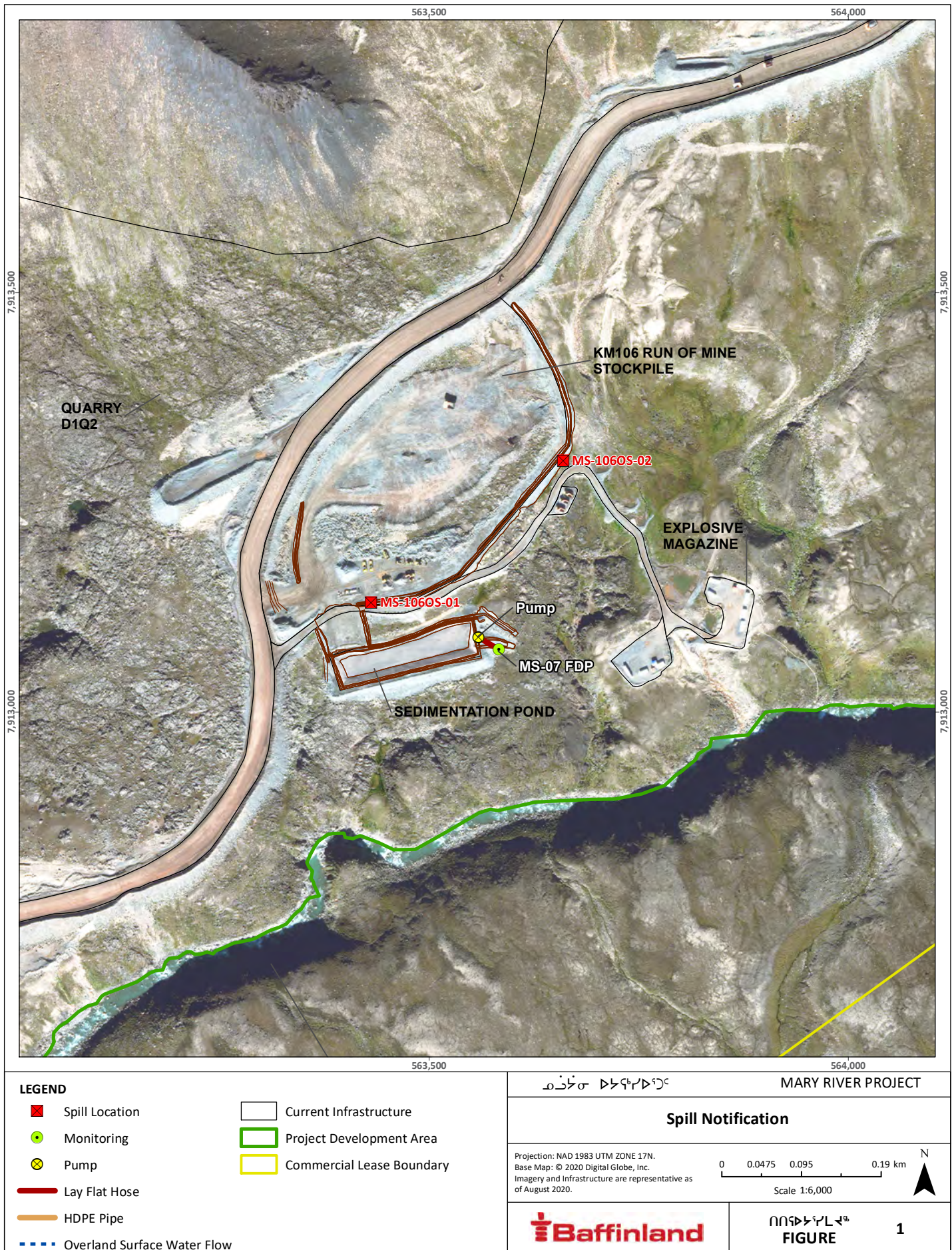




Attachment 2

Spill Locations Map





Attachment 3

Baffinland NT-NU Spill Report #2021-268



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 06-28-2021	REPORT TIME 19:30	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # 21 - 268 TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 21 - 268
B	OCCURRENCE DATE: MONTH - DAY - YEAR 06-28-2021	OCCURRENCE TIME 09:30		
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 Mine Site, Baffin Island, NU		REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 45		LONGITUDE DEGREES 79 MINUTES 12 SECONDS 0	
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 Surface Water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unknown	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 Km 106 ROM stockpile	SPILL CAUSE Seepage from toe of berm	AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY Drainage to tundra	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On June 28th 2021, at approximately 09:30, personnel completing routine monitoring observed seepage at the Km 106 ROM ore stockpile from the diversion berm. The source of this water is unknown as no surface water was visible on the ore stockpile pad. The investigation continues to confirm the source of the seepage and remedial actions including regrading. Initial field readings of the release were compliant with applicable water license and MDMER criteria. Water quality monitoring and corrective actions will be presented in the follow-up report. The incident occurred on IOL located approximately 300 meters from Mary River, the nearest fish bearing waters. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b) and section 31 of the Metal and Diamond Mining Effluent Regulations under the Fisheries Act.			
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
	ALTERNATE TELEPHONE ext. 6006		LOCATION	
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 ☐ IAC ☐ 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				



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

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REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 06-30-2021		REPORT TIME 19:00		☐ ORIGINAL SPILL REPORT, OR ☒ UPDATE # 1 TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 21 268
	OCCURRENCE DATE: MONTH - DAY - YEAR 06-28-2021		OCCURRENCE TIME 09:30			
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 Mine Site, Baffin Island, NU				REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE DEGREES MINUTES SECONDS		LONGITUDE DEGREES MINUTES SECONDS			
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 Surface Water		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unknown		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 Km 106 ROM stockpile		SPILL CAUSE Seepage from toe of berm		AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY Drainage to tundra		DESCRIBE ANY ASSISTANCE REQUIRED N/A		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On June 28th 2021, at approximately 09:30, personnel completing routine monitoring observed seepage at the Km 106 ROM ore stockpile from the diversion berm. The source of this water is unknown as no surface water was visible on the ore stockpile pad. The investigation continues to confirm the source of the seepage and remedial actions including regrading and sump installation. Initial field readings of the release were compliant with applicable water license and MDMER criteria. Water quality monitoring and corrective actions will be presented in the follow-up report. The incident occurred on IOL located approximately 300 meters from Mary River, the nearest fish bearing waters. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b) and section 31 of the Metal and Diamond Mining Effluent Regulations under the Fisheries Act. Updated coordinates below: MS-106OS-01 - N71° 18' 43.4" W79° 13' 33.8", MS-106OS-02 - N71° 18' 47.3" W79° 13' 13.2"					
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	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 ☐ IAC ☐ 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						



