



Attachment 4

Summary of Water Quality Results

Table 2: Water Quality Results for Seepage Monitoring Locations - MS-06

Analyte	Sample ID			CP-SEEPAGE-05_2021-07-27_1930	CP-SEEPAGE-06_2021-07-27_1930	CP-SEEPAGE-07_2021-07-27_1930
	ALS Laboratory Sample ID			L2619446-1	L2619446-2	L2619446-3
	Sample Date & Time			2021-07-27 19:30	2021-07-27 19:30	2021-07-27 19:30
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence and MDMER Criteria ¹			
Conductivity	umhos/cm	3	-	2060	2050	2040
Hardness (as CaCO3)	mg/L	10	-	1160	1160	1160
pH	pH units	0.1	6.0 - 9.5	7.04	6.87	6.88
Total Suspended Solids	mg/L	2	15	65.7	19.2	18.1
Total Dissolved Solids	mg/L	13	-	1710	1690	1660
Turbidity	NTU	0.1	-	22.6	4.33	4.08
Acidity (as CaCO3)	mg/L	2	-	4.7	3.6	3.7
Alkalinity, Total (as CaCO3)	mg/L	10	-	56.5	57.1	57.3
Ammonia, Total (as N)	mg/L	0.02	-	2.54	2.62	2.56
Chloride (Cl)	mg/L	0.5	-	51.8	53.2	52.8
Fluoride (F)	mg/L	0.02	-	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.02	-	21.1	21.5	21
Total Kjeldahl Nitrogen	mg/L	0.15	-	4.2	4.9	3.9
Phosphorus, Total	mg/L	0.003	-	0.0201	0.0218	0.0191
Sulfate (SO4)	mg/L	0.3	-	913	936	920
Dissolved Organic Carbon	mg/L	0.5	-	3.92	3.91	3.83
Total Organic Carbon	mg/L	0.5	-	3.38	3.51	3.68
Aluminum (Al)-Total	mg/L	0.005	-	0.317	0.949	0.271
Antimony (Sb)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total	mg/L	0.0001	-	0.013	0.0135	0.011
Beryllium (Be)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00005/0.0005	-	<0.00050	<0.00050	<0.00050
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	0.000005	-	0.000201	0.000184	0.000204
Calcium (Ca)-Total	mg/L	0.05	-	129	125	127
Cesium (Cs)-Total	mg/L	0.00001/0.0001	-	<0.00010	0.00013	<0.00010
Chromium (Cr)-Total	mg/L	0.0002-0.005	-	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Total	mg/L	0.0001/0.01	-	0.0083	0.009	0.0081
Copper (Cu)-Total	mg/L	0.0005-0.005	0.3	<0.0050	<0.0050	<0.0050
Iron (Fe)-Total	mg/L	0.01	-	0.65	2.62	0.48
Lead (Pb)-Total	mg/L	0.000005-0.0005	0.2	<0.00050	0.00076	<0.00050
Lithium (Li)-Total	mg/L	0.001	-	0.019	0.02	0.021
Magnesium (Mg)-Total	mg/L	0.05	-	203	200	217
Manganese (Mn)-Total	mg/L	0.0005	-	2.66	2.66	2.63
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00105	0.00099	0.00095
Nickel (Ni)-Total	mg/L	0.0005/0.10	0.5	0.0164	0.0181	0.0163
Phosphorus (P)-Total	mg/L	0.05/0.50	-	<0.50	<0.50	<0.50
Potassium (K)-Total	mg/L	0.05	-	14.3	14.2	14.6
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0109	0.0124	0.0104
Selenium (Se)-Total	mg/L	0.00005	-	0.00333	0.00324	0.0035
Silicon (Si)-Total	mg/L	0.00002/0.10	-	2.5	3.3	2.1
Silver (Ag)-Total	mg/L	0.00005/0.0005	-	<0.00050	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.05	-	21.2	20.5	22.2
Strontium (Sr)-Total	mg/L	0.001	-	0.138	0.132	0.131
Sulfur (S)-Total	mg/L	0.00040/0.50	-	357	348	343
Tellurium (Te)-Total	mg/L	0.0002/0.002	-	<0.0020	<0.0020	<0.0020
Thallium (Tl)-Total	mg/L	0.00001/0.0002	-	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.0010
Tin (Sn)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total	mg/L	0.0002-0.003	-	0.0151	0.0549	0.0113
Tungsten (W)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Uranium (U)-Total	mg/L	0.00001/0.001	-	0.00624	0.00597	0.0051
Vanadium (V)-Total	mg/L	0.0005-0.006	-	<0.0050	<0.0050	<0.0050
Zinc (Zn)-Total	mg/L	0.0004-0.03	0.5	<0.030	<0.030	<0.030
Zirconium (Zr)-Total	mg/L	0.0002	-	<0.0020	<0.0020	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	<0.050	<0.050	<0.050
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.009	0.0085	0.0088
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L	0.01/0.1	-	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.000167	0.000151	0.000178
Calcium (Ca)-Dissolved	mg/L	0.05	-	122	121	121
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Dissolved	mg/L	0.00005/0.005	-	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.008	0.0078	0.0077
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	0.0023	<0.0020	<0.0020
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	mg/L	0.001	-	0.02	0.019	0.018
Magnesium (Mg)-Dissolved	mg/L	0.005	-	208	207	209
Manganese (Mn)-Dissolved	mg/L	0.0005	-	2.67	2.63	2.52
Mercury (Hg)-Dissolved	mg/L	0.0000005	-	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.001	0.00097	0.00099
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.016	0.0157	0.0154
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	<0.50	<0.50	<0.50
Potassium (K)-Dissolved	mg/L	0.05	-	14.1	14.1	14.2
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0105	0.01	0.0098
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00364	0.00339	0.00346
Silicon (Si)-Dissolved	mg/L	0.05	-	1.74	1.83	1.83
Silver (Ag)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.05	-	21.1	21.3	21.5
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.127	0.128	0.125
Sulfur (S)-Dissolved	mg/L	0.5	-	341	346	338
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	<0.0020	<0.0020
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	<0.00010	<0.00010
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.0030	<0.0030	<0.0030
Tungsten (W)-Dissolved	mg/L	0.0001	-	<0.0010	<0.0010	<0.0010
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00579	0.00536	0.00507
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	<0.0050	<0.0050
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	<0.010	<0.010	<0.010
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	<0.0020	<0.0020
Acute Lethality ^{2,3}	N/A		Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 2: Water Quality Results for Seepage Monitoring Locations - MS-06

Analyte	Sample ID			CP-SEEPAGE-08_2021-07-27_1940	MS-C-E_2021-07-27_2110
	ALS Laboratory Sample ID			L2619446-4	L2619446-5
	Sample Date & Time			2021-07-27 19:40	2021-07-27 21:10
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence and MDMER Criteria ¹		
Conductivity	umhos/cm	3	-	2040	854
Hardness (as CaCO3)	mg/L	10	-	1200	431
pH	pH units	0.1	6.0 - 9.5	7.14	8.06
Total Suspended Solids	mg/L	2	15	17.5	3.9
Total Dissolved Solids	mg/L	13	-	1730	589
Turbidity	NTU	0.1	-	3.55	7.16
Acidity (as CaCO3)	mg/L	2	-	3.3	N/A
Alkalinity, Total (as CaCO3)	mg/L	10	-	57.8	119
Ammonia, Total (as N)	mg/L	0.02	-	2.42	<0.010
Chloride (Cl)	mg/L	0.5	-	57.5	22.6
Fluoride (F)	mg/L	0.02	-	<0.10	0.053
Nitrate (as N)	mg/L	0.02	-	22.8	4.45
Total Kjeldahl Nitrogen	mg/L	0.15	-	4.2	0.54
Phosphorus, Total	mg/L	0.003	-	0.0187	0.0039
Sulfate (SO4)	mg/L	0.3	-	1000	256
Dissolved Organic Carbon	mg/L	0.5	-	3.86	6.11
Total Organic Carbon	mg/L	0.5	-	3.54	5.8
Aluminum (Al)-Total	mg/L	0.005	-	0.212	0.0849
Antimony (Sb)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	0.0001
Barium (Ba)-Total	mg/L	0.0001	-	0.0111	0.0241
Beryllium (Be)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Bismuth (Bi)-Total	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	0.022
Cadmium (Cd)-Total	mg/L	0.000005	-	0.00021	0.0000198
Calcium (Ca)-Total	mg/L	0.05	-	127	63.7
Cesium (Cs)-Total	mg/L	0.00001/0.0001	-	<0.00010	0.000017
Chromium (Cr)-Total	mg/L	0.0002-0.005	-	<0.0050	<0.00050
Cobalt (Co)-Total	mg/L	0.0001/0.01	-	0.0075	0.00037
Copper (Cu)-Total	mg/L	0.0005-0.005	0.3	<0.0050	0.00182
Iron (Fe)-Total	mg/L	0.01	-	0.37	0.142
Lead (Pb)-Total	mg/L	0.000005-0.0005	0.2	<0.00050	0.000167
Lithium (Li)-Total	mg/L	0.001	-	0.018	0.0046
Magnesium (Mg)-Total	mg/L	0.05	-	219	64.8
Manganese (Mn)-Total	mg/L	0.0005	-	2.46	0.00585
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00108	0.00338
Nickel (Ni)-Total	mg/L	0.0005/0.10	0.5	0.017	0.00228
Phosphorus (P)-Total	mg/L	0.05/0.50	-	<0.50	<0.050
Potassium (K)-Total	mg/L	0.05	-	15.2	5.02
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0124	0.00693
Selenium (Se)-Total	mg/L	0.00005	-	0.00256	0.000483
Silicon (Si)-Total	mg/L	0.00002/0.10	-	2.1	1.97
Silver (Ag)-Total	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Sodium (Na)-Total	mg/L	0.05	-	22.6	14.1
Strontium (Sr)-Total	mg/L	0.001	-	0.13	0.0463
Sulfur (S)-Total	mg/L	0.00040/0.50	-	345	92.2
Tellurium (Te)-Total	mg/L	0.0002/0.002	-	<0.0020	<0.00020
Thallium (Tl)-Total	mg/L	0.00001/0.0002	-	<0.00010	<0.000010
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00010
Tin (Sn)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Titanium (Ti)-Total	mg/L	0.0002-0.003	-	0.0103	0.00397
Tungsten (W)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Uranium (U)-Total	mg/L	0.00001/0.001	-	0.00723	0.0148
Vanadium (V)-Total	mg/L	0.0005-0.006	-	<0.0050	<0.00050
Zinc (Zn)-Total	mg/L	0.0004-0.03	0.5	<0.030	<0.0030
Zirconium (Zr)-Total	mg/L	0.0002	-	<0.0020	0.00027
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	<0.050	0.0218
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.01	0.0247
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Boron (B)-Dissolved	mg/L	0.01/0.1	-	<0.10	0.021
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.000183	0.0000111
Calcium (Ca)-Dissolved	mg/L	0.05	-	124	64.9
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	0.000011
Chromium (Cr)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.0071	0.00031
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	0.0031	0.00166
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	0.043
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.001	-	0.015	0.0038
Magnesium (Mg)-Dissolved	mg/L	0.005	-	217	65.3
Manganese (Mn)-Dissolved	mg/L	0.0005	-	2.41	0.0039
Mercury (Hg)-Dissolved	mg/L	0.0000005	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00109	0.00333
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.0168	0.00215
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	<0.50	<0.050
Potassium (K)-Dissolved	mg/L	0.05	-	15.1	5.14
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0127	0.00644
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00307	0.000439
Silicon (Si)-Dissolved	mg/L	0.05	-	1.92	1.87
Silver (Ag)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.05	-	22.4	14.3
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.13	0.0461
Sulfur (S)-Dissolved	mg/L	0.5	-	332	90.9
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	<0.000010
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.0030	0.00146
Tungsten (W)-Dissolved	mg/L	0.0001	-	<0.0010	<0.00010
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00691	0.0145
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	<0.010	<0.0010
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	0.00021
Acute Lethality ^{2,3}	N/A		Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic

Notes:
Bold highlight indicate results that exceeded the applicable water quality criteria.
¹Type A Water Licence (ZAM-MRY1325 - Amend. 1) - Table 10.
²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).
³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).



Attachment 5

Laboratory Certificates of Analysis (COAs)



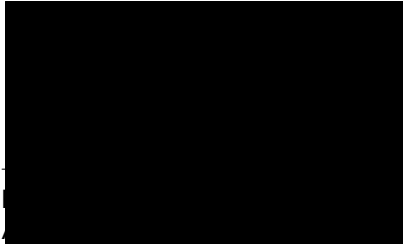
Baffinland Iron Mine's Corporation
(Oakville)
ATTN: Connor Devereaux/Kendra Button
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 28-JUL-21
Report Date: 24-AUG-21 07:13 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2619446
Project P.O. #: 4500090295
Job Reference: CRUSHER SEEPAGE
C of C Numbers:
Legal Site Desc:



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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-1	CP-SEEPAGE-05_2021-07-27_1930							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30							
Matrix:	WATER							
Physical Tests								
Conductivity		2060		1.0	umhos/cm		03-AUG-21	R5542083
Hardness (as CaCO3)		1160		1.3	mg/L		03-AUG-21	
pH		7.04		0.10	pH units		28-JUL-21	R5530608
Total Suspended Solids		65.7		2.0	mg/L		28-JUL-21	R5531017
Total Dissolved Solids		1710		10	mg/L		29-JUL-21	R5531338
Turbidity		22.6		0.10	NTU		28-JUL-21	R5530602
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		56.5		1.0	mg/L		03-AUG-21	R5542083
Ammonia, Total (as N)		2.54	DLHC	0.10	mg/L		04-AUG-21	R5540236
Chloride (Cl)		51.8	DLDS	2.5	mg/L		03-AUG-21	R5542517
Fluoride (F)		<0.10	DLDS	0.10	mg/L		03-AUG-21	R5542517
Nitrate (as N)		21.1	DLDS	0.10	mg/L		03-AUG-21	R5542517
Total Kjeldahl Nitrogen		4.20	DLM	0.50	mg/L	10-AUG-21	10-AUG-21	R5547731
Phosphorus, Total		0.0201		0.0030	mg/L	30-JUL-21	01-AUG-21	R5538022
Sulfate (SO4)		913	DLDS	1.5	mg/L		03-AUG-21	R5542517
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				27-JUL-21	30-JUL-21	R5536768
Dissolved Organic Carbon		3.92		0.50	mg/L	27-JUL-21	03-AUG-21	R5542365
Total Organic Carbon		3.38		0.50	mg/L		31-JUL-21	R5539318
Inorganic Parameters								
Acidity (as CaCO3)		4.7		2.0	mg/L		04-AUG-21	R5544278
Total Metals								
Aluminum (Al)-Total		0.317	DLHC	0.050	mg/L	30-JUL-21	31-JUL-21	R5535776
Antimony (Sb)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Arsenic (As)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Barium (Ba)-Total		0.0130	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Beryllium (Be)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Bismuth (Bi)-Total		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Boron (B)-Total		<0.10	DLHC	0.10	mg/L	30-JUL-21	31-JUL-21	R5535776
Cadmium (Cd)-Total		0.000201	DLHC	0.000050	mg/L	30-JUL-21	31-JUL-21	R5535776
Calcium (Ca)-Total		129	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Cesium (Cs)-Total		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Chromium (Cr)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Cobalt (Co)-Total		0.0083	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Copper (Cu)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Iron (Fe)-Total		0.65	DLHC	0.10	mg/L	30-JUL-21	31-JUL-21	R5535776
Lead (Pb)-Total		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Lithium (Li)-Total		0.019	DLHC	0.010	mg/L	30-JUL-21	31-JUL-21	R5535776
Magnesium (Mg)-Total		203	DLHC	0.050	mg/L	30-JUL-21	31-JUL-21	R5535776
Manganese (Mn)-Total		2.66	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		05-AUG-21	R5544800
Molybdenum (Mo)-Total		0.00105	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-1	CP-SEEPAGE-05_2021-07-27_1930							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30							
Matrix:	WATER							
Total Metals								
Nickel (Ni)-Total		0.0164	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Phosphorus (P)-Total		<0.50	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Potassium (K)-Total		14.3	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Rubidium (Rb)-Total		0.0109	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Selenium (Se)-Total		0.00333	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Silicon (Si)-Total		2.5	DLHC	1.0	mg/L	30-JUL-21	31-JUL-21	R5535776
Silver (Ag)-Total		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Sodium (Na)-Total		21.2	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Strontium (Sr)-Total		0.138	DLHC	0.010	mg/L	30-JUL-21	31-JUL-21	R5535776
Sulfur (S)-Total		357	DLHC	5.0	mg/L	30-JUL-21	31-JUL-21	R5535776
Tellurium (Te)-Total		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Thallium (Tl)-Total		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Thorium (Th)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Tin (Sn)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Titanium (Ti)-Total		0.0151	DLHC	0.0030	mg/L	30-JUL-21	31-JUL-21	R5535776
Tungsten (W)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Uranium (U)-Total		0.00624	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Vanadium (V)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Zinc (Zn)-Total		<0.030	DLHC	0.030	mg/L	30-JUL-21	31-JUL-21	R5535776
Zirconium (Zr)-Total		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					11-AUG-21	R5547873
Dissolved Metals Filtration Location		FIELD					30-JUL-21	R5536761
Aluminum (Al)-Dissolved		<0.050	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Antimony (Sb)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Arsenic (As)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Barium (Ba)-Dissolved		0.0090	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Beryllium (Be)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Bismuth (Bi)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Boron (B)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898
Cadmium (Cd)-Dissolved		0.000167	DLHC	0.000050	mg/L	30-JUL-21	01-AUG-21	R5537898
Calcium (Ca)-Dissolved		122	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Cesium (Cs)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Chromium (Cr)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Cobalt (Co)-Dissolved		0.0080	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Copper (Cu)-Dissolved		0.0023	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Iron (Fe)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898
Lead (Pb)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Lithium (Li)-Dissolved		0.020	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Magnesium (Mg)-Dissolved		208	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Manganese (Mn)-Dissolved		2.67	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-1 CP-SEEPAGE-05_2021-07-27_1930 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30 Matrix: WATER								
Dissolved Metals								
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	11-AUG-21	11-AUG-21	R5548204
Molybdenum (Mo)-Dissolved		0.00100	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Nickel (Ni)-Dissolved		0.0160	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Phosphorus (P)-Dissolved		<0.50	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Potassium (K)-Dissolved		14.1	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Rubidium (Rb)-Dissolved		0.0105	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Selenium (Se)-Dissolved		0.00364	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Silicon (Si)-Dissolved		1.74	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Silver (Ag)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Sodium (Na)-Dissolved		21.1	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Strontium (Sr)-Dissolved		0.127	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Sulfur (S)-Dissolved		341	DLHC	5.0	mg/L	30-JUL-21	01-AUG-21	R5537898
Tellurium (Te)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Thallium (Tl)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Thorium (Th)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Tin (Sn)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Titanium (Ti)-Dissolved		<0.0030	DLHC	0.0030	mg/L	30-JUL-21	01-AUG-21	R5537898
Tungsten (W)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Uranium (U)-Dissolved		0.00579	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Vanadium (V)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Zinc (Zn)-Dissolved		<0.010	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Zirconium (Zr)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
L2619446-2 CP-SEEPAGE-06_2021-07-27_1930 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30 Matrix: WATER								
Physical Tests								
Conductivity		2050		1.0	umhos/cm		03-AUG-21	R5542083
Hardness (as CaCO3)		1160		1.3	mg/L		03-AUG-21	
pH		6.87		0.10	pH units		28-JUL-21	R5530608
Total Suspended Solids		19.2		2.0	mg/L		28-JUL-21	R5531017
Total Dissolved Solids		1690		10	mg/L		29-JUL-21	R5531338
Turbidity		4.33		0.10	NTU		28-JUL-21	R5530602
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		57.1		1.0	mg/L		03-AUG-21	R5542083
Ammonia, Total (as N)		2.62	DLHC	0.10	mg/L		04-AUG-21	R5540236
Chloride (Cl)		53.2	DLDS	2.5	mg/L		03-AUG-21	R5542517
Fluoride (F)		<0.10	DLDS	0.10	mg/L		03-AUG-21	R5542517
Nitrate (as N)		21.5	DLDS	0.10	mg/L		03-AUG-21	R5542517
Total Kjeldahl Nitrogen		4.90	DLM	0.50	mg/L	10-AUG-21	10-AUG-21	R5547731
Phosphorus, Total		0.0218		0.0030	mg/L	30-JUL-21	01-AUG-21	R5538022
Sulfate (SO4)		936	DLDS	1.5	mg/L		03-AUG-21	R5542517
Organic / Inorganic Carbon								

