA	0.00088	0.00051	0.00251
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	0.26	0.52	0.54	0.91	1.11
	Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.00010 DLA	<0.000050	0.000058	0.000071
	Silicon (Si)-Dissolved (mg/L)	8.54	5.65	9.83	6.37	7.52
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000020 DLA	<0.000010	<0.000010	0.000022
	Sodium (Na)-Dissolved (mg/L)	5.02	8.54	2.41	3.97	4.18
	Strontium (Sr)-Dissolved (mg/L)	0.338	0.603	0.0553	0.323	0.514
	Sulfur (S)-Dissolved (mg/L)	188	281	8.15	24.4	72.6
	Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000020 DLA	<0.000010	<0.000010	0.000016
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00020 DLA	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00031	<0.00060 DLA	0.00053	0.00043	<0.00090 DLM
	Uranium (U)-Dissolved (mg/L)	<0.000010	0.00144	0.000021	0.00164	0.000185
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.0010 DLA	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	2.43	0.0025	0.0051	0.0021	1.57
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00060 DLA	0.00055	<0.00030	<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1660964-26	L1660964-27	L1660964-28	L1660964-29	L1660964-30
Description	Water	Water	Water	Water	Water
Sampled Date	19-AUG-15	19-AUG-15	19-AUG-15		20-AUG-15
Sampled Time	08:25	08:45	11:15		10:00
Client ID	WQ-VC-DBC	WQ-VCU	FIELD BLANK	TRAVEL BLANK	WQ-MS-S-03
Grouping **Analyte**					
WATER					
Dissolved Metals Magnesium (Mg)-Dissolved (mg/L)	8.33	7.52	<0.10		61.6
Manganese (Mn)-Dissolved (mg/L)	0.0696	0.0222	<0.00010		1.45
Mercury (Hg)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050		<0.0000050
Molybdenum (Mo)-Dissolved (mg/L)	0.000489	0.000405	<0.000050		0.000349
Nickel (Ni)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		0.00202
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050		<0.050
Potassium (K)-Dissolved (mg/L)	0.58	0.53	<0.10		3.41
Selenium (Se)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		<0.000050
Silicon (Si)-Dissolved (mg/L)	6.11	5.95	<0.050		6.31
Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		<0.000010
Sodium (Na)-Dissolved (mg/L)	2.74	2.57	<0.050		5.34
Strontium (Sr)-Dissolved (mg/L)	0.274	0.260	<0.00020		0.438
Sulfur (S)-Dissolved (mg/L)	8.66	6.06	<0.50		152
Thallium (Tl)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		0.000085
Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		<0.00010
Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		<0.00030
Uranium (U)-Dissolved (mg/L)	0.000606	0.000448	<0.000010		0.00406
Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		<0.00050
Zinc (Zn)-Dissolved (mg/L)	0.0013	0.0010	<0.0010		0.987
Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		<0.00030

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1660964-31				
	Description	Water				
	Sampled Date	20-AUG-15				
	Sampled Time	10:20				
	Client ID	WQ-PC-U				
Grouping	**Analyte**					
WATER						
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	10.3				
	Manganese (Mn)-Dissolved (mg/L)	0.344				
	Mercury (Hg)-Dissolved (mg/L)	<0.0000050				
	Molybdenum (Mo)-Dissolved (mg/L)	0.000429				
	Nickel (Ni)-Dissolved (mg/L)	0.00073				
	Phosphorus (P)-Dissolved (mg/L)	<0.050				
	Potassium (K)-Dissolved (mg/L)	0.88				
	Selenium (Se)-Dissolved (mg/L)	0.000054				
	Silicon (Si)-Dissolved (mg/L)	6.86				
	Silver (Ag)-Dissolved (mg/L)	0.000013				
	Sodium (Na)-Dissolved (mg/L)	4.45				
	Strontium (Sr)-Dissolved (mg/L)	0.268				
	Sulfur (S)-Dissolved (mg/L)	32.8				
	Thallium (Tl)-Dissolved (mg/L)	<0.000010				
	Tin (Sn)-Dissolved (mg/L)	<0.00010				
	Titanium (Ti)-Dissolved (mg/L)	0.00089				
	Uranium (U)-Dissolved (mg/L)	0.000352				
	Vanadium (V)-Dissolved (mg/L)	0.00183				
	Zinc (Zn)-Dissolved (mg/L)	0.0066				
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030				