Attachment 4

Water Quality Results

Analyte	Sample ID			MS-106OS-01_2021-06-28_1245	MS-106OS-02_2021-06-28_1820
	ALS Laboratory Sample ID			L2607337-1	L2607337-2
	Sample Date & Time			2021-06-28 12:45	2021-06-28 18:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence and MDMER Criteria ¹		
Conductivity	uS/cm	3	-	1750	1190
Hardness (as CaCO3)	mg/L	0.5	-	971	590
pH	pH units	0.1	6.0 - 9.5	7.54	7.71
Total Suspended Solids	mg/L	2	15	5.5	15.9
Total Dissolved Solids	mg/L	10	-	1470	812
Turbidity	NTU	0.1	-	6.35	13
Un-Ionized Ammonia	mg/L	-	-	0.01	0.00
Acidity (as CaCO3)	mg/L	2	-	5.6	5.2
Alkalinity, Total (as CaCO3)	mg/L	1	-	50.9	134
Ammonia, Total (as N)	mg/L	0.005	-	3.24	0.103
Chloride (Cl)	mg/L	2.5	-	18.5	21.3
Fluoride (F)	mg/L	0.1	-	<0.20	<0.10
Nitrate (as N)	mg/L	0.025	-	45.7	55.2
Total Kjeldahl Nitrogen	mg/L	0.05	-	1.25	<0.050
Phosphorus, Total	mg/L	0.002	-	0.0128	0.0193
Sulfate (SO4)	mg/L	1.5	-	816	298
Dissolved Organic Carbon	mg/L	0.5	-	3.3	3.99
Total Organic Carbon	mg/L	0.5	-	3	4.01
Aluminum (Al)-Total	mg/L	0.003	-	0.53	0.447
Antimony (Sb)-Total	mg/L	0.0001	-	0.00081	<0.00010
Arsenic (As)-Total	mg/L	0.0001	0.5	0.00028	0.00019
Barium (Ba)-Total	mg/L	0.0001	-	0.028	0.0645
Beryllium (Be)-Total	mg/L	0.0001	-	<0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.00005	-	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.01	-	0.074	0.03
Cadmium (Cd)-Total	mg/L	0.000005	-	0.000576	0.000404
Calcium (Ca)-Total	mg/L	0.05	-	161	121
Cesium (Cs)-Total	mg/L	0.00001	-	0.000057	0.000053
Chromium (Cr)-Total	mg/L	0.0001	-	0.00147	0.0011
Cobalt (Co)-Total	mg/L	0.0001	-	0.00719	0.00233
Copper (Cu)-Total	mg/L	0.0005	0.3	0.00939	0.00258
Iron (Fe)-Total	mg/L	0.01	-	0.819	0.693
Lead (Pb)-Total	mg/L	0.00005	0.2	0.00217	0.00108
Lithium (Li)-Total	mg/L	0.001	-	0.0131	0.0082
Magnesium (Mg)-Total	mg/L	0.005	-	179	69.6
Manganese (Mn)-Total	mg/L	0.0001	-	1.27	0.0936
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.0173	0.00407
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.00624	0.00285
Phosphorus (P)-Total	mg/L	0.05	-	0.219	<0.050
Potassium (K)-Total	mg/L	0.05	-	21.6	15.9
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0124	0.0107
Selenium (Se)-Total	mg/L	0.00005	-	0.00943	0.00269
Silicon (Si)-Total	mg/L	0.1	-	2.8	3.55
Silver (Ag)-Total	mg/L	0.00001	-	0.000034	0.000021
Sodium (Na)-Total	mg/L	0.05	-	12.7	9.6
Strontium (Sr)-Total	mg/L	0.0002	-	0.203	0.313
Sulfur (S)-Total	mg/L	0.5	-	297	102
Tellurium (Te)-Total	mg/L	0.0002	-	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.00001	-	0.000024	0.000051
Thorium (Th)-Total	mg/L	0.0001	-	0.00014	0.0002
Tin (Sn)-Total	mg/L	0.0001	-	0.00073	<0.00010