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-2 CP-SEEPAGE-06_2021-07-27_1930								
Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30								
Matrix: WATER								
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				27-JUL-21	30-JUL-21	R5536768
Dissolved Organic Carbon		3.91		0.50	mg/L	27-JUL-21	03-AUG-21	R5542365
Total Organic Carbon		3.51		0.50	mg/L		31-JUL-21	R5539318
Inorganic Parameters								
Acidity (as CaCO3)		3.6		2.0	mg/L		04-AUG-21	R5544278
Total Metals								
Aluminum (Al)-Total		0.949	DLHC	0.050	mg/L	30-JUL-21	31-JUL-21	R5535776
Antimony (Sb)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Arsenic (As)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Barium (Ba)-Total		0.0135	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Beryllium (Be)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Bismuth (Bi)-Total		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Boron (B)-Total		<0.10	DLHC	0.10	mg/L	30-JUL-21	31-JUL-21	R5535776
Cadmium (Cd)-Total		0.000184	DLHC	0.000050	mg/L	30-JUL-21	31-JUL-21	R5535776
Calcium (Ca)-Total		125	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Cesium (Cs)-Total		0.00013	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Chromium (Cr)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Cobalt (Co)-Total		0.0090	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Copper (Cu)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Iron (Fe)-Total		2.62	DLHC	0.10	mg/L	30-JUL-21	31-JUL-21	R5535776
Lead (Pb)-Total		0.00076	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Lithium (Li)-Total		0.020	DLHC	0.010	mg/L	30-JUL-21	31-JUL-21	R5535776
Magnesium (Mg)-Total		200	DLHC	0.050	mg/L	30-JUL-21	31-JUL-21	R5535776
Manganese (Mn)-Total		2.66	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		05-AUG-21	R5544800
Molybdenum (Mo)-Total		0.00099	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Nickel (Ni)-Total		0.0181	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Phosphorus (P)-Total		<0.50	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Potassium (K)-Total		14.2	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Rubidium (Rb)-Total		0.0124	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Selenium (Se)-Total		0.00324	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Silicon (Si)-Total		3.3	DLHC	1.0	mg/L	30-JUL-21	31-JUL-21	R5535776
Silver (Ag)-Total		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	31-JUL-21	R5535776
Sodium (Na)-Total		20.5	DLHC	0.50	mg/L	30-JUL-21	31-JUL-21	R5535776
Strontium (Sr)-Total		0.132	DLHC	0.010	mg/L	30-JUL-21	31-JUL-21	R5535776
Sulfur (S)-Total		348	DLHC	5.0	mg/L	30-JUL-21	31-JUL-21	R5535776
Tellurium (Te)-Total		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Thallium (Tl)-Total		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Thorium (Th)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Tin (Sn)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Titanium (Ti)-Total		0.0549	DLHC	0.0030	mg/L	30-JUL-21	31-JUL-21	R5535776

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-2	CP-SEEPAGE-06_2021-07-27_1930							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30							
Matrix:	WATER							
Total Metals								
Tungsten (W)-Total		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	31-JUL-21	R5535776
Uranium (U)-Total		0.00597	DLHC	0.00010	mg/L	30-JUL-21	31-JUL-21	R5535776
Vanadium (V)-Total		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	31-JUL-21	R5535776
Zinc (Zn)-Total		<0.030	DLHC	0.030	mg/L	30-JUL-21	31-JUL-21	R5535776
Zirconium (Zr)-Total		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	31-JUL-21	R5535776
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					11-AUG-21	R5547873
Dissolved Metals Filtration Location		FIELD					30-JUL-21	R5536761
Aluminum (Al)-Dissolved		<0.050	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Antimony (Sb)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Arsenic (As)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Barium (Ba)-Dissolved		0.0085	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Beryllium (Be)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Bismuth (Bi)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Boron (B)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898
Cadmium (Cd)-Dissolved		0.000151	DLHC	0.000050	mg/L	30-JUL-21	01-AUG-21	R5537898
Calcium (Ca)-Dissolved		121	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Cesium (Cs)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Chromium (Cr)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Cobalt (Co)-Dissolved		0.0078	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Copper (Cu)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Iron (Fe)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898
Lead (Pb)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Lithium (Li)-Dissolved		0.019	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Magnesium (Mg)-Dissolved		207	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Manganese (Mn)-Dissolved		2.63	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	11-AUG-21	11-AUG-21	R5548204
Molybdenum (Mo)-Dissolved		0.00097	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Nickel (Ni)-Dissolved		0.0157	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Phosphorus (P)-Dissolved		<0.50	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Potassium (K)-Dissolved		14.1	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Rubidium (Rb)-Dissolved		0.0100	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Selenium (Se)-Dissolved		0.00339	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Silicon (Si)-Dissolved		1.83	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Silver (Ag)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Sodium (Na)-Dissolved		21.3	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Strontium (Sr)-Dissolved		0.128	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Sulfur (S)-Dissolved		346	DLHC	5.0	mg/L	30-JUL-21	01-AUG-21	R5537898
Tellurium (Te)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Thallium (Tl)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Thorium (Th)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-2 CP-SEEPAGE-06_2021-07-27_1930 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30 Matrix: WATER								
Dissolved Metals								
Tin (Sn)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Titanium (Ti)-Dissolved		<0.0030	DLHC	0.0030	mg/L	30-JUL-21	01-AUG-21	R5537898
Tungsten (W)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Uranium (U)-Dissolved		0.00536	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Vanadium (V)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Zinc (Zn)-Dissolved		<0.010	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Zirconium (Zr)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
L2619446-3 CP-SEEPAGE-07_2021-07-27_1930 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30 Matrix: WATER								
Physical Tests								
Conductivity		2040		1.0	umhos/cm		03-AUG-21	R5542083
Hardness (as CaCO3)		1160		1.3	mg/L		03-AUG-21	
pH		6.88		0.10	pH units		28-JUL-21	R5530608
Total Suspended Solids		18.1		2.0	mg/L		28-JUL-21	R5531017
Total Dissolved Solids		1660		10	mg/L		29-JUL-21	R5531338
Turbidity		4.08		0.10	NTU		28-JUL-21	R5530602
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		57.3		1.0	mg/L		03-AUG-21	R5542083
Ammonia, Total (as N)		2.56	DLHC	0.10	mg/L		04-AUG-21	R5540236
Chloride (Cl)		52.8	DLDS	2.5	mg/L		03-AUG-21	R5542517
Fluoride (F)		<0.10	DLDS	0.10	mg/L		03-AUG-21	R5542517
Nitrate (as N)		21.0	DLDS	0.10	mg/L		03-AUG-21	R5542517
Total Kjeldahl Nitrogen		3.90	DLM	0.50	mg/L	10-AUG-21	10-AUG-21	R5547731
Phosphorus, Total		0.0191		0.0030	mg/L	30-JUL-21	01-AUG-21	R5538022
Sulfate (SO4)		920	DLDS	1.5	mg/L		03-AUG-21	R5542517
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				27-JUL-21	30-JUL-21	R5536768
Dissolved Organic Carbon		3.83		0.50	mg/L	27-JUL-21	03-AUG-21	R5542365
Total Organic Carbon		3.68		0.50	mg/L		31-JUL-21	R5539318
Inorganic Parameters								
Acidity (as CaCO3)		3.7		2.0	mg/L		04-AUG-21	R5544278
Total Metals								
Aluminum (Al)-Total		0.271	DLHC	0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Antimony (Sb)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Arsenic (As)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Barium (Ba)-Total		0.0110	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Beryllium (Be)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Bismuth (Bi)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Boron (B)-Total		<0.10	DLHC	0.10	mg/L	02-AUG-21	03-AUG-21	R5540436
Cadmium (Cd)-Total		0.000204	DLHC	0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Calcium (Ca)-Total		127	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-3	CP-SEEPAGE-07_2021-07-27_1930							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30							
Matrix:	WATER							
Total Metals								
Cesium (Cs)-Total		<0.00010	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Chromium (Cr)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Cobalt (Co)-Total		0.0081	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Copper (Cu)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Iron (Fe)-Total		0.48	DLHC	0.10	mg/L	02-AUG-21	03-AUG-21	R5540436
Lead (Pb)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Lithium (Li)-Total		0.021	DLHC	0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Magnesium (Mg)-Total		217	DLHC	0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Manganese (Mn)-Total		2.63	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		05-AUG-21	R5544800
Molybdenum (Mo)-Total		0.00095	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Nickel (Ni)-Total		0.0163	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Phosphorus (P)-Total		<0.50	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Potassium (K)-Total		14.6	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Rubidium (Rb)-Total		0.0104	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Selenium (Se)-Total		0.00350	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Silicon (Si)-Total		2.1	DLHC	1.0	mg/L	02-AUG-21	03-AUG-21	R5540436
Silver (Ag)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Sodium (Na)-Total		22.2	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Strontium (Sr)-Total		0.131	DLHC	0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Sulfur (S)-Total		343	DLHC	5.0	mg/L	02-AUG-21	03-AUG-21	R5540436
Tellurium (Te)-Total		<0.0020	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Thallium (Tl)-Total		<0.00010	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Thorium (Th)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Tin (Sn)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Titanium (Ti)-Total		0.0113	DLHC	0.0030	mg/L	02-AUG-21	03-AUG-21	R5540436
Tungsten (W)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Uranium (U)-Total		0.00510	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Vanadium (V)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Zinc (Zn)-Total		<0.030	DLHC	0.030	mg/L	02-AUG-21	03-AUG-21	R5540436
Zirconium (Zr)-Total		<0.0020	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					13-AUG-21	R5549431
Dissolved Metals Filtration Location		FIELD					30-JUL-21	R5536761
Aluminum (Al)-Dissolved		<0.050	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Antimony (Sb)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Arsenic (As)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Barium (Ba)-Dissolved		0.0088	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Beryllium (Be)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Bismuth (Bi)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Boron (B)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-3 CP-SEEPAGE-07_2021-07-27_1930 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:30 Matrix: WATER								
Dissolved Metals								
Cadmium (Cd)-Dissolved		0.000178	DLHC	0.000050	mg/L	30-JUL-21	01-AUG-21	R5537898
Calcium (Ca)-Dissolved		121	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Cesium (Cs)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Chromium (Cr)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Cobalt (Co)-Dissolved		0.0077	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Copper (Cu)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Iron (Fe)-Dissolved		<0.10	DLHC	0.10	mg/L	30-JUL-21	01-AUG-21	R5537898
Lead (Pb)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Lithium (Li)-Dissolved		0.018	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Magnesium (Mg)-Dissolved		209	DLHC	0.050	mg/L	30-JUL-21	01-AUG-21	R5537898
Manganese (Mn)-Dissolved		2.52	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	13-AUG-21	13-AUG-21	R5549631
Molybdenum (Mo)-Dissolved		0.00099	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Nickel (Ni)-Dissolved		0.0154	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Phosphorus (P)-Dissolved		<0.50	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Potassium (K)-Dissolved		14.2	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Rubidium (Rb)-Dissolved		0.0098	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Selenium (Se)-Dissolved		0.00346	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Silicon (Si)-Dissolved		1.83	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Silver (Ag)-Dissolved		<0.00050	DLHC	0.00050	mg/L	30-JUL-21	01-AUG-21	R5537898
Sodium (Na)-Dissolved		21.5	DLHC	0.50	mg/L	30-JUL-21	01-AUG-21	R5537898
Strontium (Sr)-Dissolved		0.125	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Sulfur (S)-Dissolved		338	DLHC	5.0	mg/L	30-JUL-21	01-AUG-21	R5537898
Tellurium (Te)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
Thallium (Tl)-Dissolved		<0.00010	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Thorium (Th)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Tin (Sn)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Titanium (Ti)-Dissolved		<0.0030	DLHC	0.0030	mg/L	30-JUL-21	01-AUG-21	R5537898
Tungsten (W)-Dissolved		<0.0010	DLHC	0.0010	mg/L	30-JUL-21	01-AUG-21	R5537898
Uranium (U)-Dissolved		0.00507	DLHC	0.00010	mg/L	30-JUL-21	01-AUG-21	R5537898
Vanadium (V)-Dissolved		<0.0050	DLHC	0.0050	mg/L	30-JUL-21	01-AUG-21	R5537898
Zinc (Zn)-Dissolved		<0.010	DLHC	0.010	mg/L	30-JUL-21	01-AUG-21	R5537898
Zirconium (Zr)-Dissolved		<0.0020	DLHC	0.0020	mg/L	30-JUL-21	01-AUG-21	R5537898
L2619446-4 CP-SEEPAGE-08_2021-07-27_1940 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:40 Matrix: WATER								
Physical Tests								
Conductivity		2040		1.0	umhos/cm		03-AUG-21	R5542083
Hardness (as CaCO3)		1200		1.3	mg/L		04-AUG-21	
pH		7.14		0.10	pH units		28-JUL-21	R5530608
Total Suspended Solids		17.5		2.0	mg/L		28-JUL-21	R5531017
Total Dissolved Solids		1730		10	mg/L		29-JUL-21	R5531338