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Conductivity	B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Antimony (Sb)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Arsenic (As)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Bismuth (Bi)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Molybdenum (Mo)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Selenium (Se)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Tin (Sn)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Vanadium (V)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Aluminum (Al)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Bismuth (Bi)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Boron (B)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Silver (Ag)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Thallium (Tl)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Tin (Sn)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Zirconium (Zr)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Cyanate	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Bismuth (Bi)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19,

Reference Information

	Parameter	Qualifier	Applies to Sample Number(s)
			-2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Tin (Sn)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Titanium (Ti)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Vanadium (V)-Dissolved	DLA	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Duplicate	Cyanate	DLA	L1660964-16, -17, -18, -19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31
Duplicate	Cadmium (Cd)-Dissolved	DLM	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Lithium (Li)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sulfate (SO4)	MS-B	L1660964-1, -2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19,

Reference Information

	Parameter	Qualifier	Applies to Sample Number(s)
			-2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1660964-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -22, -23, -24, -25, -26, -27, -28, -3, -30, -31, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L1660964-18, -19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -30

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity

This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

BE-D-L-CCMS-VA Water Diss. Be (low) in Water by CRC ICPMS APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

BE-T-L-CCMS-VA Water Total Be (Low) in Water by CRC ICPMS EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

CL-IC-N-WR Water Chloride in Water by IC EPA 300.1 (mod)

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

CN-CNO-WT Water Cyanate APHA 4500-CN-L

This analysis is carried out using procedures adapted from APHA method 4500-CN "Cyanide". Cyanate is determined by the Cyanate hydrolysis method using an ammonia selective electrode

CN-SCN-VA Water Thiocyanate by Colour APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.

CN-T-CFA-VA Water Total Cyanide in water by CFA ISO 14403:2002

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-WAD-CFA-VA Water Weak Acid Diss. Cyanide in water by CFA APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

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

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

F-IC-N-WR Water Fluoride in Water by IC EPA 300.1 (mod)

Reference Information

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

HARDNESS-CALC-VA Water Hardness APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-D-CVAA-VA Water Diss. Mercury in Water by CVAAS or CVAFS APHA 3030B/EPA 1631E (mod)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

HG-T-CVAA-VA Water Total Mercury in Water by CVAAS or CVAFS EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.

IONBALANCE-VA Water Ion Balance Calculation APHA 1030E

Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.

Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance is calculated as:

Ion Balance (%) = [Cation Sum-Anion Sum] / [Cation Sum+Anion Sum]

MET-D-CCMS-VA Water Dissolved Metals in Water by CRC ICPMS APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-DIS-LOW-ICP-VA Water Dissolved Metals in Water by ICPOES EPA 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-T-CCMS-VA Water Total Metals in Water by CRC ICPMS EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

MET-TOT-LOW-ICP-VA Water Total Metals in Water by ICPOES EPA 3005A/6010B

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

NH3-F-VA Water Ammonia in Water by Fluorescence APHA 4500 NH3-NITROGEN (AMMONIA)

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NH3-F-VA Water Ammonia in Water by Fluorescence J. ENVIRON. MONIT., 2005, 7, 37-42, RSC

This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.