Titanium (Ti)-Total	mg/L	0.0003	-	0.0146	0.0264
Tungsten (W)-Total	mg/L	0.0001	-	0.00011	<0.00010
Uranium (U)-Total	mg/L	0.00001	-	0.0141	0.0213
Vanadium (V)-Total	mg/L	0.0005	-	0.00076	0.00093
Zinc (Zn)-Total	mg/L	0.003	0.5	0.151	0.009
Zirconium (Zr)-Total	mg/L	0.0002	-	0.00659	0.0004
Aluminum (Al)-Dissolved	mg/L	0.001	-	0.0048	0.458
Antimony (Sb)-Dissolved	mg/L	0.0001	-	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.0001	-	<0.00010	0.00017
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.0213	0.0668
Beryllium (Be)-Dissolved	mg/L	0.0001	-	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.00005	-	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.01	-	0.062	0.028
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.000445	0.000377
Calcium (Ca)-Dissolved	mg/L	0.05	-	89.5	119
Cesium (Cs)-Dissolved	mg/L	0.00001	-	0.000024	0.000049
Chromium (Cr)-Dissolved	mg/L	0.0001	-	<0.00010	0.00102
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.00659	0.0022
Copper (Cu)-Dissolved	mg/L	0.0002	-	0.00189	0.00243
Iron (Fe)-Dissolved	mg/L	0.01	-	0.107	0.635
Lead (Pb)-Dissolved	mg/L	0.00005	-	<0.000050	0.000872
Lithium (Li)-Dissolved	mg/L	0.001	-	0.0113	0.0076
Magnesium (Mg)-Dissolved	mg/L	0.005	-	181	71
Manganese (Mn)-Dissolved	mg/L	0.0001	-	1.21	0.0919
Mercury (Hg)-Dissolved	mg/L	0.000005	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.0182	0.00411
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.00374	0.00278
Phosphorus (P)-Dissolved	mg/L	0.05	-	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.05	-	20	16.6
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0108	0.011
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00894	0.00265
Silicon (Si)-Dissolved	mg/L	0.05	-	2.14	3.74
Silver (Ag)-Dissolved	mg/L	0.00001	-	<0.000010	0.000022
Sodium (Na)-Dissolved	mg/L	0.05	-	11.1	9.85
Strontium (Sr)-Dissolved	mg/L	0.0002	-	0.163	0.319
Sulfur (S)-Dissolved	mg/L	0.5	-	273	95.4
Tellurium (Te)-Dissolved	mg/L	0.0002	-	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.00001	-	0.000021	0.000049
Thorium (Th)-Dissolved	mg/L	0.0001	-	<0.00010	0.00014
Tin (Sn)-Dissolved	mg/L	0.0001	-	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.0003	-	<0.00030	0.0156
Tungsten (W)-Dissolved	mg/L	0.0001	-	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.00001	-	0.0134	0.0206
Vanadium (V)-Dissolved	mg/L	0.0005	-	<0.00050	0.00089
Zinc (Zn)-Dissolved	mg/L	0.001	-	0.0021	0.0112
Zirconium (Zr)-Dissolved	mg/L	0.0002	-	<0.00020	0.00034
Acute Lethality ^{2,3}	N/A	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 (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).