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-4 CP-SEEPAGE-08_2021-07-27_1940								
Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:40								
Matrix: WATER								
Physical Tests								
Turbidity		3.55		0.10	NTU		28-JUL-21	R5530602
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		57.8		1.0	mg/L		03-AUG-21	R5542083
Ammonia, Total (as N)		2.42	DLHC	0.10	mg/L		04-AUG-21	R5540236
Chloride (Cl)		57.5	DLDS	2.5	mg/L		03-AUG-21	R5542517
Fluoride (F)		<0.10	DLDS	0.10	mg/L		03-AUG-21	R5542517
Nitrate (as N)		22.8	DLDS	0.10	mg/L		03-AUG-21	R5542517
Total Kjeldahl Nitrogen		4.20	DLM	0.50	mg/L	10-AUG-21	10-AUG-21	R5547731
Phosphorus, Total		0.0187		0.0030	mg/L	30-JUL-21	01-AUG-21	R5538022
Sulfate (SO4)		1000	DLDS	1.5	mg/L		03-AUG-21	R5542517
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				27-JUL-21	30-JUL-21	R5536768
Dissolved Organic Carbon		3.86		0.50	mg/L	27-JUL-21	03-AUG-21	R5542365
Total Organic Carbon		3.54		0.50	mg/L		31-JUL-21	R5539318
Inorganic Parameters								
Acidity (as CaCO3)		3.3		2.0	mg/L		04-AUG-21	R5544278
Total Metals								
Aluminum (Al)-Total		0.212	DLHC	0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Antimony (Sb)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Arsenic (As)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Barium (Ba)-Total		0.0111	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Beryllium (Be)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Bismuth (Bi)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Boron (B)-Total		<0.10	DLHC	0.10	mg/L	02-AUG-21	03-AUG-21	R5540436
Cadmium (Cd)-Total		0.000210	DLHC	0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Calcium (Ca)-Total		127	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Cesium (Cs)-Total		<0.00010	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Chromium (Cr)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Cobalt (Co)-Total		0.0075	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Copper (Cu)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Iron (Fe)-Total		0.37	DLHC	0.10	mg/L	02-AUG-21	03-AUG-21	R5540436
Lead (Pb)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Lithium (Li)-Total		0.018	DLHC	0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Magnesium (Mg)-Total		219	DLHC	0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Manganese (Mn)-Total		2.46	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		05-AUG-21	R5544800
Molybdenum (Mo)-Total		0.00108	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Nickel (Ni)-Total		0.0170	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Phosphorus (P)-Total		<0.50	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Potassium (K)-Total		15.2	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Rubidium (Rb)-Total		0.0124	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Selenium (Se)-Total		0.00256	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-4	CP-SEEPAGE-08_2021-07-27_1940							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:40							
Matrix:	WATER							
Total Metals								
Silicon (Si)-Total		2.1	DLHC	1.0	mg/L	02-AUG-21	03-AUG-21	R5540436
Silver (Ag)-Total		<0.00050	DLHC	0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Sodium (Na)-Total		22.6	DLHC	0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Strontium (Sr)-Total		0.130	DLHC	0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Sulfur (S)-Total		345	DLHC	5.0	mg/L	02-AUG-21	03-AUG-21	R5540436
Tellurium (Te)-Total		<0.0020	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Thallium (Tl)-Total		<0.00010	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Thorium (Th)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Tin (Sn)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Titanium (Ti)-Total		0.0103	DLHC	0.0030	mg/L	02-AUG-21	03-AUG-21	R5540436
Tungsten (W)-Total		<0.0010	DLHC	0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Uranium (U)-Total		0.00723	DLHC	0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Vanadium (V)-Total		<0.0050	DLHC	0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Zinc (Zn)-Total		<0.030	DLHC	0.030	mg/L	02-AUG-21	03-AUG-21	R5540436
Zirconium (Zr)-Total		<0.0020	DLHC	0.0020	mg/L	02-AUG-21	03-AUG-21	R5540436
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					13-AUG-21	R5549431
Dissolved Metals Filtration Location		FIELD					03-AUG-21	R5539177
Aluminum (Al)-Dissolved		<0.050	DLHC	0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Antimony (Sb)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Arsenic (As)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Barium (Ba)-Dissolved		0.0100	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Beryllium (Be)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Bismuth (Bi)-Dissolved		<0.00050	DLHC	0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Boron (B)-Dissolved		<0.10	DLHC	0.10	mg/L	03-AUG-21	03-AUG-21	R5541856
Cadmium (Cd)-Dissolved		0.000183	DLHC	0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Calcium (Ca)-Dissolved		124	DLHC	0.50	mg/L	03-AUG-21	03-AUG-21	R5541856
Cesium (Cs)-Dissolved		<0.00010	DLHC	0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Chromium (Cr)-Dissolved		<0.0050	DLHC	0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Cobalt (Co)-Dissolved		0.0071	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Copper (Cu)-Dissolved		0.0031	DLHC	0.0020	mg/L	03-AUG-21	03-AUG-21	R5541856
Iron (Fe)-Dissolved		<0.10	DLHC	0.10	mg/L	03-AUG-21	03-AUG-21	R5541856
Lead (Pb)-Dissolved		<0.00050	DLHC	0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Lithium (Li)-Dissolved		0.015	DLHC	0.010	mg/L	03-AUG-21	03-AUG-21	R5541856
Magnesium (Mg)-Dissolved		217	DLHC	0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Manganese (Mn)-Dissolved		2.41	DLHC	0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	13-AUG-21	13-AUG-21	R5549631
Molybdenum (Mo)-Dissolved		0.00109	DLHC	0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Nickel (Ni)-Dissolved		0.0168	DLHC	0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Phosphorus (P)-Dissolved		<0.50	DLHC	0.50	mg/L	03-AUG-21	03-AUG-21	R5541856
Potassium (K)-Dissolved		15.1	DLHC	0.50	mg/L	03-AUG-21	03-AUG-21	R5541856

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-4 CP-SEEPAGE-08_2021-07-27_1940 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 19:40 Matrix: WATER								
Dissolved Metals								
Rubidium (Rb)-Dissolved		0.0127	DLHC	0.0020	mg/L	03-AUG-21	03-AUG-21	R5541856
Selenium (Se)-Dissolved		0.00307	DLHC	0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Silicon (Si)-Dissolved		1.92	DLHC	0.50	mg/L	03-AUG-21	03-AUG-21	R5541856
Silver (Ag)-Dissolved		<0.00050	DLHC	0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Sodium (Na)-Dissolved		22.4	DLHC	0.50	mg/L	03-AUG-21	03-AUG-21	R5541856
Strontium (Sr)-Dissolved		0.130	DLHC	0.010	mg/L	03-AUG-21	03-AUG-21	R5541856
Sulfur (S)-Dissolved		332	DLHC	5.0	mg/L	03-AUG-21	03-AUG-21	R5541856
Tellurium (Te)-Dissolved		<0.0020	DLHC	0.0020	mg/L	03-AUG-21	03-AUG-21	R5541856
Thallium (Tl)-Dissolved		<0.00010	DLHC	0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Thorium (Th)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Tin (Sn)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Titanium (Ti)-Dissolved		<0.0030	DLHC	0.0030	mg/L	03-AUG-21	03-AUG-21	R5541856
Tungsten (W)-Dissolved		<0.0010	DLHC	0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Uranium (U)-Dissolved		0.00691	DLHC	0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Vanadium (V)-Dissolved		<0.0050	DLHC	0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Zinc (Zn)-Dissolved		<0.010	DLHC	0.010	mg/L	03-AUG-21	04-AUG-21	R5541856
Zirconium (Zr)-Dissolved		<0.0020	DLHC	0.0020	mg/L	03-AUG-21	03-AUG-21	R5541856
L2619446-5 MS-C-E_2021-07-27_2110 Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 21:10 Matrix: WATER								
Physical Tests								
Conductivity		854		1.0	umhos/cm		03-AUG-21	R5542083
Hardness (as CaCO3)		431		0.50	mg/L		04-AUG-21	
pH		8.06		0.10	pH units		28-JUL-21	R5530608
Total Suspended Solids		3.9		2.0	mg/L		28-JUL-21	R5531017
Total Dissolved Solids		589		10	mg/L		29-JUL-21	R5531338
Turbidity		7.16		0.10	NTU		28-JUL-21	R5530602
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		119		1.0	mg/L		03-AUG-21	R5542083
Ammonia, Total (as N)		<0.010		0.010	mg/L		03-AUG-21	R5540236
Chloride (Cl)		22.6		0.50	mg/L		03-AUG-21	R5542517
Fluoride (F)		0.053		0.020	mg/L		03-AUG-21	R5542517
Nitrate (as N)		4.45		0.020	mg/L		03-AUG-21	R5542517
Total Kjeldahl Nitrogen		0.540		0.050	mg/L	05-AUG-21	06-AUG-21	R5545869
Phosphorus, Total		0.0039		0.0030	mg/L	30-JUL-21	01-AUG-21	R5538022
Sulfate (SO4)		256		0.30	mg/L		03-AUG-21	R5542517
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				27-JUL-21	30-JUL-21	R5536768
Dissolved Organic Carbon		6.11		0.50	mg/L	27-JUL-21	03-AUG-21	R5542365
Total Organic Carbon		5.80		0.50	mg/L		31-JUL-21	R5539318
Inorganic Parameters								
Acidity (as CaCO3)		NA	NR:PH8	2.0	mg/L		04-AUG-21	R5544278

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-5 MS-C-E_2021-07-27_2110								
Sampled By: PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 21:10								
Matrix: WATER								
Inorganic Parameters								
Total Metals								
Aluminum (Al)-Total		0.0849		0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Antimony (Sb)-Total		<0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Arsenic (As)-Total		0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Barium (Ba)-Total		0.0241		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Beryllium (Be)-Total		<0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Boron (B)-Total		0.022		0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Cadmium (Cd)-Total		0.0000198		0.0000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Calcium (Ca)-Total		63.7		0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Cesium (Cs)-Total		0.000017		0.000010	mg/L	02-AUG-21	03-AUG-21	R5540436
Chromium (Cr)-Total		<0.00050		0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Cobalt (Co)-Total		0.00037		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Copper (Cu)-Total		0.00182		0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Iron (Fe)-Total		0.142		0.010	mg/L	02-AUG-21	03-AUG-21	R5540436
Lead (Pb)-Total		0.000167		0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Lithium (Li)-Total		0.0046		0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Magnesium (Mg)-Total		64.8		0.0050	mg/L	02-AUG-21	03-AUG-21	R5540436
Manganese (Mn)-Total		0.00585		0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		05-AUG-21	R5544800
Molybdenum (Mo)-Total		0.00338		0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Nickel (Ni)-Total		0.00228		0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Phosphorus (P)-Total		<0.050		0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Potassium (K)-Total		5.02		0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Rubidium (Rb)-Total		0.00693		0.00020	mg/L	02-AUG-21	03-AUG-21	R5540436
Selenium (Se)-Total		0.000483		0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Silicon (Si)-Total		1.97		0.10	mg/L	02-AUG-21	03-AUG-21	R5540436
Silver (Ag)-Total		<0.000050		0.000050	mg/L	02-AUG-21	03-AUG-21	R5540436
Sodium (Na)-Total		14.1		0.050	mg/L	02-AUG-21	03-AUG-21	R5540436
Strontium (Sr)-Total		0.0463		0.0010	mg/L	02-AUG-21	03-AUG-21	R5540436
Sulfur (S)-Total		92.2		0.50	mg/L	02-AUG-21	03-AUG-21	R5540436
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	02-AUG-21	03-AUG-21	R5540436
Thallium (Tl)-Total		<0.000010		0.000010	mg/L	02-AUG-21	03-AUG-21	R5540436
Thorium (Th)-Total		<0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Tin (Sn)-Total		<0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Titanium (Ti)-Total		0.00397		0.00030	mg/L	02-AUG-21	03-AUG-21	R5540436
Tungsten (W)-Total		<0.00010		0.00010	mg/L	02-AUG-21	03-AUG-21	R5540436
Uranium (U)-Total		0.0148		0.000010	mg/L	02-AUG-21	03-AUG-21	R5540436
Vanadium (V)-Total		<0.00050		0.00050	mg/L	02-AUG-21	03-AUG-21	R5540436
Zinc (Zn)-Total		<0.0030		0.0030	mg/L	02-AUG-21	03-AUG-21	R5540436
Zirconium (Zr)-Total		0.00027		0.00020	mg/L	02-AUG-21	03-AUG-21	R5540436

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-5	MS-C-E_2021-07-27_2110							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 21:10							
Matrix:	WATER							
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					13-AUG-21	R5549431
Dissolved Metals Filtration Location		FIELD					03-AUG-21	R5539177
Aluminum (Al)-Dissolved		0.0218		0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Antimony (Sb)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Arsenic (As)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Barium (Ba)-Dissolved		0.0247		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Boron (B)-Dissolved		0.021		0.010	mg/L	03-AUG-21	03-AUG-21	R5541856
Cadmium (Cd)-Dissolved		0.0000111		0.0000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Calcium (Ca)-Dissolved		64.9		0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Cesium (Cs)-Dissolved		0.000011		0.000010	mg/L	03-AUG-21	03-AUG-21	R5541856
Chromium (Cr)-Dissolved		<0.00050		0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Cobalt (Co)-Dissolved		0.00031		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Copper (Cu)-Dissolved		0.00166		0.00020	mg/L	03-AUG-21	03-AUG-21	R5541856
Iron (Fe)-Dissolved		0.043		0.010	mg/L	03-AUG-21	03-AUG-21	R5541856
Lead (Pb)-Dissolved		<0.000050		0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Lithium (Li)-Dissolved		0.0038		0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Magnesium (Mg)-Dissolved		65.3		0.0050	mg/L	03-AUG-21	03-AUG-21	R5541856
Manganese (Mn)-Dissolved		0.00390		0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	13-AUG-21	13-AUG-21	R5549631
Molybdenum (Mo)-Dissolved		0.00333		0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Nickel (Ni)-Dissolved		0.00215		0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Potassium (K)-Dissolved		5.14		0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Rubidium (Rb)-Dissolved		0.00644		0.00020	mg/L	03-AUG-21	03-AUG-21	R5541856
Selenium (Se)-Dissolved		0.000439		0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Silicon (Si)-Dissolved		1.87		0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Silver (Ag)-Dissolved		<0.000050		0.000050	mg/L	03-AUG-21	03-AUG-21	R5541856
Sodium (Na)-Dissolved		14.3		0.050	mg/L	03-AUG-21	03-AUG-21	R5541856
Strontium (Sr)-Dissolved		0.0461		0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856
Sulfur (S)-Dissolved		90.9		0.50	mg/L	03-AUG-21	03-AUG-21	R5541856
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	03-AUG-21	03-AUG-21	R5541856
Thallium (Tl)-Dissolved		<0.000010		0.000010	mg/L	03-AUG-21	03-AUG-21	R5541856
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Titanium (Ti)-Dissolved		0.00146		0.00030	mg/L	03-AUG-21	03-AUG-21	R5541856
Tungsten (W)-Dissolved		<0.00010		0.00010	mg/L	03-AUG-21	03-AUG-21	R5541856
Uranium (U)-Dissolved		0.0145		0.000010	mg/L	03-AUG-21	03-AUG-21	R5541856
Vanadium (V)-Dissolved		<0.00050		0.00050	mg/L	03-AUG-21	03-AUG-21	R5541856
Zinc (Zn)-Dissolved		<0.0010		0.0010	mg/L	03-AUG-21	03-AUG-21	R5541856

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2619446-5	MS-C-E_2021-07-27_2110							
Sampled By:	PM/KC/KB/LM/SJP/TM on 27-JUL-21 @ 21:10							
Matrix:	WATER							
Dissolved Metals								
Zirconium (Zr)-Dissolved		0.00021		0.00020	mg/L	03-AUG-21	03-AUG-21	R5541856

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Magnesium (Mg)-Total	B	L2619446-1, -2
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Iron (Fe)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2619446-1, -2, -3
Matrix Spike	Aluminum (Al)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Barium (Ba)-Total	MS-B	L2619446-1, -2
Matrix Spike	Barium (Ba)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Boron (B)-Total	MS-B	L2619446-1, -2
Matrix Spike	Calcium (Ca)-Total	MS-B	L2619446-1, -2
Matrix Spike	Calcium (Ca)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Iron (Fe)-Total	MS-B	L2619446-1, -2
Matrix Spike	Iron (Fe)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Lithium (Li)-Total	MS-B	L2619446-1, -2
Matrix Spike	Lithium (Li)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2619446-1, -2
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Manganese (Mn)-Total	MS-B	L2619446-1, -2
Matrix Spike	Manganese (Mn)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Potassium (K)-Total	MS-B	L2619446-1, -2
Matrix Spike	Potassium (K)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Silicon (Si)-Total	MS-B	L2619446-1, -2
Matrix Spike	Silicon (Si)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Sodium (Na)-Total	MS-B	L2619446-1, -2
Matrix Spike	Sodium (Na)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Strontium (Sr)-Total	MS-B	L2619446-1, -2
Matrix Spike	Strontium (Sr)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Sulfur (S)-Total	MS-B	L2619446-1, -2
Matrix Spike	Sulfur (S)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Titanium (Ti)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Tungsten (W)-Total	MS-B	L2619446-3, -4, -5
Matrix Spike	Uranium (U)-Total	MS-B	L2619446-1, -2
Matrix Spike	Uranium (U)-Total	MS-B	L2619446-3, -4, -5

Sample Parameter Qualifier key listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
NR:PH8	No Result: No Acidity, pH Of Sample >8.3

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-WT	Water	Acidity (as CaCO3)	APHA 2310 B - Potentiometric Titration
ALK-WT	Water	Alkalinity, Total (as CaCO3)	APHA 2320B

Reference Information

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.

CL-IC-N-WT	Water	Chloride by IC	EPA 300.1 (mod)
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Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

DOC-WT	Water	Dissolved Organic Carbon	APHA 5310B
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Sample is filtered through a 0.45um filter, then injected into a heated reaction chamber which is packed with an oxidative catalyst. The water is vaporized and the organic carbon is oxidized to carbon dioxide. The carbon dioxide is transported in a carrier gas and is measured by a non-dispersive infrared detector.

EC-SCREEN-WT	Water	Conductivity Screen (Internal Use Only)	APHA 2510
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Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

EC-WT	Water	Conductivity	APHA 2510 B
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Water samples can be measured directly by immersing the conductivity cell into the sample.

F-IC-N-WT	Water	Fluoride in Water by IC	EPA 300.1 (mod)
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Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

HARDNESS-CALC-WT	Water	Hardness	APHA 2340 B
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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-WT	Water	Dissolved Mercury in Water by CVAAS	EPA 1631E (mod)
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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.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-T-CVAA-WT	Water	Total Mercury in Water by CVAAS	EPA 1631E (mod)
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Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

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

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

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

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

NH3-F-WT	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
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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. Weston et al.