NO2-L-IC-N-WR Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

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

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

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

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

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

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

Reference Information

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Chain of Custody Numbers:

1 2 3 4 5
6

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
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page 1 of ___

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882.	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	Emilie.Hamm@gov.yk.ca	
		Email 3	erik.plt@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Company:	EDI	Email 1 or Fax	sjenner@edynamics.com
Contact:	S Jenner	Email 2	mmarjanovic@edynamics.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget **Sampler:** SD, DH, DS

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
							P	P	P	P	P	F/P						
	WQ-DC-12	19 - Aug -15	18:45	Water	R	R	R	R	R	R	R	R	R					9
	~~WQ-DC~~ WQ-DC-DX+105	19 - Aug -15	19:00	Water	R	R	R	R	R	R	R	R	R					9
	WQ-VC-R	18 - Aug -15	13:57	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-R	18 - Aug -15	17:40	Water	R	R	R	R	R	R	R	R	R					9
	WQ-VC-Rr	18 - Aug -15	13:57	Water	R	R	R	R	R	R	R	R	R					9
	WQ-VC-UMN	18 - Aug -15	14:45	Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	0.1

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C		
2.1	3.2, 3.5	0.8, 0.8	3.5			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Scott Dilling	20 Aug 2015	09:24	Suyons	20Aug15	1500			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

ALS FM-0326e v09 Front/04 January 2014

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page 2 of ___

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report ☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2 Emilie.Hamm@gov.yk.ca	
		Email 3 erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order #. (lab use only)		ALS Contact: Sean Slugget	Sampler: SD, DH, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR, TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA -VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
					P	P	P	P	P	P	P	F/P						
	WQ-DC-DX	19-Aug-15	19:50	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-14	19-Aug-15	19:30	Water	R	R	R	R	R	R	R	R	R					9
	WQ-TP	19-Aug-15	14:40	Water	R	R	R	R	R	R	R	R	R					9
	WQ-CH-P-13-01	19-Aug-15	16:30	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-B	19-Aug-15	15:10	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-10	19-Aug-15	18:00	Water	R	R	R	R	R	R	R	R	R					9
		-Aug-15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)					
Frozen ☐		SIF Observations	Yes ☐	No ☐	
Ice packs Yes ☐	No ☐	Custody seal intact	Yes ☐	No ☐	
Cooling Initiated ☐					
INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
0.1					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
[illegible]	20 Aug 2015	09:20	SLyons	20Aug15	1500			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page 3 of ___

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	Emilie.Hamm@gov.yk.ca	
		Email 3	erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution		Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax	slenner@edynamics.com	
Contact:	S Jenner	Email 2	mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)		ALS Contact: Sean Slugget	Sampler: DH, SD, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
					P	P	P	P	P	P	F/P							
	WQ-DC-11	19 - Aug -15	1830	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-13	19 - Aug -15	1920	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-8	19 - Aug -15	17:40	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-D26	19 - Aug -15	17:15	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DC-U	19 - Aug -15	13:15	Water	R	R	R	R	R	R	R	R	R					9
	WQ-SEEP	19 - Aug -15	14:15	Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)	SAMPLE CONDITION AS RECEIVED (lab use only)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No		Frozen ☐ SIF Observations Yes ☐ No ☐
Are samples for human drinking water use? ☐ Yes ☑ No		Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
		Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
3.2					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: SCOTT DILLING	Date: 20-AUG-2015	Time: 0915	Received by: SLYONS	Date: 20Aug15	Time: 1500	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION — WHITE - LABORATORY COPY — YELLOW - CLIENT COPY

NA-FM-0326e v09 Front/04 January 2014

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page 4 of ___

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report ☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue	☐ Criteria on Report - provide details below if box checked	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
	Whitehorse, YT Y1A 3T8	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2 Emilie.Hamm@gov.yk.ca	
		Email 3 erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax sjenner@edynamics.com	
Contact:	S Jenner	Email 2 mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget **Sampler:** SD, DH, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA -VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
	WQ-DC-B-r	19-Aug-15	15:15	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DESS-01	20-Aug-15	0800	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DESS-01r	20-Aug-15	0805	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DESS-02	20-Aug-15	0830	Water	R	R	R	R	R	R	R	R	R					9
	WQ-DESS-03	20-Aug-15	0815	Water	R	R	R	R	R	R	R	R	R					9
		-Aug-15		Water	R	R	R	R	R	R	R	R	R					9
		Aug-15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☐	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
0.8					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: SCOTT DILLING	Date: 20 Aug 2015	Time: 09:27	Received by: SWoms	Date: 20AUG15	Time: 1500	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