Spill Report Number:

21-280



August 2, 2021

Resource Management Officer
Crown Indigenous Relations and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0
Jonathan.Mesher@canada.ca

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

Enforcement Officer
Environment and Climate Change Canada
933 Mivvik Street
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #2021-280
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On July 2, 2021, at approximately 11:40, seepage was observed from the Milne Port west ore pad ditch while Ore Stockpile runoff water was being pumped from Pond 3 to Ore Stockpile Settling Pond MP-06 via the ditch during routine water level management activities. Immediately upon discovery of the seepage, the pump transferring water to MP-06 was stopped, preventing further release. A maximum volume of 6.3 cubic meters of contact water seeped from the west ore pad ditch to the adjacent tundra and then flowed overland to the West Beach at Milne Inlet in the vicinity of the approved MP-06 discharge location. Initial field readings of the release were compliant with applicable water licence criteria. Subsequent water samples collected from the seepage and from Pond 3 to characterize the water quality of the release were submitted to an external laboratory for analysis. The table below shows the coordinates of the sample locations. The third party analytical laboratory results for the seepage and Pond 3 water samples were compliant with all applicable water licence criteria. The incident occurred on IOL located approximately 200 meters from Milne Inlet.

Sample Location	Description	Coordinates (Lat/Long)
MP-POND3-01	Seepage observed downslope of west ore pad ditch	N71° 53' 8.3" W80° 54' 53.2"
MP-POND3	Pond 3 which holds Ore Stockpile runoff water	N71° 53' 0.4" W80° 54' 47.4"

Photos of the seepage event and a figure showing the spill location are provided in Attachment 1 and Attachment 2, respectively. The spill was reported to the NT-NU Spill Reporting Line on July 3, 2021. The NT-NU Spill Report (#2021-280) is included as Attachment 3. The external laboratory water quality results are included as Attachment 4.

Immediate and Follow-Up Action:

Upon discovering the seepage, the pump transferring water through the west ore pad ditch was shut off, preventing further release. Water samples collected from the seepage location and from Pond 3 on the day of the release were submitted to an external laboratory for analysis. The laboratory water quality results confirmed the seepage was compliant with all applicable water licence criteria, however, analysis of a toxicity sample included in the laboratory shipment was cancelled because the sample was not delivered to the third



party laboratory within the analysis hold time. The delay was due to external shipping and logistical issues encountered during sample transit. Subsequent water samples collected from Pond 3 on July 13, 2021 were also compliant with all water licence criteria. The July 13 analysis also included toxicology analysis, which demonstrated that the Pond 3 water was not acutely toxic.

Modifications to the pond-to-pond transfer process configuration were implemented to allow water level management activities to recommence without the need to route the water through the west ore pad ditch. The west ore pad ditch also collects a low volume of runoff water from the ore pad intermittently. A temporary diversion berm was constructed to prevent this runoff from reporting to the ditch until the ditch is repaired. The temporary diversion berm will redirect runoff water from the ore pad to Pond 3 and/or MP-06. Prior to construction of the diversion berm, the west ore pad ditch was inspected regularly and no runoff water from the ore pad was observed to have reported to the ditch.

Further investigation is being conducted to determine the root cause of the ditch seepage, and to subsequently determine the appropriate corrective actions to effectively resolve the seepage.

Current Status:

Modifications were implemented to the pond-to-pond transfer process configuration to ensure water is not routed through the west ore pad ditch until corrective actions are implemented to address the seepage. A temporary diversion berm was constructed to prevent runoff water from the ore pad from reporting to the ditch. Ore pad runoff water will be redirected to surface water management ponds until the ditch is repaired. The temporary diversion berm will be inspected on a regular basis to ensure it is functioning as intended and diverting water away from the affected ditch and to surface water management ponds.