NO3-IC-WT	Water	Nitrate in Water by IC	EPA 300.1 (mod)
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Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

P-T-COL-WT	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS
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This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is deteremined colourimetrically after persulphate digestion of the sample.

PH-BF	Water	pH	APHA 4500 H-Electrode
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Water samples are analyzed directly by a calibrated pH meter.

SO4-IC-N-WT	Water	Sulfate in Water by IC	EPA 300.1 (mod)
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Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SOLIDS-TDS-BF	Water	Total Dissolved Solids	APHA 2540C
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A well-mixed sample is filtered though glass fibres filter. A known volume of the filtrate is evaporated and dried at 180 +/- 2C for 1hr.

SOLIDS-TSS-BF	Water	Suspended solids	APHA 2540 D-Gravimetric
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A well-mixed sample is filtered through a weighed standard glass fibre filter and the residue retained is dried in an oven at 104 +/- 1C for a minimum of four hours or until a constant weight is achieved.

TKN-F-WT	Water	TKN in Water by Fluorescence	J. ENVIRON. MONIT., 2005,7,37-42,RSC
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Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorecence detection

TOC-WT	Water	Total Organic Carbon	APHA 5310B
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Sample is injected into a heated reaction chamber which is packed with an oxidative catalyst. The water is vaporized and the organic cabon is oxidized to carbon dioxide. The carbon dioxide is transported in a carrier gas and is measured by a non-dispersive infrared detector.

TURBIDITY-BF	Water	Turbidity	APHA 2130 B
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Sample result is based on a comparison of the intensity of the light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension under the same conditions. Sample readings are obtained from a Nephelometer.

** 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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
BF	ALS ENVIRONMENTAL - BAFFIN ISLAND, NUNAVUT, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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 weight of sample
- mg/L - unit of concentration based on volume, parts per million.
- < - Less than.
- D.L. - The reporting limit.
- 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.

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Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-WT		Water						
Batch	R5544278							
WG3590560-3	DUP	L2619446-1						
Acidity (as CaCO3)		4.7	3.7	J	mg/L	1.0	4	04-AUG-21
WG3590560-2	LCS							
Acidity (as CaCO3)			103.5		%		85-115	04-AUG-21
WG3590560-1	MB							
Acidity (as CaCO3)			<2.0		mg/L		2	04-AUG-21
ALK-WT		Water						
Batch	R5542083							
WG3588742-4	DUP	WG3588742-3						
Alkalinity, Total (as CaCO3)		34.4	38.7		mg/L	12	20	03-AUG-21
WG3588742-2	LCS							
Alkalinity, Total (as CaCO3)			85.2		%		85-115	03-AUG-21
WG3588742-1	MB							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	03-AUG-21
CL-IC-N-WT		Water						
Batch	R5542517							
WG3589172-10	DUP	WG3589172-8						
Chloride (Cl)		0.64	0.64		mg/L	0.0	20	03-AUG-21
WG3589172-4	DUP	WG3589172-3						
Chloride (Cl)		2.73	2.73		mg/L	0.1	20	03-AUG-21
WG3589172-2	LCS							
Chloride (Cl)			100.4		%		90-110	03-AUG-21
WG3589172-7	LCS							
Chloride (Cl)			100.3		%		90-110	03-AUG-21
WG3589172-1	MB							
Chloride (Cl)			<0.50		mg/L		0.5	03-AUG-21
WG3589172-6	MB							
Chloride (Cl)			<0.50		mg/L		0.5	03-AUG-21
WG3589172-5	MS	WG3589172-3						
Chloride (Cl)			100.2		%		75-125	03-AUG-21
WG3589172-9	MS	WG3589172-8						
Chloride (Cl)			99.0		%		75-125	03-AUG-21
DOC-WT		Water						
Batch	R5542365							
WG3587813-3	DUP	L2619421-9						
Dissolved Organic Carbon		2.38	2.46		mg/L	2.9	20	03-AUG-21
WG3587813-2	LCS							

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
DOC-WT		Water						
Batch	R5542365							
WG3587813-2	LCS		103.7		%		80-120	03-AUG-21
Dissolved Organic Carbon								
WG3587813-1	MB		<0.50		mg/L		0.5	03-AUG-21
Dissolved Organic Carbon								
WG3587813-4	MS	L2619421-9	98.9		%		70-130	03-AUG-21
Dissolved Organic Carbon								
EC-WT		Water						
Batch	R5542083							
WG3588742-4	DUP	WG3588742-3	92.8		umhos/cm	0.6	10	03-AUG-21
Conductivity								
WG3588742-2	LCS		101.7		%		90-110	03-AUG-21
Conductivity								
WG3588742-1	MB		<2.0		umhos/cm		2	03-AUG-21
Conductivity								
F-IC-N-WT		Water						
Batch	R5542517							
WG3589172-10	DUP	WG3589172-8	0.029		mg/L	0.2	20	03-AUG-21
Fluoride (F)								
WG3589172-4	DUP	WG3589172-3	<0.020	RPD-NA	mg/L	N/A	20	03-AUG-21
Fluoride (F)								
WG3589172-2	LCS		104.2		%		90-110	03-AUG-21
Fluoride (F)								
WG3589172-7	LCS		103.0		%		90-110	03-AUG-21
Fluoride (F)								
WG3589172-1	MB		<0.020		mg/L		0.02	03-AUG-21
Fluoride (F)								
WG3589172-6	MB		<0.020		mg/L		0.02	03-AUG-21
Fluoride (F)								
WG3589172-5	MS	WG3589172-3	101.8		%		75-125	03-AUG-21
Fluoride (F)								
WG3589172-9	MS	WG3589172-8	100.4		%		75-125	03-AUG-21
Fluoride (F)								
HG-D-CVAA-WT		Water						
Batch	R5548204							
WG3594570-4	DUP	WG3594570-3	<0.0000050	RPD-NA	mg/L	N/A	20	11-AUG-21
Mercury (Hg)-Dissolved								
WG3594570-2	LCS							

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAA-WT		Water						
Batch	R5548204							
WG3594570-2	LCS							
Mercury (Hg)-Dissolved			98.0		%		80-120	11-AUG-21
WG3594570-1	MB							
Mercury (Hg)-Dissolved			<0.0000050		mg/L		0.000005	11-AUG-21
WG3594570-6	MS	WG3594570-5						
Mercury (Hg)-Dissolved			86.6		%		70-130	11-AUG-21
Batch	R5549631							
WG3596477-4	DUP	WG3596477-3						
Mercury (Hg)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	13-AUG-21
WG3596477-2	LCS							
Mercury (Hg)-Dissolved			100.0		%		80-120	13-AUG-21
WG3596477-1	MB							
Mercury (Hg)-Dissolved			<0.0000050		mg/L		0.000005	13-AUG-21
WG3596477-6	MS	WG3596477-5						
Mercury (Hg)-Dissolved			96.6		%		70-130	13-AUG-21
HG-T-CVAA-WT		Water						
Batch	R5544800							
WG3590268-3	DUP	L2621310-7						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	05-AUG-21
WG3590268-2	LCS							
Mercury (Hg)-Total			94.6		%		80-120	05-AUG-21
WG3590268-1	MB							
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	05-AUG-21
WG3590268-4	MS	L2621310-8						
Mercury (Hg)-Total			90.1		%		70-130	05-AUG-21
MET-D-CCMS-WT		Water						
Batch	R5537898							
WG3587996-4	DUP	WG3587996-3						
Aluminum (Al)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	30-JUL-21
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Arsenic (As)-Dissolved		0.00038	0.00038		mg/L	0.2	20	30-JUL-21
Barium (Ba)-Dissolved		0.0163	0.0161		mg/L	0.9	20	30-JUL-21
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-JUL-21
Boron (B)-Dissolved		0.016	0.016		mg/L	1.2	20	30-JUL-21
Cadmium (Cd)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5537898							
WG3587996-4	DUP	WG3587996-3						
Calcium (Ca)-Dissolved		46.8	47.0		mg/L	0.4	20	30-JUL-21
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-JUL-21
Chromium (Cr)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	30-JUL-21
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Copper (Cu)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	30-JUL-21
Iron (Fe)-Dissolved		0.092	0.093		mg/L	1.2	20	30-JUL-21
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-JUL-21
Lithium (Li)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-JUL-21
Magnesium (Mg)-Dissolved		12.5	12.4		mg/L	0.2	20	30-JUL-21
Manganese (Mn)-Dissolved		0.0250	0.0254		mg/L	1.7	20	30-JUL-21
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-JUL-21
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	30-JUL-21
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	30-JUL-21
Potassium (K)-Dissolved		0.168	0.160		mg/L	4.6	20	30-JUL-21
Rubidium (Rb)-Dissolved		0.00024	0.00026		mg/L	10	20	30-JUL-21
Selenium (Se)-Dissolved		0.000056	0.000066		mg/L	17	20	30-JUL-21
Silicon (Si)-Dissolved		3.90	3.89		mg/L	0.1	20	30-JUL-21
Silver (Ag)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-JUL-21
Sodium (Na)-Dissolved		1.67	1.67		mg/L	0.1	20	30-JUL-21
Strontium (Sr)-Dissolved		0.0609	0.0608		mg/L	0.2	20	30-JUL-21
Sulfur (S)-Dissolved		<0.50	0.56	RPD-NA	mg/L	N/A	20	30-JUL-21
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	30-JUL-21
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-JUL-21
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	30-JUL-21
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-JUL-21
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	30-JUL-21
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-JUL-21
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	30-JUL-21
WG3587996-2	LCS							
Aluminum (Al)-Dissolved			103.5		%		80-120	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch R5537898								
WG3587996-2 LCS								
Antimony (Sb)-Dissolved			98.3		%		80-120	30-JUL-21
Arsenic (As)-Dissolved			96.2		%		80-120	30-JUL-21
Barium (Ba)-Dissolved			92.3		%		80-120	30-JUL-21
Beryllium (Be)-Dissolved			103.0		%		80-120	30-JUL-21
Bismuth (Bi)-Dissolved			99.9		%		80-120	30-JUL-21
Boron (B)-Dissolved			100.1		%		80-120	30-JUL-21
Cadmium (Cd)-Dissolved			96.8		%		80-120	30-JUL-21
Calcium (Ca)-Dissolved			98.0		%		80-120	30-JUL-21
Cesium (Cs)-Dissolved			98.7		%		80-120	30-JUL-21
Chromium (Cr)-Dissolved			95.5		%		80-120	30-JUL-21
Cobalt (Co)-Dissolved			93.7		%		80-120	30-JUL-21
Copper (Cu)-Dissolved			93.9		%		80-120	30-JUL-21
Iron (Fe)-Dissolved			94.1		%		80-120	30-JUL-21
Lead (Pb)-Dissolved			101.2		%		80-120	30-JUL-21
Lithium (Li)-Dissolved			112.9		%		80-120	30-JUL-21
Magnesium (Mg)-Dissolved			101.3		%		80-120	30-JUL-21
Manganese (Mn)-Dissolved			97.2		%		80-120	30-JUL-21
Molybdenum (Mo)-Dissolved			96.8		%		80-120	30-JUL-21
Nickel (Ni)-Dissolved			93.9		%		80-120	30-JUL-21
Phosphorus (P)-Dissolved			101.3		%		80-120	30-JUL-21
Potassium (K)-Dissolved			97.8		%		80-120	30-JUL-21
Rubidium (Rb)-Dissolved			96.5		%		80-120	30-JUL-21
Selenium (Se)-Dissolved			96.1		%		80-120	30-JUL-21
Silicon (Si)-Dissolved			95.5		%		60-140	30-JUL-21
Silver (Ag)-Dissolved			97.2		%		80-120	30-JUL-21
Sodium (Na)-Dissolved			98.8		%		80-120	30-JUL-21
Strontium (Sr)-Dissolved			96.0		%		80-120	30-JUL-21
Sulfur (S)-Dissolved			108.2		%		80-120	30-JUL-21
Tellurium (Te)-Dissolved			96.4		%		80-120	30-JUL-21
Thallium (Tl)-Dissolved			102.3		%		80-120	30-JUL-21
Thorium (Th)-Dissolved			97.2		%		80-120	30-JUL-21
Tin (Sn)-Dissolved			98.0		%		80-120	30-JUL-21
Titanium (Ti)-Dissolved			91.8		%		80-120	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5537898							
WG3587996-2		LCS						
Tungsten (W)-Dissolved			99.8		%		80-120	30-JUL-21
Uranium (U)-Dissolved			102.5		%		80-120	30-JUL-21
Vanadium (V)-Dissolved			96.4		%		80-120	30-JUL-21
Zinc (Zn)-Dissolved			95.5		%		80-120	30-JUL-21
Zirconium (Zr)-Dissolved			95.7		%		80-120	30-JUL-21
WG3587996-1		MB						
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	30-JUL-21
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	30-JUL-21
Boron (B)-Dissolved			<0.010		mg/L		0.01	30-JUL-21
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	30-JUL-21
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	30-JUL-21
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	30-JUL-21
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-21
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	30-JUL-21
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	30-JUL-21
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	30-JUL-21
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	30-JUL-21
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	30-JUL-21
Manganese (Mn)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-21
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	30-JUL-21
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-21
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	30-JUL-21
Potassium (K)-Dissolved			<0.050		mg/L		0.05	30-JUL-21
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	30-JUL-21
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	30-JUL-21
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	30-JUL-21
Silver (Ag)-Dissolved			<0.000050		mg/L		0.00005	30-JUL-21
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	30-JUL-21
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-21