ALS-FM-0325e v09 Front/04 January 2014

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page ____ of ____

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	Emilie.Hamm@gov.yk.ca	
		Email 3	erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution	
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Company:	EDI	Email 1 or Fax	sjenner@edynamics.com
Contact:	S Jenner	Email 2	mmarjanovic@edynamics.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only):

ALS Contact: Sean Slugget **Sampler:** DH, SD, DS

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
					P	P	P	P	P	P	P	F/P						
	WQ-BC	19 - Aug -15	0945	Water	R	R	R	R	R	R	R	R	R					9
	WQ-PC-D	20 - Aug -15	0725	Water	R	R	R	R	R	R	R	R	R					9
	WQ-VC-DBC	19 - Aug -15	0825	Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐
Ice packs	Yes ☐	No ☐	Custody seal intact	Yes ☐ No ☐
Cooling Initiated	☐			

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
0.8					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
SCOTT DILLING	20-AUG-2015	0930	SLYONS	20AUG15	1500			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-03266 v09 Front04 January 2014

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L1660964-COFC

COC Number: 14 -

Page ____ of ____

Report To		Report Format / Distribution		Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	EDI	Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Meghan Marjanovic	Quality Control (QC) Report with Report	☐ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	2195 - 2nd Avenue Whitehorse, YT Y1A 3T8	☐ Criteria on Report - provide details below if box checked		E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT
		Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	867-393-4882	Email 1 or Fax	mmarjanovic@edynamics.com	Specify Date Required for E2,E or P:
		Email 2	Emilie.Hamm@gov.yk.ca	
		Email 3	erik.pit@gov.yk.ca	

Invoice To	Same as Report To ☑ Yes ☑ No	Invoice Distribution		Analysis Request
	Copy of Invoice with Report ☑ Yes ☐ No	Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:	EDI	Email 1 or Fax	sjenner@edynamics.com	
Contact:	S Jenner	Email 2	mmarjanovic@edynamics.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q49310	Approver ID:	Cost Center:
Job #:	MOUNT NANSEN 15-Y-0146	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only)		ALS Contact:	Sean Slugget	Sampler: SD, DH, DS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	ALK-PCT-VA,EC-PCT-VA,PH-PCT-VA	ANIONS-ALL-IC-WR,TSS-MAN-WR	CN-WAD-CFA-VA,CN-T-CFA-VA	CN-CNO-WT	CN-SCN-VA	NH3-F-VA	MET-T-BCMDG-VA	MET-D-BCMDG-VA	IONBALANC-VA, TDS-CALC-VA					Number of Containers
					P		P	P	P	P	P	F/P						
	WQ - VC U	19 - Aug -15	0845.	Water	R	R	R	R	R	R	R	R	R					9
	FIELD BLANK	19 - Aug -15	1115	Water	R	R	R	R	R	R	R	R	R					9
	TRAVEL BLANK	- Aug -15		Water	R	R	R	R	R	R	R	R	R					~~9~~ 8
	WQ - MS - S - 03	20 - Aug -15	1000.	Water	R	R	R	R	R	R	R	R	R					9
	WQ - PC - U	20 - Aug -15	10:20	Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9
		- Aug -15		Water	R	R	R	R	R	R	R	R	R					9

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)	SAMPLE CONDITION AS RECEIVED (lab use only)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No		Frozen ☐ SIF Observations Yes ☐ No ☐
Are samples for human drinking water use? ☐ Yes ☑ No		Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐
		Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
3.5					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
SCOTT DILLING	20-AUG-15	~~0955~~ 1100	SLUGGO	20AUG15	1500			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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 specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.