Should you require further information or clarification on the incident described above, please feel free to contact Connor Devereaux or Kendra Button (647) 253-0596 (ext. 6016).

Prepared by:

A blue ink signature of Kendra Button, written in a cursive style.

Kendra Button
Environmental Superintendent

Reviewed by:

A blue ink signature of Sangjin Yun, written in a cursive style.

Sangjin Yun
OHT & Shiploading Manager, Operations

Cc: Justin Hack (CIRNAC)
Chris Spencer, Hugh Karpik (QIA)
Robert Arsenault, Curtis Didham, Shauna Seeteenak (ECCC)
Sylvain Proulx, Tim Sewell, Megan Lord-Hoyle, Lou Kamermans, Francois Gaudreau, Martin Beausejour, Christopher Murray, Allison Parker, Connor Devereaux, Sangjin Yun, Joe Armstrong, Ray Poulin (Baffinland)



Attachments

Attachment 1: Photos

Attachment 2: Spill Location Map

Attachment 3: Baffinland NT-NU Spill Report #2021-280

Attachment 4: Surface Water Quality Results



Attachment 1

Photos



Photo 1. Pond-to Pond Water Transfer Route via West Ore Pad Ditch (July 2, 2021)



Photo 2. Seepage Location within West Ore Pad Ditch (July 2, 2021)



Photo 3. Spill to Tundra Down-Gradient of West Ore Pad Ditch Seepage Location (July 2, 2021)



Photo 4. Tundra Down-Gradient of West Ore Pad Ditch Seepage Location (July 3, 2021)



Photo 5. Modified Pond-to-Pond Transfer Process Configuration through Pipe, and Temporary Diversion Berm Preventing Ore Pad Runoff Water from Reporting to West Ore Pad Ditch (August 2, 2021)



Attachment 2

Spill Location Map





Attachment 3

Baffinland NT-NU Spill Report #2021-280



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 07-03-2021	REPORT TIME 11:30	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 21 - 280
B	OCCURRENCE DATE: MONTH – DAY – YEAR 07-02-2021	OCCURRENCE TIME 11:40			
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 Mine Site, Baffin Island, NU		REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 53 SECONDS 07		LONGITUDE DEGREES 80 MINUTES 54 SECONDS 52		
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 Surface Water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES 6168 L	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 Ore Pad West Ditch	SPILL CAUSE Seepage from ditch	AREA OF CONTAMINATION IN SQUARE METRES N/A		
J	FACTORS AFFECTING SPILL OR RECOVERY Drainage to tundra	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On July 2, 2021, at approximately 11:40, seepage was observed from the Milne Port west ore pad ditch while water was being pumped from Pond 3, which holds Ore Stockpile runoff, to MP-06 during routine water level management activities. Immediately upon discovery of the seepage, the pump transferring water to MP-06 was stopped, preventing further release. A maximum volume of 6168 L of water seeped from the west ore pad ditch to the adjacent tundra. An investigation is in progress to confirm the source of the seepage and remedial actions. Initial field readings of the release were compliant with applicable water license criteria. Water quality monitoring and corrective actions will be presented in the follow-up report. The incident occurred on IOL approximately 200 meters from Milne Inlet. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b), subsection 38(5) of the Fisheries Act, and the Arctic Waters Pollution Prevention Act subsection 5(1).				
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 LOCATION 416-364-8820	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					



Attachment 4

Water Quality Results



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

Date Received: 03-JUL-21
Report Date: 05-JUL-21 09:03 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2609265
Project P.O. #: 4500090295
Job Reference: MP-POND3
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2609265-1 MP-POND3-01_2021-07-02_1205 Sampled By: BR/CL on 02-JUL-21 @ 12:05 Matrix: Water Physical Tests pH Total Suspended Solids Total Dissolved Solids Turbidity	 8.04 5.4 694 2.96	 	 0.10 2.0 10 0.10	 pH units mg/L mg/L NTU	 	 03-JUL-21 03-JUL-21 04-JUL-21 03-JUL-21	 R5509580 R5509816 R5510377 R5509377

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PH-BF	Water	pH	APHA 4500 H-Electrode
Water samples are analyzed directly by a calibrated pH meter.			
SOLIDS-TDS-BF	Water	Total Dissolved Solids	APHA 2540C
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
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.			
TURBIDITY-BF	Water	Turbidity	APHA 2130 B
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
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.