Quality Control Report

Workorder: L2619446

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5537898							
WG3587996-1 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	30-JUL-21
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	30-JUL-21
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	30-JUL-21
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	30-JUL-21
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-21
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	30-JUL-21
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-21
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	30-JUL-21
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	30-JUL-21
WG3587996-5 MS		WG3587996-6						
Aluminum (Al)-Dissolved			102.5		%		70-130	30-JUL-21
Antimony (Sb)-Dissolved			100.9		%		70-130	30-JUL-21
Arsenic (As)-Dissolved			100.8		%		70-130	30-JUL-21
Barium (Ba)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Beryllium (Be)-Dissolved			105.1		%		70-130	30-JUL-21
Bismuth (Bi)-Dissolved			91.3		%		70-130	30-JUL-21
Boron (B)-Dissolved			100.0		%		70-130	30-JUL-21
Cadmium (Cd)-Dissolved			100.6		%		70-130	30-JUL-21
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Cesium (Cs)-Dissolved			100.3		%		70-130	30-JUL-21
Chromium (Cr)-Dissolved			95.5		%		70-130	30-JUL-21
Cobalt (Co)-Dissolved			94.7		%		70-130	30-JUL-21
Copper (Cu)-Dissolved			94.5		%		70-130	30-JUL-21
Iron (Fe)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Lead (Pb)-Dissolved			97.6		%		70-130	30-JUL-21
Lithium (Li)-Dissolved			108.6		%		70-130	30-JUL-21
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Molybdenum (Mo)-Dissolved			98.7		%		70-130	30-JUL-21
Nickel (Ni)-Dissolved			93.4		%		70-130	30-JUL-21
Phosphorus (P)-Dissolved			107.2		%		70-130	30-JUL-21
Potassium (K)-Dissolved			101.0		%		70-130	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5537898							
WG3587996-5	MS	WG3587996-6						
Rubidium (Rb)-Dissolved			100.5		%		70-130	30-JUL-21
Selenium (Se)-Dissolved			106.5		%		70-130	30-JUL-21
Silicon (Si)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Silver (Ag)-Dissolved			95.3		%		70-130	30-JUL-21
Sodium (Na)-Dissolved			98.4		%		70-130	30-JUL-21
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	30-JUL-21
Sulfur (S)-Dissolved			109.5		%		70-130	30-JUL-21
Tellurium (Te)-Dissolved			102.5		%		70-130	30-JUL-21
Thallium (Tl)-Dissolved			99.4		%		70-130	30-JUL-21
Thorium (Th)-Dissolved			92.4		%		70-130	30-JUL-21
Tin (Sn)-Dissolved			97.6		%		70-130	30-JUL-21
Titanium (Ti)-Dissolved			94.5		%		70-130	30-JUL-21
Tungsten (W)-Dissolved			96.4		%		70-130	30-JUL-21
Uranium (U)-Dissolved			99.4		%		70-130	30-JUL-21
Vanadium (V)-Dissolved			97.8		%		70-130	30-JUL-21
Zinc (Zn)-Dissolved			96.7		%		70-130	30-JUL-21
Zirconium (Zr)-Dissolved			95.2		%		70-130	30-JUL-21
Batch	R5541856							
WG3588695-4	DUP	WG3588695-3						
Aluminum (Al)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-AUG-21
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Arsenic (As)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Barium (Ba)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	03-AUG-21
Cadmium (Cd)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Calcium (Ca)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-AUG-21
Chromium (Cr)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-21
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Copper (Cu)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-21
Iron (Fe)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5541856							
WG3588695-4	DUP	WG3588695-3						
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Lithium (Li)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-AUG-21
Magnesium (Mg)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-AUG-21
Manganese (Mn)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-21
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-21
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Potassium (K)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Rubidium (Rb)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-21
Selenium (Se)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Silicon (Si)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Silver (Ag)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Sodium (Na)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Strontium (Sr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-AUG-21
Sulfur (S)-Dissolved		<0.50	<0.50	RPD-NA	mg/L	N/A	20	03-AUG-21
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-21
Thallium (Tl)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-AUG-21
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	03-AUG-21
Tungsten (W)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-AUG-21
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-21
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	03-AUG-21
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-21
WG3588695-2	LCS							
Aluminum (Al)-Dissolved			105.1		%		80-120	03-AUG-21
Antimony (Sb)-Dissolved			100.2		%		80-120	03-AUG-21
Arsenic (As)-Dissolved			102.6		%		80-120	03-AUG-21
Barium (Ba)-Dissolved			104.7		%		80-120	03-AUG-21
Beryllium (Be)-Dissolved			95.7		%		80-120	03-AUG-21
Bismuth (Bi)-Dissolved			99.3		%		80-120	03-AUG-21
Boron (B)-Dissolved			94.4		%		80-120	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5541856							
WG3588695-2		LCS						
Cadmium (Cd)-Dissolved			102.4		%		80-120	03-AUG-21
Calcium (Ca)-Dissolved			98.3		%		80-120	03-AUG-21
Cesium (Cs)-Dissolved			100.5		%		80-120	03-AUG-21
Chromium (Cr)-Dissolved			102.0		%		80-120	03-AUG-21
Cobalt (Co)-Dissolved			102.7		%		80-120	03-AUG-21
Copper (Cu)-Dissolved			101.8		%		80-120	03-AUG-21
Iron (Fe)-Dissolved			100.5		%		80-120	03-AUG-21
Lead (Pb)-Dissolved			99.9		%		80-120	03-AUG-21
Lithium (Li)-Dissolved			93.5		%		80-120	03-AUG-21
Magnesium (Mg)-Dissolved			106.4		%		80-120	03-AUG-21
Manganese (Mn)-Dissolved			104.1		%		80-120	03-AUG-21
Molybdenum (Mo)-Dissolved			101.5		%		80-120	03-AUG-21
Nickel (Ni)-Dissolved			100.6		%		80-120	03-AUG-21
Phosphorus (P)-Dissolved			100.6		%		80-120	03-AUG-21
Potassium (K)-Dissolved			105.0		%		80-120	03-AUG-21
Rubidium (Rb)-Dissolved			103.6		%		80-120	03-AUG-21
Selenium (Se)-Dissolved			99.7		%		80-120	03-AUG-21
Silicon (Si)-Dissolved			98.9		%		60-140	03-AUG-21
Silver (Ag)-Dissolved			101.1		%		80-120	03-AUG-21
Sodium (Na)-Dissolved			105.4		%		80-120	03-AUG-21
Strontium (Sr)-Dissolved			103.4		%		80-120	03-AUG-21
Sulfur (S)-Dissolved			103.5		%		80-120	03-AUG-21
Tellurium (Te)-Dissolved			94.0		%		80-120	03-AUG-21
Thallium (Tl)-Dissolved			100.2		%		80-120	03-AUG-21
Thorium (Th)-Dissolved			96.5		%		80-120	03-AUG-21
Tin (Sn)-Dissolved			98.8		%		80-120	03-AUG-21
Titanium (Ti)-Dissolved			103.5		%		80-120	03-AUG-21
Tungsten (W)-Dissolved			99.3		%		80-120	03-AUG-21
Uranium (U)-Dissolved			96.6		%		80-120	03-AUG-21
Vanadium (V)-Dissolved			103.7		%		80-120	03-AUG-21
Zinc (Zn)-Dissolved			102.0		%		80-120	03-AUG-21
Zirconium (Zr)-Dissolved			98.9		%		80-120	03-AUG-21
WG3588695-1		MB						
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5541856							
WG3588695-1	MB							
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	03-AUG-21
Boron (B)-Dissolved			<0.010		mg/L		0.01	03-AUG-21
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	03-AUG-21
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	03-AUG-21
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	03-AUG-21
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	03-AUG-21
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	03-AUG-21
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	03-AUG-21
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	03-AUG-21
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	03-AUG-21
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	03-AUG-21
Manganese (Mn)-Dissolved			<0.00050		mg/L		0.0005	03-AUG-21
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	03-AUG-21
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	03-AUG-21
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	03-AUG-21
Potassium (K)-Dissolved			<0.050		mg/L		0.05	03-AUG-21
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	03-AUG-21
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	03-AUG-21
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	03-AUG-21
Silver (Ag)-Dissolved			<0.000050		mg/L		0.00005	03-AUG-21
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	03-AUG-21
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	03-AUG-21
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	03-AUG-21
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	03-AUG-21
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	03-AUG-21
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5541856							
WG3588695-1	MB							
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	03-AUG-21
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	03-AUG-21
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	03-AUG-21
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	04-AUG-21
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	03-AUG-21
WG3588695-5	MS	WG3588695-3						
Aluminum (Al)-Dissolved			108.8		%		70-130	03-AUG-21
Antimony (Sb)-Dissolved			103.2		%		70-130	03-AUG-21
Arsenic (As)-Dissolved			107.3		%		70-130	03-AUG-21
Barium (Ba)-Dissolved			106.1		%		70-130	03-AUG-21
Beryllium (Be)-Dissolved			103.3		%		70-130	03-AUG-21
Bismuth (Bi)-Dissolved			98.1		%		70-130	03-AUG-21
Boron (B)-Dissolved			95.4		%		70-130	03-AUG-21
Cadmium (Cd)-Dissolved			110.0		%		70-130	03-AUG-21
Calcium (Ca)-Dissolved			100.5		%		70-130	03-AUG-21
Cesium (Cs)-Dissolved			104.4		%		70-130	03-AUG-21
Chromium (Cr)-Dissolved			104.5		%		70-130	03-AUG-21
Cobalt (Co)-Dissolved			105.2		%		70-130	03-AUG-21
Copper (Cu)-Dissolved			104.9		%		70-130	03-AUG-21
Iron (Fe)-Dissolved			99.5		%		70-130	03-AUG-21
Lead (Pb)-Dissolved			101.6		%		70-130	03-AUG-21
Lithium (Li)-Dissolved			98.8		%		70-130	03-AUG-21
Magnesium (Mg)-Dissolved			108.6		%		70-130	03-AUG-21
Manganese (Mn)-Dissolved			106.9		%		70-130	03-AUG-21
Molybdenum (Mo)-Dissolved			100.1		%		70-130	03-AUG-21
Nickel (Ni)-Dissolved			104.1		%		70-130	03-AUG-21
Phosphorus (P)-Dissolved			107.9		%		70-130	03-AUG-21
Potassium (K)-Dissolved			108.3		%		70-130	03-AUG-21
Rubidium (Rb)-Dissolved			108.4		%		70-130	03-AUG-21
Selenium (Se)-Dissolved			109.4		%		70-130	03-AUG-21
Silicon (Si)-Dissolved			99.1		%		70-130	03-AUG-21
Silver (Ag)-Dissolved			103.5		%		70-130	03-AUG-21
Sodium (Na)-Dissolved			107.8		%		70-130	03-AUG-21
Strontium (Sr)-Dissolved			104.0		%		70-130	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-WT		Water						
Batch	R5541856							
WG3588695-5	MS	WG3588695-3						
Sulfur (S)-Dissolved			106.6		%		70-130	03-AUG-21
Tellurium (Te)-Dissolved			107.6		%		70-130	03-AUG-21
Thallium (Tl)-Dissolved			103.0		%		70-130	03-AUG-21
Thorium (Th)-Dissolved			97.2		%		70-130	03-AUG-21
Tin (Sn)-Dissolved			100.7		%		70-130	03-AUG-21
Titanium (Ti)-Dissolved			103.2		%		70-130	03-AUG-21
Tungsten (W)-Dissolved			100.4		%		70-130	03-AUG-21
Uranium (U)-Dissolved			96.0		%		70-130	03-AUG-21
Vanadium (V)-Dissolved			106.5		%		70-130	03-AUG-21
Zinc (Zn)-Dissolved			106.9		%		70-130	03-AUG-21
Zirconium (Zr)-Dissolved			100.7		%		70-130	03-AUG-21
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-4	DUP	WG3587775-3						
Aluminum (Al)-Total		0.0132	0.0136		mg/L	2.9	20	30-JUL-21
Antimony (Sb)-Total		0.00061	0.00062		mg/L	1.3	20	30-JUL-21
Arsenic (As)-Total		0.00021	0.00021		mg/L	2.3	20	30-JUL-21
Barium (Ba)-Total		0.0600	0.0596		mg/L	0.5	20	30-JUL-21
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-JUL-21
Boron (B)-Total		0.045	0.045		mg/L	0.8	20	30-JUL-21
Cadmium (Cd)-Total		0.0000873	0.0000927		mg/L	6.0	20	30-JUL-21
Calcium (Ca)-Total		70.0	69.9		mg/L	0.1	20	30-JUL-21
Chromium (Cr)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	30-JUL-21
Cesium (Cs)-Total		0.000061	0.000059		mg/L	2.3	20	30-JUL-21
Cobalt (Co)-Total		0.00012	0.00011		mg/L	8.9	20	30-JUL-21
Copper (Cu)-Total		0.00198	0.00194		mg/L	1.6	20	30-JUL-21
Iron (Fe)-Total		0.056	0.057		mg/L	1.3	20	30-JUL-21
Lead (Pb)-Total		0.000104	0.000103		mg/L	0.8	20	30-JUL-21
Lithium (Li)-Total		0.0062	0.0062		mg/L	0.3	20	30-JUL-21
Magnesium (Mg)-Total		10.4	10.5		mg/L	1.0	20	30-JUL-21
Manganese (Mn)-Total		0.0228	0.0227		mg/L	0.1	20	30-JUL-21
Molybdenum (Mo)-Total		0.000851	0.000843		mg/L	1.0	20	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-4	DUP	WG3587775-3						
Nickel (Ni)-Total		0.00082	0.00085		mg/L	3.5	20	30-JUL-21
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	30-JUL-21
Potassium (K)-Total		7.62	7.69		mg/L	0.9	20	30-JUL-21
Rubidium (Rb)-Total		0.0104	0.0106		mg/L	1.6	20	30-JUL-21
Selenium (Se)-Total		0.000078	0.000108	J	mg/L	0.000030	0.0001	30-JUL-21
Silicon (Si)-Total		3.33	3.75		mg/L	12	20	31-JUL-21
Silver (Ag)-Total		0.000197	0.000201		mg/L	1.8	20	30-JUL-21
Sodium (Na)-Total		27.4	27.8		mg/L	1.2	20	30-JUL-21
Strontium (Sr)-Total		0.503	0.499		mg/L	0.9	20	30-JUL-21
Sulfur (S)-Total		24.8	30.1		mg/L	19	20	30-JUL-21
Thallium (Tl)-Total		0.000016	0.000017		mg/L	5.4	20	30-JUL-21
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	30-JUL-21
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-JUL-21
Tin (Sn)-Total		0.00013	0.00013		mg/L	1.3	20	30-JUL-21
Titanium (Ti)-Total		0.00049	0.00044		mg/L	12	20	30-JUL-21
Tungsten (W)-Total		0.00018	0.00017		mg/L	3.4	20	30-JUL-21
Uranium (U)-Total		0.000274	0.000283		mg/L	3.1	20	30-JUL-21
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	30-JUL-21
Zinc (Zn)-Total		0.0053	0.0050		mg/L	4.3	20	30-JUL-21
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	30-JUL-21
WG3587775-2	LCS							
Aluminum (Al)-Total			100.2		%		80-120	30-JUL-21
Antimony (Sb)-Total			101.6		%		80-120	30-JUL-21
Arsenic (As)-Total			103.3		%		80-120	30-JUL-21
Barium (Ba)-Total			105.4		%		80-120	30-JUL-21
Beryllium (Be)-Total			96.7		%		80-120	30-JUL-21
Bismuth (Bi)-Total			101.2		%		80-120	30-JUL-21
Boron (B)-Total			90.1		%		80-120	30-JUL-21
Cadmium (Cd)-Total			101.0		%		80-120	30-JUL-21
Calcium (Ca)-Total			98.2		%		80-120	30-JUL-21
Chromium (Cr)-Total			97.7		%		80-120	30-JUL-21
Cesium (Cs)-Total			104.7		%		80-120	30-JUL-21
Cobalt (Co)-Total			99.9		%		80-120	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-2		LCS						
Copper (Cu)-Total			98.9		%		80-120	30-JUL-21
Iron (Fe)-Total			98.7		%		80-120	30-JUL-21
Lead (Pb)-Total			102.8		%		80-120	30-JUL-21
Lithium (Li)-Total			93.0		%		80-120	30-JUL-21
Magnesium (Mg)-Total			97.9		%		80-120	30-JUL-21
Manganese (Mn)-Total			101.4		%		80-120	30-JUL-21
Molybdenum (Mo)-Total			100.3		%		80-120	30-JUL-21
Nickel (Ni)-Total			98.3		%		80-120	30-JUL-21
Phosphorus (P)-Total			102.1		%		70-130	30-JUL-21
Potassium (K)-Total			100.7		%		80-120	30-JUL-21
Rubidium (Rb)-Total			106.6		%		80-120	30-JUL-21
Selenium (Se)-Total			98.7		%		80-120	30-JUL-21
Silicon (Si)-Total			100.3		%		60-140	30-JUL-21
Silver (Ag)-Total			95.0		%		80-120	30-JUL-21
Sodium (Na)-Total			98.1		%		80-120	30-JUL-21
Strontium (Sr)-Total			102.3		%		80-120	30-JUL-21
Sulfur (S)-Total			101.1		%		80-120	30-JUL-21
Thallium (Tl)-Total			102.5		%		80-120	30-JUL-21
Tellurium (Te)-Total			95.0		%		80-120	30-JUL-21
Thorium (Th)-Total			101.0		%		80-120	30-JUL-21
Tin (Sn)-Total			100.1		%		80-120	30-JUL-21
Titanium (Ti)-Total			97.6		%		80-120	30-JUL-21
Tungsten (W)-Total			101.3		%		80-120	30-JUL-21
Uranium (U)-Total			104.7		%		80-120	30-JUL-21
Vanadium (V)-Total			100.4		%		80-120	30-JUL-21
Zinc (Zn)-Total			100.1		%		80-120	30-JUL-21
Zirconium (Zr)-Total			101.4		%		80-120	30-JUL-21
WG3587775-1		MB						
Aluminum (Al)-Total			<0.0050		mg/L		0.005	30-JUL-21
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Arsenic (As)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Barium (Ba)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	30-JUL-21

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Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-1 MB								
Boron (B)-Total			<0.010		mg/L		0.01	30-JUL-21
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	30-JUL-21
Calcium (Ca)-Total			<0.050		mg/L		0.05	30-JUL-21
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	30-JUL-21
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	30-JUL-21
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Copper (Cu)-Total			<0.00050		mg/L		0.0005	30-JUL-21
Iron (Fe)-Total			<0.010		mg/L		0.01	30-JUL-21
Lead (Pb)-Total			<0.000050		mg/L		0.00005	30-JUL-21
Lithium (Li)-Total			<0.0010		mg/L		0.001	30-JUL-21
Magnesium (Mg)-Total			0.0060	B	mg/L		0.005	30-JUL-21
Manganese (Mn)-Total			<0.00050		mg/L		0.0005	30-JUL-21
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	30-JUL-21
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	30-JUL-21
Phosphorus (P)-Total			<0.050		mg/L		0.05	30-JUL-21
Potassium (K)-Total			<0.050		mg/L		0.05	30-JUL-21
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	30-JUL-21
Selenium (Se)-Total			<0.000050		mg/L		0.00005	30-JUL-21
Silicon (Si)-Total			<0.10		mg/L		0.1	30-JUL-21
Silver (Ag)-Total			<0.000050		mg/L		0.00005	30-JUL-21
Sodium (Na)-Total			<0.050		mg/L		0.05	30-JUL-21
Strontium (Sr)-Total			<0.0010		mg/L		0.001	30-JUL-21
Sulfur (S)-Total			<0.50		mg/L		0.5	30-JUL-21
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	30-JUL-21
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	30-JUL-21
Thorium (Th)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Tin (Sn)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	30-JUL-21
Tungsten (W)-Total			<0.00010		mg/L		0.0001	30-JUL-21
Uranium (U)-Total			<0.000010		mg/L		0.00001	30-JUL-21
Vanadium (V)-Total			<0.00050		mg/L		0.0005	30-JUL-21
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-JUL-21
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	30-JUL-21
WG3587775-5 MS		WG3587775-6						