Environmental

Quality Control Report

Workorder: L2609265

Report Date: 05-JUL-21

Page 1 of 2

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	R5509580							
WG3568414-2	DUP	L2609265-1						
pH		8.04	8.06	J	pH units	0.02	0.2	03-JUL-21
WG3568414-1	LCS							
pH			7.01		pH units		6.9-7.1	03-JUL-21
SOLIDS-TDS-BF		Water						
Batch	R5510377							
WG3568368-4	DUP	L2609318-2						
Total Dissolved Solids		2250	2270		mg/L	1.2	20	04-JUL-21
WG3568368-2	LCS							
Total Dissolved Solids			101.6		%		85-115	04-JUL-21
WG3568368-1	MB							
Total Dissolved Solids			<10		mg/L		10	04-JUL-21
SOLIDS-TSS-BF		Water						
Batch	R5509816							
WG3568418-3	DUP	L2609265-1						
Total Suspended Solids		5.4	6.2		mg/L	13	25	03-JUL-21
WG3568418-2	LCS							
Total Suspended Solids			96.6		%		85-115	03-JUL-21
WG3568418-1	MB							
Total Suspended Solids			<2.0		mg/L		2	03-JUL-21
TURBIDITY-BF		Water						
Batch	R5509377							
WG3568477-3	DUP	L2609265-1						
Turbidity		2.96	2.92		NTU	1.4	15	03-JUL-21
WG3568477-2	LCS							
Turbidity			98.2		%		85-115	03-JUL-21
WG3568477-1	MB							
Turbidity			<0.10		NTU		0.1	03-JUL-21

Quality Control Report

Workorder: L2609265

Report Date: 05-JUL-21

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

Page 2 of 2

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
J	Duplicate results and limits are expressed in terms of absolute difference.

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.



COC Number: 20 -

Page 1 of 1

Report To		Contact and company name below will appear on the final report		Reports / Recipients		Turnaround Time (TAT) Requested		AFFIX ALS BARCODE LABEL HERE (ALS use only)	
Company:	Baffinland Iron Mine Corporation	Contact and company address 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 Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		Routine (R) if received by 3pm M-F - no surcharges apply ☒ day (R4) if received by 3pm M-F - 20% rush surcharge minimum ☒ day (R3) if received by 3pm M-F - 25% rush surcharge minimum ☒ day (R2) 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		Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm	
Phone:	647-253-0596								
Street:	2275 Upper Middle Rd E, Suite 300								
City/Province:	Oakville, Ontario	Invoice To Same as Report To ☒ YES ☐ NO Copy of Invoice with Report ☐ YES ☒ NO Company: Baffinland Iron Mine Corporation Contact: Accounts Payable		Invoice Recipients		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		EXENDED STORAGE REQUIRED	
Postal Code:	L6H 0C3								
Company:									
ALS Account # / Quote #:	23642, Q83450	Project Information Job #: MP-POND3 PO / AFE: 450090295 LSD:		Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: ap@baffinland.com Email 2: commercial@baffinland.com		NUMBER OF CONTAINERS		SAMPLES ON HOLD	
ALS Lab Work Order # (lab use only):	L2609265								
ALS Sample # (lab use only)				Oil and Gas Required Fields (client use) AFE/Coast Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:					
ALS Contact:	Rick Hawthorne			Sampler: BR/CL					
Sample Location (SYS_LOC_CODE)	MP-POND3-01	Sampling Date (dd-mm-yy)	Time (hh:mm)	Field Matrix	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)				
1	MP-POND3-01_2021-07-02_1205	2/Jul/21	12:05	WW					
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 ☐ CE PACKS ☐ FROZEN ☐ COOLING INITIATED				
Are samples for human consumption/ use? ☐ YES ☒ NO					Submission Comments Identified on Sample Receipt Notification: Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A				
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			INITIAL COOLER TEMPERATURES °C				
Released by: Bradley Rasmussen		Received by: CV			5C				
Date: 2-Jul-21		Date: July 3			Time: 7am				
Time: 17:35		Date: July 3			Time: 7am				

WHITE - LABORATORY COPY	YELLOW - CLIENT COPY
-------------------------	----------------------

AUG 2020 FRONT



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

Date Received: 03-JUL-21
Report Date: 13-JUL-21 08:03 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2609269
Project P.O. #: 4500090295
Job Reference: MP-POND3
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 05-JUL-21 06:22

Rick Hawthorne
Account Manager

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ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2609269-1	MP-POND3_2021-07-02_1455							
Sampled By: BR/DO on 02-JUL-21 @ 14:55								
Matrix: Water								
Physical Tests								
Hardness (as CaCO3)		299		0.50	mg/L		09-JUL-21	
pH		8.18		0.10	pH units		03-JUL-21	R5509580
Total Suspended Solids		4.5		2.0	mg/L		03-JUL-21	R5509816
Total Dissolved Solids		656		10	mg/L		04-JUL-21	R5510377
Turbidity		2.32		0.10	NTU		03-JUL-21	R5509377
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		97.4		1.0	mg/L		10-JUL-21	R5516888
Ammonia, Total (as N)		0.173		0.0050	mg/L		09-JUL-21	R5516693
Chloride (Cl)		134		2.5	mg/L		09-JUL-21	R5516579
Fluoride (F)		0.49		0.10	mg/L		09-JUL-21	R5516579
Nitrate (as N)		4.79		0.025	mg/L		09-JUL-21	R5516579
Total Kjeldahl Nitrogen		0.906		0.050	mg/L	11-JUL-21	12-JUL-21	R5517767
Phosphorus (P)-Total		0.0036		0.0020	mg/L		09-JUL-21	R5516761
Sulfate (SO4)		194		1.5	mg/L		09-JUL-21	R5516579
Organic / Inorganic Carbon								
Dissolved Organic Carbon		20.3		0.50	mg/L		09-JUL-21	R5516783
Total Organic Carbon		20.7		0.50	mg/L		09-JUL-21	R5516755
Total Metals								
Aluminum (Al)-Total		0.0302		0.0030	mg/L		09-JUL-21	R5516685
Antimony (Sb)-Total		0.00017		0.00010	mg/L		09-JUL-21	R5516685
Arsenic (As)-Total		0.00023		0.00010	mg/L		09-JUL-21	R5516685
Barium (Ba)-Total		0.0191		0.00010	mg/L		09-JUL-21	R5516685
Beryllium (Be)-Total		<0.00010		0.00010	mg/L		09-JUL-21	R5516685
Bismuth (Bi)-Total		<0.000050		0.000050	mg/L		09-JUL-21	R5516685
Boron (B)-Total		0.108		0.010	mg/L		09-JUL-21	R5516685
Cadmium (Cd)-Total		<0.000010	DLM	0.000010	mg/L		09-JUL-21	R5516685
Calcium (Ca)-Total		63.8		0.050	mg/L		09-JUL-21	R5516685
Cesium (Cs)-Total		0.000040		0.000010	mg/L		09-JUL-21	R5516685
Chromium (Cr)-Total		<0.00010		0.00010	mg/L		09-JUL-21	R5516685
Cobalt (Co)-Total		0.00048		0.00010	mg/L		09-JUL-21	R5516685
Copper (Cu)-Total		<0.00050		0.00050	mg/L		09-JUL-21	R5516685
Iron (Fe)-Total		0.040		0.010	mg/L		09-JUL-21	R5516685
Lead (Pb)-Total		0.000061		0.000050	mg/L		09-JUL-21	R5516685
Lithium (Li)-Total		0.0252		0.0010	mg/L		09-JUL-21	R5516685
Magnesium (Mg)-Total		34.9		0.0050	mg/L		09-JUL-21	R5516685
Manganese (Mn)-Total		0.0858		0.00010	mg/L		09-JUL-21	R5516685
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		09-JUL-21	R5516265
Molybdenum (Mo)-Total		0.00862		0.000050	mg/L		09-JUL-21	R5516685
Nickel (Ni)-Total		<0.00050		0.00050	mg/L		09-JUL-21	R5516685
Phosphorus (P)-Total		<0.050		0.050	mg/L		09-JUL-21	R5516685
Potassium (K)-Total		11.6		0.050	mg/L		09-JUL-21	R5516685
Rubidium (Rb)-Total		0.00806		0.00020	mg/L		09-JUL-21	R5516685