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-5	MS	WG3587775-6						
Aluminum (Al)-Total			101.2		%		70-130	30-JUL-21
Antimony (Sb)-Total			99.9		%		70-130	30-JUL-21
Arsenic (As)-Total			101.6		%		70-130	30-JUL-21
Barium (Ba)-Total			N/A	MS-B	%		-	30-JUL-21
Beryllium (Be)-Total			95.3		%		70-130	30-JUL-21
Bismuth (Bi)-Total			86.6		%		70-130	30-JUL-21
Boron (B)-Total			N/A	MS-B	%		-	30-JUL-21
Cadmium (Cd)-Total			88.1		%		70-130	30-JUL-21
Calcium (Ca)-Total			N/A	MS-B	%		-	30-JUL-21
Chromium (Cr)-Total			98.6		%		70-130	30-JUL-21
Cesium (Cs)-Total			105.3		%		70-130	30-JUL-21
Cobalt (Co)-Total			96.0		%		70-130	30-JUL-21
Copper (Cu)-Total			89.2		%		70-130	30-JUL-21
Iron (Fe)-Total			N/A	MS-B	%		-	30-JUL-21
Lead (Pb)-Total			91.7		%		70-130	30-JUL-21
Lithium (Li)-Total			N/A	MS-B	%		-	30-JUL-21
Magnesium (Mg)-Total			N/A	MS-B	%		-	30-JUL-21
Manganese (Mn)-Total			N/A	MS-B	%		-	30-JUL-21
Molybdenum (Mo)-Total			105.3		%		70-130	30-JUL-21
Nickel (Ni)-Total			91.0		%		70-130	30-JUL-21
Phosphorus (P)-Total			99.1		%		70-130	30-JUL-21
Potassium (K)-Total			N/A	MS-B	%		-	30-JUL-21
Rubidium (Rb)-Total			105.7		%		70-130	30-JUL-21
Selenium (Se)-Total			95.8		%		70-130	30-JUL-21
Silicon (Si)-Total			N/A	MS-B	%		-	30-JUL-21
Silver (Ag)-Total			87.1		%		70-130	30-JUL-21
Sodium (Na)-Total			N/A	MS-B	%		-	30-JUL-21
Strontium (Sr)-Total			N/A	MS-B	%		-	30-JUL-21
Sulfur (S)-Total			N/A	MS-B	%		-	30-JUL-21
Thallium (Tl)-Total			92.7		%		70-130	30-JUL-21
Tellurium (Te)-Total			83.1		%		70-130	30-JUL-21
Thorium (Th)-Total			99.0		%		70-130	30-JUL-21
Tin (Sn)-Total			97.6		%		70-130	30-JUL-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5535776							
WG3587775-5 MS		WG3587775-6						
Titanium (Ti)-Total			103.7		%		70-130	30-JUL-21
Tungsten (W)-Total			99.9		%		70-130	30-JUL-21
Uranium (U)-Total			N/A	MS-B	%		-	30-JUL-21
Vanadium (V)-Total			104.9		%		70-130	30-JUL-21
Zinc (Zn)-Total			83.5		%		70-130	30-JUL-21
Zirconium (Zr)-Total			107.0		%		70-130	30-JUL-21
Batch	R5540436							
WG3588530-4 DUP		WG3588530-3						
Aluminum (Al)-Total		0.278	0.281		mg/L	1.2	20	03-AUG-21
Antimony (Sb)-Total		0.00067	0.00067		mg/L	0.7	20	03-AUG-21
Arsenic (As)-Total		0.00045	0.00043		mg/L	4.9	20	03-AUG-21
Barium (Ba)-Total		0.0735	0.0741		mg/L	0.9	20	03-AUG-21
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-21
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Boron (B)-Total		0.026	0.026		mg/L	0.0	20	03-AUG-21
Cadmium (Cd)-Total		<0.0000050	0.0000067	RPD-NA	mg/L	N/A	20	03-AUG-21
Calcium (Ca)-Total		178	177		mg/L	0.6	20	03-AUG-21
Chromium (Cr)-Total		0.00146	0.00095	J	mg/L	0.00051	0.001	03-AUG-21
Cesium (Cs)-Total		0.000032	0.000031		mg/L	2.2	20	03-AUG-21
Cobalt (Co)-Total		0.00023	0.00023		mg/L	1.0	20	03-AUG-21
Copper (Cu)-Total		0.00387	0.00385		mg/L	0.5	20	03-AUG-21
Iron (Fe)-Total		0.698	0.700		mg/L	0.3	20	03-AUG-21
Lead (Pb)-Total		0.000421	0.000396		mg/L	6.0	20	03-AUG-21
Lithium (Li)-Total		0.0227	0.0219		mg/L	3.5	20	03-AUG-21
Magnesium (Mg)-Total		41.4	41.1		mg/L	0.7	20	03-AUG-21
Manganese (Mn)-Total		0.0943	0.0919		mg/L	2.5	20	03-AUG-21
Molybdenum (Mo)-Total		0.00157	0.00151		mg/L	4.0	20	03-AUG-21
Nickel (Ni)-Total		0.00175	0.00149		mg/L	16	20	03-AUG-21
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	03-AUG-21
Potassium (K)-Total		2.59	2.55		mg/L	1.3	20	03-AUG-21
Rubidium (Rb)-Total		0.00197	0.00179		mg/L	9.7	20	03-AUG-21
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Silicon (Si)-Total		6.74	6.96		mg/L	3.1	20	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5540436							
WG3588530-4	DUP	WG3588530-3						
Silver (Ag)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-21
Sodium (Na)-Total		122	121		mg/L	1.5	20	03-AUG-21
Strontium (Sr)-Total		0.413	0.406		mg/L	1.7	20	03-AUG-21
Sulfur (S)-Total		38.3	38.6		mg/L	0.8	20	03-AUG-21
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-AUG-21
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-21
Thorium (Th)-Total		0.00012	0.00012		mg/L	0.2	20	03-AUG-21
Tin (Sn)-Total		0.00575	0.00560		mg/L	2.7	20	03-AUG-21
Titanium (Ti)-Total		0.0139	0.0144		mg/L	3.4	20	03-AUG-21
Tungsten (W)-Total		0.00908	0.00888		mg/L	2.2	20	03-AUG-21
Uranium (U)-Total		0.00215	0.00216		mg/L	0.4	20	03-AUG-21
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-21
Zinc (Zn)-Total		0.0139	0.0124		mg/L	11	20	03-AUG-21
Zirconium (Zr)-Total		0.00028	0.00026		mg/L	8.1	20	03-AUG-21
WG3588530-2	LCS							
Aluminum (Al)-Total			106.2		%		80-120	03-AUG-21
Antimony (Sb)-Total			102.7		%		80-120	03-AUG-21
Arsenic (As)-Total			103.1		%		80-120	03-AUG-21
Barium (Ba)-Total			106.6		%		80-120	03-AUG-21
Beryllium (Be)-Total			103.1		%		80-120	03-AUG-21
Bismuth (Bi)-Total			100.9		%		80-120	03-AUG-21
Boron (B)-Total			101.8		%		80-120	03-AUG-21
Cadmium (Cd)-Total			104.1		%		80-120	03-AUG-21
Calcium (Ca)-Total			99.9		%		80-120	03-AUG-21
Chromium (Cr)-Total			105.5		%		80-120	03-AUG-21
Cesium (Cs)-Total			101.4		%		80-120	03-AUG-21
Cobalt (Co)-Total			105.5		%		80-120	03-AUG-21
Copper (Cu)-Total			103.8		%		80-120	03-AUG-21
Iron (Fe)-Total			100.5		%		80-120	03-AUG-21
Lead (Pb)-Total			100.6		%		80-120	03-AUG-21
Lithium (Li)-Total			107.6		%		80-120	03-AUG-21
Magnesium (Mg)-Total			106.9		%		80-120	03-AUG-21
Manganese (Mn)-Total			104.5		%		80-120	03-AUG-21

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5540436							
WG3588530-2		LCS						
Molybdenum (Mo)-Total			102.5		%		80-120	03-AUG-21
Nickel (Ni)-Total			103.6		%		80-120	03-AUG-21
Phosphorus (P)-Total			109.7		%		70-130	03-AUG-21
Potassium (K)-Total			104.9		%		80-120	03-AUG-21
Rubidium (Rb)-Total			105.0		%		80-120	03-AUG-21
Selenium (Se)-Total			98.6		%		80-120	03-AUG-21
Silicon (Si)-Total			101.6		%		60-140	03-AUG-21
Silver (Ag)-Total			103.0		%		80-120	03-AUG-21
Sodium (Na)-Total			106.4		%		80-120	03-AUG-21
Strontium (Sr)-Total			103.1		%		80-120	03-AUG-21
Sulfur (S)-Total			103.6		%		80-120	03-AUG-21
Thallium (Tl)-Total			101.3		%		80-120	03-AUG-21
Tellurium (Te)-Total			99.5		%		80-120	03-AUG-21
Thorium (Th)-Total			98.3		%		80-120	03-AUG-21
Tin (Sn)-Total			100.6		%		80-120	03-AUG-21
Titanium (Ti)-Total			104.7		%		80-120	03-AUG-21
Tungsten (W)-Total			100.4		%		80-120	03-AUG-21
Uranium (U)-Total			99.3		%		80-120	03-AUG-21
Vanadium (V)-Total			106.7		%		80-120	03-AUG-21
Zinc (Zn)-Total			101.4		%		80-120	03-AUG-21
Zirconium (Zr)-Total			99.4		%		80-120	03-AUG-21
WG3588530-1		MB						
Aluminum (Al)-Total			<0.0050		mg/L		0.005	03-AUG-21
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Arsenic (As)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Barium (Ba)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	03-AUG-21
Boron (B)-Total			<0.010		mg/L		0.01	03-AUG-21
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	03-AUG-21
Calcium (Ca)-Total			<0.050		mg/L		0.05	03-AUG-21
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	03-AUG-21
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	03-AUG-21
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	03-AUG-21

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5540436							
WG3588530-1 MB								
Copper (Cu)-Total			<0.00050		mg/L		0.0005	03-AUG-21
Iron (Fe)-Total			<0.010		mg/L		0.01	03-AUG-21
Lead (Pb)-Total			<0.000050		mg/L		0.00005	03-AUG-21
Lithium (Li)-Total			<0.0010		mg/L		0.001	03-AUG-21
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	03-AUG-21
Manganese (Mn)-Total			<0.00050		mg/L		0.0005	03-AUG-21
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	03-AUG-21
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	03-AUG-21
Phosphorus (P)-Total			<0.050		mg/L		0.05	03-AUG-21
Potassium (K)-Total			<0.050		mg/L		0.05	03-AUG-21
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	03-AUG-21
Selenium (Se)-Total			<0.000050		mg/L		0.00005	03-AUG-21
Silicon (Si)-Total			<0.10		mg/L		0.1	03-AUG-21
Silver (Ag)-Total			<0.000050		mg/L		0.00005	03-AUG-21
Sodium (Na)-Total			<0.050		mg/L		0.05	03-AUG-21
Strontium (Sr)-Total			<0.0010		mg/L		0.001	03-AUG-21
Sulfur (S)-Total			<0.50		mg/L		0.5	03-AUG-21
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	03-AUG-21
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	03-AUG-21
Thorium (Th)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Tin (Sn)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	03-AUG-21
Tungsten (W)-Total			<0.00010		mg/L		0.0001	03-AUG-21
Uranium (U)-Total			<0.000010		mg/L		0.00001	03-AUG-21
Vanadium (V)-Total			<0.00050		mg/L		0.0005	03-AUG-21
Zinc (Zn)-Total			<0.0030		mg/L		0.003	03-AUG-21
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	03-AUG-21
WG3588530-5 MS		WG3588530-3						
Aluminum (Al)-Total			N/A	MS-B	%		-	03-AUG-21
Antimony (Sb)-Total			102.0		%		70-130	03-AUG-21
Arsenic (As)-Total			104.0		%		70-130	03-AUG-21
Barium (Ba)-Total			N/A	MS-B	%		-	03-AUG-21
Beryllium (Be)-Total			95.8		%		70-130	03-AUG-21
Bismuth (Bi)-Total			91.3		%		70-130	03-AUG-21

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R5540436							
WG3588530-5	MS	WG3588530-3						
Boron (B)-Total			91.8		%		70-130	03-AUG-21
Cadmium (Cd)-Total			100.6		%		70-130	03-AUG-21
Calcium (Ca)-Total			N/A	MS-B	%		-	03-AUG-21
Chromium (Cr)-Total			99.3		%		70-130	03-AUG-21
Cesium (Cs)-Total			100.6		%		70-130	03-AUG-21
Cobalt (Co)-Total			100.9		%		70-130	03-AUG-21
Copper (Cu)-Total			94.8		%		70-130	03-AUG-21
Iron (Fe)-Total			N/A	MS-B	%		-	03-AUG-21
Lead (Pb)-Total			93.1		%		70-130	03-AUG-21
Lithium (Li)-Total			N/A	MS-B	%		-	03-AUG-21
Magnesium (Mg)-Total			N/A	MS-B	%		-	03-AUG-21
Manganese (Mn)-Total			N/A	MS-B	%		-	03-AUG-21
Molybdenum (Mo)-Total			102.7		%		70-130	03-AUG-21
Nickel (Ni)-Total			96.1		%		70-130	03-AUG-21
Phosphorus (P)-Total			106.9		%		70-130	03-AUG-21
Potassium (K)-Total			N/A	MS-B	%		-	03-AUG-21
Rubidium (Rb)-Total			95.3		%		70-130	03-AUG-21
Selenium (Se)-Total			102.0		%		70-130	03-AUG-21
Silicon (Si)-Total			N/A	MS-B	%		-	03-AUG-21
Silver (Ag)-Total			96.2		%		70-130	03-AUG-21
Sodium (Na)-Total			N/A	MS-B	%		-	03-AUG-21
Strontium (Sr)-Total			N/A	MS-B	%		-	03-AUG-21
Sulfur (S)-Total			N/A	MS-B	%		-	03-AUG-21
Thallium (Tl)-Total			95.1		%		70-130	03-AUG-21
Tellurium (Te)-Total			91.5		%		70-130	03-AUG-21
Thorium (Th)-Total			94.4		%		70-130	03-AUG-21
Tin (Sn)-Total			96.3		%		70-130	03-AUG-21
Titanium (Ti)-Total			N/A	MS-B	%		-	03-AUG-21
Tungsten (W)-Total			N/A	MS-B	%		-	03-AUG-21
Uranium (U)-Total			N/A	MS-B	%		-	03-AUG-21
Vanadium (V)-Total			107.9		%		70-130	03-AUG-21
Zinc (Zn)-Total			87.8		%		70-130	03-AUG-21
Zirconium (Zr)-Total			90.3		%		70-130	03-AUG-21

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Contact: Connor Devereaux/Kendra Button

PH-BF Water

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-BF		Water						
Batch	R5530608							
WG3585398-2	DUP	L2619446-1						
pH		7.04	7.05	J	pH units	0.01	0.2	28-JUL-21
WG3585398-1	LCS		7.02		pH units		6.9-7.1	28-JUL-21
pH								
SO4-IC-N-WT		Water						
Batch	R5542517							
WG3589172-10	DUP	WG3589172-8						
Sulfate (SO4)		1.57	1.57		mg/L	0.1	20	03-AUG-21
WG3589172-4	DUP	WG3589172-3						
Sulfate (SO4)		3.26	3.26		mg/L	0.2	20	03-AUG-21
WG3589172-2	LCS		101.2		%		90-110	03-AUG-21
Sulfate (SO4)								
WG3589172-7	LCS		101.4		%		90-110	03-AUG-21
Sulfate (SO4)								
WG3589172-1	MB		<0.30		mg/L		0.3	03-AUG-21
Sulfate (SO4)								
WG3589172-6	MB		<0.30		mg/L		0.3	03-AUG-21
Sulfate (SO4)								
WG3589172-5	MS	WG3589172-3	101.5		%		75-125	03-AUG-21
Sulfate (SO4)								
WG3589172-9	MS	WG3589172-8	100.3		%		75-125	03-AUG-21
Sulfate (SO4)								
SOLIDS-TDS-BF		Water						
Batch	R5531338							
WG3585415-3	DUP	L2619423-1						
Total Dissolved Solids		2280	2250		mg/L	1.4	20	29-JUL-21
WG3585415-2	LCS		101.6		%		85-115	29-JUL-21
Total Dissolved Solids								
WG3585415-1	MB		<10		mg/L		10	29-JUL-21
Total Dissolved Solids								
SOLIDS-TSS-BF		Water						
Batch	R5531017							
WG3585404-3	DUP	L2619421-11						
Total Suspended Solids		<2.0	<2.0	RPD-NA	mg/L	N/A	25	28-JUL-21
WG3585404-2	LCS		98.4		%		85-115	28-JUL-21
Total Suspended Solids								
WG3585404-1	MB							

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TSS-BF	Water							
Batch R5531017								
WG3585404-1 MB								
Total Suspended Solids			<2.0		mg/L		2	28-JUL-21
TKN-F-WT	Water							
Batch R5545869								
WG3587832-3 DUP		L2619743-2						
Total Kjeldahl Nitrogen		0.110	0.110		mg/L	0.0	20	06-AUG-21
WG3587832-2 LCS								
Total Kjeldahl Nitrogen			105.3		%		75-125	06-AUG-21
WG3587832-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	06-AUG-21
WG3587832-4 MS		L2619743-2						
Total Kjeldahl Nitrogen			102.0		%		70-130	06-AUG-21
Batch R5547731								
WG3593537-3 DUP		L2623996-1						
Total Kjeldahl Nitrogen		0.230	0.300	J	mg/L	0.070	0.1	10-AUG-21
WG3593537-2 LCS								
Total Kjeldahl Nitrogen			106.8		%		75-125	10-AUG-21
WG3593537-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	10-AUG-21
WG3593537-4 MS		L2623996-1						
Total Kjeldahl Nitrogen			100.8		%		70-130	10-AUG-21
TOC-WT	Water							
Batch R5539318								
WG3587853-3 DUP		L2619743-3						
Total Organic Carbon		2.08	2.10		mg/L	1.2	20	31-JUL-21
WG3587853-2 LCS								
Total Organic Carbon			102.3		%		80-120	31-JUL-21
WG3587853-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	31-JUL-21
WG3587853-4 MS		L2619743-3						
Total Organic Carbon			101.2		%		70-130	31-JUL-21
TURBIDITY-BF	Water							
Batch R5530602								
WG3585401-3 DUP		L2619446-2						
Turbidity		4.33	4.36		NTU	0.7	15	28-JUL-21
WG3585401-2 LCS								

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Connor Devereaux/Kendra Button

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-BF		Water						
Batch	R5530602							
WG3585401-2	LCS							
Turbidity			108.7		%		85-115	28-JUL-21
WG3585401-1	MB							
Turbidity			<0.10		NTU		0.1	28-JUL-21

Quality Control Report

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Client: Baffinland Iron Mine's Corporation (Oakville)
2275 Upper Middle Rd. E. Suite #300
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Contact: Connor Devereaux/Kendra Button

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna

EPS 1/RM/14

Page 1 of 2

Work Order : 246007

Sample Number : 69005

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-05	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, red		

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	<i>Daphnia magna</i>	Time to First Brood :	7.4 days
Organism Batch :	Dm21-16	Average Brood Size :	37.7 young
Culture Mortality :	0.4% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms / Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms / Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	Yes (see 'COMMENTS')	Test Method Deviation(s) :	Yes (see 'COMMENTS')

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.3 g/L
Date Tested :	2021-08-03	Warning Limits ($\pm$ 2SD) :	5.7 - 7.1 g/L
LC50 :	6.3 g/L	Organism Batch :	Dm21-16
95% Confidence Limits :	6.0 - 6.6 g/L	Analyst(s) :	JD
Statistical Method :	Linear Regression (MLE)		

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s) : Due to chemical interactions/interferences of the sample during measurement of hardness, the sample hardness was inaccurately measured and consequently unnecessarily adjusted. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By :

Project Manager

Work Order : 246007

Sample Number : 69005

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃)
Initial Chemistry (100%) :	7.1	9.3	1965	20	106	>1000 mg/L
Chemistry after Adjustment (100%) :	7.4	8.7	2028	20	100	>1000 mg/L

0 HOURS

Date & Time 2021-07-31 14:15

Analyst(s) : JD(CGR)/CGR

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	7.4	8.7	2028	20	100	>1000
100	B	0	0	7.4	8.7	2028	20	100	>1000
100	C	0	0	7.4	8.7	2028	20	100	>1000
Control	A	0	0	8.4	8.8	692	19	100	210
Control	B	0	0	8.4	8.8	692	19	100	210
Control	C	0	0	8.4	8.8	692	19	100	210

Notes:

24 HOURS

Date & Time 2021-08-01 14:15

Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	20
100	B	—	0	—	—	—	20
100	C	—	0	—	—	—	20
Control	A	—	0	—	—	—	20
Control	B	—	0	—	—	—	20
Control	C	—	0	—	—	—	20

Notes:

48 HOURS

Date & Time 2021-08-02 14:15

Analyst(s) : AGP (JCS)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.1	8.3	2023	20
100	B	0	0	8.1	8.3	2052	20
100	C	0	0	8.1	8.3	2050	20
Control	A	0	0	8.4	8.4	696	20
Control	B	0	0	8.4	8.4	696	20
Control	C	0	0	8.4	8.4	694	20

Notes:

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

 Test Data Reviewed By : KP

 Date : 2021-08-03



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

Page 1 of 2

Work Order : 246007

Sample Number : 69005

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-05	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, red		

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout.
Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	<i>Oncorhynchus mykiss</i>	Average Fork Length (± 2 SD) :	43.9 mm (± 5.6)
Organism Batch :	T21-18	Range of Fork Lengths :	40 - 49 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.79 g (± 0.27)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.63 - 1.04 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.4 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	19
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 $\pm$ 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	Date Tested :	2021-07-30
Organism Batch :	T21-18	Analyst(s) :	LL, JCS
LC50 :	3475 mg/L	Historical Mean LC50 :	3704 mg/L
95% Confidence Limits :	2956 - 3898 mg/L	Warning Limits (± 2 SD) :	3182 - 4311 mg/L
Statistical Method :	Linear Regression (MLE)		

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT****Rainbow Trout**

EPS 1/RM/13

Page 2 of 2

Work Order : 246007

Sample Number : 69005

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	6.9	8.6	2048	15	91
After 30 min pre-aeration :	7.0	8.5	2042	16	92

0 HOURS

Date & Time	2021-07-31	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	7.0	8.5	2042	16	92
Control	0	0	8.3	9.3	787	15	97

Notes:

24 HOURS

Date & Time	2021-08-01	9:05					
Analyst(s) :	JCS (MDH)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-08-02	9:05					
Analyst(s) :	MDH						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-08-03	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

96 HOURS

Date & Time	2021-08-04	9:05					
Analyst(s) :	FS						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	7.9	9.3	2049	15	
Control	0	0	8.3	9.3	722	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : FSDate : 2021-08-04



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna

EPS 1/RM/14

Page 1 of 2

Work Order : 246007

Sample Number : 69006

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-06	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*. Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	<i>Daphnia magna</i>	Time to First Brood :	7.4 days
Organism Batch :	Dm21-16	Average Brood Size :	37.7 young
Culture Mortality :	0.4% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms / Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms / Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	Yes (see 'COMMENTS')	Test Method Deviation(s) :	Yes (see 'COMMENTS')

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.3 g/L
Date Tested :	2021-08-03	Warning Limits ($\pm$ 2SD) :	5.7 - 7.1 g/L
LC50 :	6.3 g/L	Organism Batch :	Dm21-16
95% Confidence Limits :	6.0 - 6.6 g/L	Analyst(s) :	JD
Statistical Method :	Linear Regression (MLE)		

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s) : Due to chemical interactions/interferences of the sample during measurement of hardness, the sample hardness was inaccurately measured and consequently unnecessarily adjusted. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By :

Project Manager

**TOXICITY TEST REPORT*****Daphnia magna***

EPS 1/RM/14

Page 2 of 2

Work Order : 246007

Sample Number : 69006

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃)
Initial Chemistry (100%) :	6.9	9.0	1973	20	103	>1000 mg/L
Chemistry after Adjustment (100%) :	7.3	8.3	2025	20	96	>1000 mg/L

0 HOURS

Date & Time 2021-07-31 14:20

Analyst(s) : JD (CGR)/CGR

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	7.3	8.3	2025	20	96	>1000
100	B	0	0	7.3	8.3	2025	20	96	>1000
100	C	0	0	7.3	8.3	2025	20	96	>1000
Control	A	0	0	8.4	8.8	692	20	100	210
Control	B	0	0	8.4	8.8	692	20	100	210
Control	C	0	0	8.4	8.8	692	20	100	210

Notes:

24 HOURS

Date & Time 2021-08-01 14:20

Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	20
100	B	—	0	—	—	—	20
100	C	—	0	—	—	—	20
Control	A	—	0	—	—	—	20
Control	B	—	0	—	—	—	20
Control	C	—	0	—	—	—	20

Notes:

48 HOURS

Date & Time 2021-08-02 14:20

Analyst(s) : AGP (JCS)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.1	8.3	2035	20
100	B	0	0	8.0	8.3	2041	20
100	C	0	0	8.0	8.3	2045	20
Control	A	0	0	8.4	8.5	697	20
Control	B	0	0	8.4	8.4	695	20
Control	C	0	0	8.4	8.3	695	20

Notes:

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

Test Data Reviewed By : KPDate : 2021-08-03



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

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Work Order : 246007

Sample Number : 69006

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-06	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout.
Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	<i>Oncorhynchus mykiss</i>	Average Fork Length (± 2 SD) :	41.6 mm (± 3.0)
Organism Batch :	T21-18	Range of Fork Lengths :	40 - 45 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.64 g (± 0.22)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.49 - 0.85 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.3 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	19
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 $\pm$ 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	Date Tested :	2021-07-30
Organism Batch :	T21-18	Analyst(s) :	LL, JCS
LC50 :	3475 mg/L	Historical Mean LC50 :	3704 mg/L
95% Confidence Limits :	2956 - 3898 mg/L	Warning Limits (± 2 SD) :	3182 - 4311 mg/L
Statistical Method :	Linear Regression (MLE)		

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT****Rainbow Trout**

EPS 1/RM/13

Page 2 of 2

Work Order : 246007

Sample Number : 69006

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	6.8	9.4	2040	15	100
After 30 min pre-aeration :	6.9	9.1	2034	16	99

0 HOURS

Date & Time	2021-07-31	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	6.9	9.1	2034	16	99
Control	0	0	8.3	9.3	787	15	97

Notes:

24 HOURS

Date & Time	2021-08-01	9:05					
Analyst(s) :	JCS (MDH)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-08-02	9:05					
Analyst(s) :	MDH						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-08-03	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

96 HOURS

Date & Time	2021-08-04	9:05					
Analyst(s) :	FS						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	7.9	9.2	2044	15	
Control	0	0	8.3	9.3	721	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : FSDate : 2021-08-04



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna

EPS 1/RM/14

Page 1 of 2

Work Order : 246007

Sample Number : 69007

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-07	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	<i>Daphnia magna</i>	Time to First Brood :	7.4 days
Organism Batch :	Dm21-16	Average Brood Size :	37.7 young
Culture Mortality :	0.4% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms / Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms / Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	Yes (see 'COMMENTS')	Test Method Deviation(s) :	Yes (see 'COMMENTS')

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.3 g/L
Date Tested :	2021-08-03	Warning Limits ($\pm$ 2SD) :	5.7 - 7.1 g/L
LC50 :	6.3 g/L	Organism Batch :	Dm21-16
95% Confidence Limits :	6.0 - 6.6 g/L	Analyst(s) :	JD
Statistical Method :	Linear Regression (MLE)		

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s) : Due to chemical interactions/interferences of the sample during measurement of hardness, the sample hardness was inaccurately measured and consequently unnecessarily adjusted. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By : _____
Project Manager

**TOXICITY TEST REPORT*****Daphnia magna***

EPS 1/RM/14

Page 2 of 2

Work Order : 246007

Sample Number : 69007

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃)
Initial Chemistry (100%) :	7.0	9.0	1964	20	103	>1000 mg/L
Chemistry after Adjustment (100%) :	7.2	8.7	2023	20	100	>1000 mg/L

0 HOURS

Date & Time 2021-07-31 14:25

Analyst(s) : JD (CGR)/CGR

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	7.2	8.7	2023	20	100	>1000
100	B	0	0	7.2	8.7	2023	20	100	>1000
100	C	0	0	7.2	8.7	2023	20	100	>1000
Control	A	0	0	8.4	8.8	692	20	100	210
Control	B	0	0	8.4	8.8	692	20	100	210
Control	C	0	0	8.4	8.8	692	20	100	210

Notes:

24 HOURS

Date & Time 2021-08-01 14:25

Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	20
100	B	—	0	—	—	—	20
100	C	—	0	—	—	—	20
Control	A	—	0	—	—	—	20
Control	B	—	0	—	—	—	20
Control	C	—	0	—	—	—	20

Notes: Some test organisms in the 100% concentration appeared to be adhered to gas bubbles on the sides and bottoms of the test chambers.

48 HOURS

Date & Time 2021-08-02 14:25

Analyst(s) : AGP (JCS)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.1	8.3	1987	20
100	B	0	0	8.0	8.3	2007	20
100	C	0	0	8.0	8.3	2004	20
Control	A	0	0	8.4	8.4	695	20
Control	B	0	0	8.4	8.4	695	20
Control	C	0	0	8.4	8.4	697	20

Notes:

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

Test Data Reviewed By : KP

Date : 2021-08-03



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

Page 1 of 2

Work Order : 246007

Sample Number : 69007

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:30
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-07	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout.
Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	<i>Oncorhynchus mykiss</i>	Average Fork Length (± 2 SD) :	45.8 mm (± 3.9)
Organism Batch :	T21-18	Range of Fork Lengths :	44 - 50 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.89 g (± 0.30)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.72 - 1.21 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.5 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	19
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 $\pm$ 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	Date Tested :	2021-07-30
Organism Batch :	T21-18	Analyst(s) :	LL, JCS
LC50 :	3475 mg/L	Historical Mean LC50 :	3704 mg/L
95% Confidence Limits :	2956 - 3898 mg/L	Warning Limits (± 2 SD) :	3182 - 4311 mg/L
Statistical Method :	Linear Regression (MLE)		

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT****Rainbow Trout**

EPS 1/RM/13

Page 2 of 2

Work Order : 246007

Sample Number : 69007

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	6.8	9.5	2030	15	101
After 30 min pre-aeration :	6.9	9.3	2025	15	100

0 HOURS

Date & Time	2021-07-31	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	6.9	9.3	2025	15	100
Control	0	0	8.3	9.3	787	15	97

Notes:

24 HOURS

Date & Time	2021-08-01	9:05					
Analyst(s) :	JCS (MDH)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-08-02	9:05					
Analyst(s) :	MDH						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-08-03	9:05					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

96 HOURS

Date & Time	2021-08-04	9:05					
Analyst(s) :	FS						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	7.9	9.3	2034	15	
Control	0	0	8.4	9.4	722	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : FSDate : 2021-08-04



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna

EPS 1/RM/14

Page 1 of 2

Work Order : 246007

Sample Number : 69008

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:40
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-08	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	<i>Daphnia magna</i>	Time to First Brood :	7.4 days
Organism Batch :	Dm21-16	Average Brood Size :	37.7 young
Culture Mortality :	0.4% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms / Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms / Test Level :	30
Duration of Pre-Aeration :	30 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	Yes (see 'COMMENTS')	Test Method Deviation(s) :	Yes (see 'COMMENTS')

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.3 g/L
Date Tested :	2021-08-03	Warning Limits ($\pm$ 2SD) :	5.7 - 7.1 g/L
LC50 :	6.3 g/L	Organism Batch :	Dm21-16
95% Confidence Limits :	6.0 - 6.6 g/L	Analyst(s) :	JD
Statistical Method :	Linear Regression (MLE)		

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Noted Deviation(s) : Due to chemical interactions/interferences of the sample during measurement of hardness, the sample hardness was inaccurately measured and consequently unnecessarily adjusted. There were no other unusual conditions or deviations from the test method, and the test is considered to be valid.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT*****Daphnia magna***

EPS 1/RM/14

Page 2 of 2

Work Order : 246007

Sample Number : 69008

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃)
Initial Chemistry (100%) :	7.3	9.6	1969	20	110	>1000 mg/L
Chemistry after Adjustment (100%) :	7.4	8.9	2017	20	102	>1000 mg/L

0 HOURS

Date & Time 2021-07-31 14:50

Analyst(s) : JD(CGR)/CGR

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	7.4	8.7	1989	20	100	>1000
100	B	0	0	7.4	8.7	1989	20	100	>1000
100	C	0	0	7.4	8.7	1989	20	100	>1000
Control	A	0	0	8.4	8.8	692	20	100	210
Control	B	0	0	8.4	8.8	692	20	100	210
Control	C	0	0	8.4	8.8	692	20	100	210

Notes:

24 HOURS

Date & Time 2021-08-01 14:50

Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	20
100	B	—	0	—	—	—	20
100	C	—	0	—	—	—	20
Control	A	—	0	—	—	—	20
Control	B	—	0	—	—	—	20
Control	C	—	0	—	—	—	20

Notes:

48 HOURS

Date & Time 2021-08-02 14:50

Analyst(s) : AGP (JCS)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.0	8.3	1998	20
100	B	0	0	8.0	8.3	2010	20
100	C	0	0	8.1	8.3	2015	20
Control	A	0	0	8.4	8.4	696	20
Control	B	0	0	8.4	8.3	694	20
Control	C	0	0	8.4	8.3	695	20

Notes:

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

Test Data Reviewed By : KP

Date : 2021-08-03



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

Page 1 of 2

Work Order : 246007

Sample Number : 69008

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	19:40
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	CP-SEEPAGE-08	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout.
Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	<i>Oncorhynchus mykiss</i>	Average Fork Length (± 2 SD) :	45.6 mm (± 5.8)
Organism Batch :	T21-18	Range of Fork Lengths :	41 - 50 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.90 g (± 0.27)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.67 - 1.11 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.5 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	19
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 $\pm$ 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	120 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	Date Tested :	2021-07-30
Organism Batch :	T21-18	Analyst(s) :	LL, JCS
LC50 :	3475 mg/L	Historical Mean LC50 :	3704 mg/L
95% Confidence Limits :	2956 - 3898 mg/L	Warning Limits (± 2 SD) :	3182 - 4311 mg/L
Statistical Method :	Linear Regression (MLE)		

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT****Rainbow Trout**

EPS 1/RM/13

Page 2 of 2

Work Order : 246007

Sample Number : 69008

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	7.1	10.0	2029	15	107
After 30 min pre-aeration :	7.2	9.7	2023	16	105

0 HOURS

Date & Time	2021-07-31	10:40					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	7.3	9.2	2024	15	99
Control	0	0	8.3	9.3	787	15	97

Notes:

24 HOURS

Date & Time	2021-08-01	10:40					
Analyst(s) :	JCS (MDH)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-08-02	10:40					
Analyst(s) :	MDH						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-08-03	10:40					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

96 HOURS

Date & Time	2021-08-04	10:40					
Analyst(s) :	FS						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	7.9	9.2	2035	15	
Control	0	0	8.3	9.3	723	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : FSDate : 2021-08-04



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna

EPS 1/RM/14

Page 1 of 2

Work Order : 246007

Sample Number : 69009

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	21:10
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	MS-C-E	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* .
Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	<i>Daphnia magna</i>	Time to First Brood :	7.4 days
Organism Batch :	Dm21-16	Average Brood Size :	37.7 young
Culture Mortality :	0.4% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms / Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms / Test Level :	30
Duration of Pre-Aeration :	30 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.3 g/L
Date Tested :	2021-08-03	Warning Limits ($\pm$ 2SD) :	5.7 - 7.1 g/L
LC50 :	6.3 g/L	Organism Batch :	Dm21-16
95% Confidence Limits :	6.0 - 6.6 g/L	Analyst(s) :	JD
Statistical Method :	Linear Regression (MLE)		

COMMENTS

All test validity criteria as specified in the test method were satisfied.

Approved By :

Project Manager

**TOXICITY TEST REPORT*****Daphnia magna***

EPS 1/RM/14

Page 2 of 2

Work Order : 246007

Sample Number : 69009

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃)
Initial Chemistry (100%) :	8.1	9.6	840	20	108	414 mg/L

0 HOURS

Date & Time 2021-07-31 10:45
Analyst(s) : JD (CGR)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	8.1	8.7	822	20	99	414
100	B	0	0	8.1	8.7	822	20	99	414
100	C	0	0	8.1	8.7	822	20	99	414
Control	A	0	0	8.4	8.8	692	19	100	210
Control	B	0	0	8.4	8.8	692	19	100	210
Control	C	0	0	8.4	8.8	692	19	100	210

Notes:

24 HOURS

Date & Time 2021-08-01 10:45
Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	20
100	B	—	0	—	—	—	20
100	C	—	0	—	—	—	20
Control	A	—	0	—	—	—	20
Control	B	—	0	—	—	—	20
Control	C	—	0	—	—	—	20

Notes:

48 HOURS

Date & Time 2021-08-02 10:45
Analyst(s) : JW

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.4	8.4	835	20
100	B	0	0	8.4	8.4	833	20
100	C	0	0	8.4	8.4	833	20
Control	A	0	0	8.4	8.4	697	20
Control	B	0	0	8.4	8.4	697	20
Control	C	0	0	8.4	8.4	698	20

Notes: Some test organisms in the 100% concentration were floating.

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

Test Data Reviewed By : KP

Date : 2021-08-03



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B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
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Fax. (519) 763-4419

TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

Page 1 of 2

Work Order : 246007

Sample Number : 69009

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-27
Location :	Waterloo ON	Time Collected :	21:10
Job Number :	L2619446	Date Received :	2021-07-30
Substance :	MS-C-E	Time Received :	11:30
Sampling Method :	Grab	Temperature on Receipt :	9 °C
Sampled By :	P. Woolfrey/ K. Button/ Sadie (BIM)	Date Tested :	2021-07-31
Sample Description :	Clear, pale red		

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout.
Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	<i>Oncorhynchus mykiss</i>	Average Fork Length (± 2 SD) :	43.4 mm (± 3.0)
Organism Batch :	T21-18	Range of Fork Lengths :	41 - 46 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.66 g (± 0.23)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.44 - 0.86 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.3 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	19
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 $\pm$ 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	120 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride	Date Tested :	2021-07-30
Organism Batch :	T21-18	Analyst(s) :	LL, JCS
LC50 :	3475 mg/L	Historical Mean LC50 :	3704 mg/L
95% Confidence Limits :	2956 - 3898 mg/L	Warning Limits (± 2 SD) :	3182 - 4311 mg/L
Statistical Method :	Linear Regression (MLE)		

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

**TOXICITY TEST REPORT****Rainbow Trout**

EPS 1/RM/13

Page 2 of 2

Work Order : 246007

Sample Number : 69009

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	8.0	10.0	850	15	106
After 30 min pre-aeration :	8.1	9.7	848	16	104

0 HOURS

Date & Time	2021-07-31	10:40					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	8.1	9.4	848	15	101
Control	0	0	8.3	9.3	787	15	97

Notes:

24 HOURS

Date & Time	2021-08-01	10:40					
Analyst(s) :	JCS (MDH)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-08-02	10:40					
Analyst(s) :	MDH						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-08-03	10:40					
Analyst(s) :	LL (FS)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

96 HOURS

Date & Time	2021-08-04	10:40					
Analyst(s) :	FS						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	8.3	9.3	858	15	
Control	0	0	8.3	9.4	719	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : FSDate : 2021-08-04

CHAIN OF CUSTODY RECORD



AquaTox Work Order No:

246007

Shipping Address: AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, Ontario Canada N0B 2J0

Voice: (519) 763-4412

Fax: (519) 763-4419

P.O. Number: 4500090295	+
Field Sampler Name (print): Peter Woolfrey/Kendra Button/Sadie	+
Signature:	
Affiliation: Baffinland Iron Mine / ALS Environmental	
Sample Storage (prior to shipping): Refrigerated	
Custody Relinquished by: Peter Woolfrey	
Date/Time Shipped: 2021-07-28 19:00	

Client: ALS Environmental c/o Baffinland Iron Mine
Quote # (2021): 162705399-21
Phone: (519) 886-6910
Fax: (519) 886-9047
Contact: Rick Hawthorne (ALS) / Martina Rendas (Aquatox)

Sample Identification					Analyses Requested										Sample Method and Volume		
Date Collected (yyyy-mm-dd)	Time Collected (e.g. 14:30, 24 hr clock)	Sample Name	AquaTox Sample Number	Temp. on arrival	Rainbow Trout Single Concentration	Rainbow Trout LC50	Daphnia magna Single Concentration	Daphnia magna LC50	Fathead Minnow Survival & Growth	Ceriodaphnia dubia Survival & Reproduction	Lemna minor Growth	Pseudokirchneriella subcapitata Growth	Other (please specify below)	Grab	Composite	# of Containers and Volume (eg. 2 x 1L, 3 x 10L, etc.)	
2021-07-27	19:30	CP-SEEPAGE-05	69005	9°C	✓		✓							✓		2 x 10L Carboy	
2021-07-27	19:30	CP-SEEPAGE-06	69006	9°C	✓		✓							✓		2 x 10L Carboy	
2021-07-27	19:30	CP-SEEPAGE-07	69007	9°C	✓		✓							✓		2 x 10L Carboy	
2021-07-27	19:30	CP-SEEPAGE-07			✓		✓							✓		2 x 10L Carboy	
2021-07-27	19:40	CP-SEEPAGE-08	69008	9°C	✓		✓							✓		2 x 10L Carboy	
2021-07-27	21:10	MS-C-E	69009	9°C	✓		✓							✓		2 x 10L Carboy	

For Lab Use Only	
Received By:	SNM/CGR
Date:	2021-07-30
Time:	11:30
Storage Location:	
Storage Temp. (°C):	

Please list any special requests or instructions:		
☐ RUSH testing	☐ RUSH testing & reporting	☐ Daily updates
Report Distribution: BIM-ENV-LABRESULTS@baffinland.com,		
rick.hawthorne@alsglobal.com		

Subcontract Request Form

Subcontract To:
AQUATOX TESTING AND CONSULTING

11B NICHOLAS BEAVER ROAD
RR3
GUELPH, ON N1H 6H9

NOTES: Please reference on final report and invoice: PO# L2619446
ALS requires QC data to be provided with your final results.

Please see enclosed 5 sample(s) in 0 Container(s)

SAMPLE NUMBER	ANALYTICAL REQUIRED	DATE SAMPLED DUE DATE	Priority Flag
L2619446-1 CP- SEEPAGE-05_2021-07-27_1930		7/27/2021	
	Special Request Aquatox (SPECIAL REQUEST2-AQT 14)	8/31/2021	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	8/31/2021	
L2619446-2 CP- SEEPAGE-06_2021-07-27_1930		7/27/2021	
	Special Request Aquatox (SPECIAL REQUEST2-AQT 14)	8/31/2021	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	8/31/2021	
L2619446-3 CP- SEEPAGE-07_2021-07-27_1930		7/27/2021	
	Special Request Aquatox (SPECIAL REQUEST2-AQT 14)	8/31/2021	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	8/31/2021	
L2619446-4 CP- SEEPAGE-08_2021-07-27_1940		7/27/2021	
	Special Request Aquatox (SPECIAL REQUEST2-AQT 14)	8/31/2021	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	8/31/2021	
L2619446-5 MS-C- E_2021-07-27_2110		7/27/2021	
	Special Request Aquatox (SPECIAL REQUEST2-AQT 14)	8/31/2021	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	8/31/2021	



L2619446

WATERLOO

Subcontract Request Form

Subcontract To:

AQUATOX TESTING AND CONSULTING

11B NICHOLAS BEAVER ROAD
RR3
GUELPH, ON N1H 6H9

Subcontract Info Contact: Mary-Lynn Pike (519) 886-6910

Analysis and reporting info contact: Rick Hawthorne
60 NORTHLAND ROAD, UNIT 1
WATERLOO, ON N2V 2B8

Phone: (519) 886-6910

Email: Rick.Hawthorne@alsglobal.com

Please email confirmation of receipt to:

Rick.Hawthorne@alsglobal.com

Shipped By: _____ Date Shipped: _____

Received By: _____ Date Received: _____

Verified By: _____ Date Verified: _____

Temperature: _____

Sample Integrity Issues: _____



L2619446-COFC

COC Number: 20 -



www.alsglobal.com

Canada 1-800-387-2222

Page 1 of 1

Report To		Reports / Recipients				Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)			
Contact and company name below will appear on the final report		Select Report Format: ☐ PDF ☒ EXCEL ☒ EDD (DIGITAL) Merge QC/QCI Reports with COA ☒ YES ☐ NO ☐ N/A ☐ Compare Results to Criteria on Report - provide details below if box checked				☒ Routine [R] If received by 3pm M-F - no surcharges apply ☐ day [P4] if received by 3pm M-F - 20% rush surcharge minimum ☐ day [P3] if received by 3pm M-F - 25% rush surcharge minimum ☐ day [P2] if received by 3pm M-F - 50% rush surcharge minimum ☐ day [E] if received by 3pm M-F - 100% rush surcharge minimum Same day [E2] If received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests					
Company: Baffinland Iron Mine Corporation		Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX				Date and Time Required for all E&P TATs:					
Contact: Connor Devereaux / Kendra Button		Email 1 or Fax BIM-ENV-LABRESULTS@baffinland.com				For tests that can not be performed according to the TAT requested, you will be contacted.					
Phone: 647-253-0596		Email 2 bim.equissa@baffinland.com				Analysis Request					
Company address below will appear on the final report		Email 3				Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below					
Street: 2275 Upper Middle Rd E, Suite 300		Invoice Recipients				NUMBER OF CONTAINERS		SAMPLES ON HOLD EXTENDED STORAGE REQUIRED SUSPECTED HAZARD (see notes)			
City/Province: Oakville, Ontario		Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX				F/P					
Postal Code: L6H 0C3		Email 1 or Fax ap@baffinland.com				Group 3					
Invoice To: Same as Report To ☒ YES ☐ NO		Email 2 commercial@baffinland.com									
Copy of Invoice with Report ☐ YES ☒ NO		Oil and Gas Required Fields (client use)									
Company: Baffinland Iron Mine Corporation		AFE/Cost Center: PO#									
Contact: Accounts Payable		Major/Minor Code: Routing Code:									
Project Information		Requisitioner:									
ALS Account # / Quote #: 23642, Q83450		Location:									
Job #: CRUSHER SEEPAGE		ALS Contact: Rick Hawthorne				Sampler: PM/KC/KB/LM/SJP/TM					
PO / AFE: 4500090295											
LSD:											
ALS Lab Work Order # (lab use only): L2619446											
ALS Sample # (lab use only)	Sample Identification (fills automatically) (SYS_SAMPLE_CODE)	Sample Location (SYS_LOC_CODE)	Sampling Date (dd-mmm-yy)	Time (hh:mm)	Field Matrix						
1	CP-SEEPAGE-05_2021-07-27_1930	CP-SEEPAGE-05	27/Jul/21	19:30	WS	11	R	R			
2	CP-SEEPAGE-06_2021-07-27_1930	CP-SEEPAGE-06	27/Jul/21	19:30	WS	11	R	R			
3	CP-SEEPAGE-07_2021-07-27_1930	CP-SEEPAGE-07	27/Jul/21	19:30	WS	11	R	R			
4	CP-SEEPAGE-08_2021-07-27_1940	CP-SEEPAGE-08	27/Jul/21	19:40	WS	11	R	R			
5	MS-C-E_2021-07-27_2110	MS-C-E	27/Jul/21	21:10	WS	11	R	R			
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)				SAMPLE RECEIPT DETAILS (lab use only)					
Are samples taken from a Regulated DW System? ☐ YES ☒ NO						Cooling Method: ☐ NONE ☒ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED					
Are samples for human consumption/ use? ☐ YES ☒ NO						Submission Comments identified on Sample Receipt Notification: ☐ YES ☒ NO					
						Cooler Custody Seals Intact: ☐ YES ☒ N/A Sample Custody Seals Intact: ☐ YES ☒ N/A					
						INITIAL COOLER TEMPERATURES °C: 10 FINAL COOLER TEMPERATURES °C: 12.6					
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)					
Released by: Peter Woolfrey		Date: 28-Jul-21		Time: 9:00		Received by: AWJ		Date: JUL 28/21		Time: 9AM	
								Received by: RH		Date: 28-30-Jul-21	
										Time: 4:30	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FORM 1

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.

Spill Report Number:

21-338



September 7, 2021

Resource Management Officer
Nunavut Region
Crown Indigenous Relations and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0
Jonathan.Mesher@aandc-aadnc.gc.ca

Regulatory Manager
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-Up to Spill #2021-338
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On August 9, 2021 at 00:25 hrs, approximately 0.8 cubic meters of Diesel Exhaust Fluid (DEF) spilled onto the ground at the Milne Port Warehouse Laydown when a tote fell off a flatbed trailer during off-loading activities. The spilled DEF was released directly to the surrounding ground at the Warehouse Laydown, resulting in an affected area of approximately 37 m². At the time of the event, the Operator was removing a tote from the flatbed trailer and inadvertently engaged the loader forks into a second tote. The second tote was pulled to the edge of the trailer and damaged when it subsequently fell to the ground. The spill location is >100 m to the nearest fish bearing water body.

Immediate and Follow-Up Action:

The damaged tote was immediately up-righted and the scene of the incident secured to prevent additional product from being released. A berm was constructed and absorbent materials deployed to contain the spilled material. Once the spill was effectively contained, contaminated gravel was collected from the affected area using mobile equipment and placed in sealed containers within the Hazardous Waste Berm to be transported for offsite disposal.

Recommendations:

A procedure was created for loading and offloading trailers and the use of spotters. Spotter training and competency was reviewed to ensure crews are trained and instructed to maintain a line of sight on the cargo being offloaded, including repositioning as necessary. All crews involved in loading and offloading trailers and spotting will review the new procedure, and spotter competency assessments completed on all spotters.

Current Status:

Contaminated soil was removed from the affected area of the Warehouse Laydown and placed in sealed containers for disposal offsite. The affected area of the Warehouse Laydown was graded and resurfaced and is back in operation.

Should you require further information or clarification on the above noted spill, please feel free to contact the undersigned at (647) 253-0596 x4322 or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:

A handwritten signature in black ink, appearing to read "K. Button".

Kendra Button
Environmental Superintendent

Reviewed by:

James Martin

James Martin
Accommodations and Essential Services
Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report



cc. Tim Sewell, Tayfun Eldum, Megan Lord-Hoyle, Francois Gaudreau, Martin Beausejour, Sylvain Proulx, Christopher Murray, Shawn Stevens, Connor Devereaux, James Martin, Norm Hilliard, Lyle Hemmerling (Baffinland), Chris Spencer, Hugh Karpik (QIA), Justin Hack (CIRNAC)



Attachment 1

Photos



Photo 1. Location of Diesel Exhaust Fuel Spill (Before Cleanup) – August 9, 2021



Photo 2. Location of Diesel Exhaust Fuel Spill (After Cleanup) – August 9, 2021

Spill Report Number:

21-338



Attachment 2

Spill Location Map

Figure 1. Map of Spill Location



Location of Spill #2021-338
0.8 m³ Diesel Exhaust Fluid
Milne Port Site
August 9, 2021
Latitude: 71° 88' 46"
Longitude: 80° 89' 91"



Attachment 3

Baffinland NT-NU Spill Report #2021-338



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR 08-09-2021	REPORT TIME 19:30	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 21 - 338
B	OCCURRENCE DATE: MONTH – DAY – YEAR 08-09-2021	OCCURRENCE TIME 00:25			
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"			
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Milne Inlet Port Site, Baffin Island, NU		REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 88 SECONDS 46		LONGITUDE DEGREES 80 MINUTES 89 SECONDS 91		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3			
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A			
H	PRODUCT SPILLED Diesel Exhaust Fluid (DEF)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 0.8 cubic meters	U.N. NUMBER N/A		
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A		
I	SPILL SOURCE Storage Tote	SPILL CAUSE Tote puncture	AREA OF CONTAMINATION IN SQUARE METRES 35		
J	FACTORS AFFECTING SPILL OR RECOVERY Rain and congested area	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT N/A		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On August 9, 2021 at 00:25 hours, a loader Operator unloading a tote containing Diesel Exhaust Fluid (DEF) from a trailer inadvertently engaged the loader forks into a second tote, pulling it to the edge of the trailer. The tote subsequently fell to the ground, releasing approximately 0.8 cubic meters of DEF to the ground at the Warehouse Laydown. The loader Operator immediately initiated containment measures and reported the spill. A dirt berm was constructed and absorbent materials were deployed to contain the spilled material. Impacted soil was subsequently removed and placed in totes in the hazardous materials berm. This location is >100 m to the nearest water course. An investigation of the incident is ongoing and details will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the GN EPA paragraph 5.1(a).				
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 416-364-8820	TELEPHONE ext. 6016
M	ANY ALTERNATE CONTACT Shawn Stevens	POSITION Manager of HSES	EMPLOYER Baffinland	ALTERNATE CONTACT 416-364-8820 LOCATION	ALTERNATE TELEPHONE ext. 6006
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC			SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN		FILE STATUS ☐ OPEN ☐ CLOSED
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					