* 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
L2609269-1	MP-POND3_2021-07-02_1455							
Sampled By:	BR/DO on 02-JUL-21 @ 14:55							
Matrix:	Water							
Total Metals								
Selenium (Se)-Total		0.000532		0.000050	mg/L		09-JUL-21	R5516685
Silicon (Si)-Total		2.08		0.10	mg/L		09-JUL-21	R5516685
Silver (Ag)-Total		<0.000010		0.000010	mg/L		09-JUL-21	R5516685
Sodium (Na)-Total		76.1		0.050	mg/L		09-JUL-21	R5516685
Strontium (Sr)-Total		0.306		0.00020	mg/L		09-JUL-21	R5516685
Sulfur (S)-Total		70.3		0.50	mg/L		09-JUL-21	R5516685
Tellurium (Te)-Total		<0.00020		0.00020	mg/L		09-JUL-21	R5516685
Thallium (Tl)-Total		0.000039		0.000010	mg/L		09-JUL-21	R5516685
Thorium (Th)-Total		<0.00010		0.00010	mg/L		09-JUL-21	R5516685
Tin (Sn)-Total		<0.00010		0.00010	mg/L		09-JUL-21	R5516685
Titanium (Ti)-Total		<0.00060	DLM	0.00060	mg/L		09-JUL-21	R5516685
Tungsten (W)-Total		0.00019		0.00010	mg/L		09-JUL-21	R5516685
Uranium (U)-Total		0.576		0.000010	mg/L		09-JUL-21	R5516685
Vanadium (V)-Total		<0.00050		0.00050	mg/L		09-JUL-21	R5516685
Zinc (Zn)-Total		<0.0030		0.0030	mg/L		09-JUL-21	R5516685
Zirconium (Zr)-Total		<0.00020		0.00020	mg/L		09-JUL-21	R5516685
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					09-JUL-21	R5516209
Dissolved Metals Filtration Location		FIELD					08-JUL-21	R5516166
Aluminum (Al)-Dissolved		0.0070		0.0010	mg/L	08-JUL-21	09-JUL-21	R5516685
Antimony (Sb)-Dissolved		0.00019		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Arsenic (As)-Dissolved		0.00021		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Barium (Ba)-Dissolved		0.0193		0.00020	mg/L	08-JUL-21	09-JUL-21	R5516685
Beryllium (Be)-Dissolved		<0.00010		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Bismuth (Bi)-Dissolved		<0.000050		0.000050	mg/L	08-JUL-21	09-JUL-21	R5516685
Boron (B)-Dissolved		0.104		0.010	mg/L	08-JUL-21	09-JUL-21	R5516685
Cadmium (Cd)-Dissolved		<0.000010	DLM	0.000010	mg/L	08-JUL-21	09-JUL-21	R5516685
Calcium (Ca)-Dissolved		61.8		0.050	mg/L	08-JUL-21	09-JUL-21	R5516685
Cesium (Cs)-Dissolved		0.000041		0.000010	mg/L	08-JUL-21	09-JUL-21	R5516685
Chromium (Cr)-Dissolved		<0.00010		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Cobalt (Co)-Dissolved		0.00037		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Copper (Cu)-Dissolved		0.00032		0.00020	mg/L	08-JUL-21	09-JUL-21	R5516685
Iron (Fe)-Dissolved		<0.010		0.010	mg/L	08-JUL-21	09-JUL-21	R5516685
Lead (Pb)-Dissolved		<0.000050		0.000050	mg/L	08-JUL-21	09-JUL-21	R5516685
Lithium (Li)-Dissolved		0.0252		0.0010	mg/L	08-JUL-21	09-JUL-21	R5516685
Magnesium (Mg)-Dissolved		35.2		0.0050	mg/L	08-JUL-21	09-JUL-21	R5516685
Manganese (Mn)-Dissolved		0.0653		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	09-JUL-21	09-JUL-21	R5516265
Molybdenum (Mo)-Dissolved		0.00856		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Nickel (Ni)-Dissolved		<0.00050		0.00050	mg/L	08-JUL-21	09-JUL-21	R5516685
Phosphorus (P)-Dissolved		<0.050		0.050	mg/L	08-JUL-21	09-JUL-21	R5516685

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2609269-1	MP-POND3_2021-07-02_1455							
Sampled By:	BR/DO on 02-JUL-21 @ 14:55							
Matrix:	Water							
Dissolved Metals								
Potassium (K)-Dissolved		11.7		0.050	mg/L	08-JUL-21	09-JUL-21	R5516685
Rubidium (Rb)-Dissolved		0.00836		0.00040	mg/L	08-JUL-21	09-JUL-21	R5516685
Selenium (Se)-Dissolved		0.000613		0.000050	mg/L	08-JUL-21	09-JUL-21	R5516685
Silicon (Si)-Dissolved		1.93		0.050	mg/L	08-JUL-21	09-JUL-21	R5516685
Silver (Ag)-Dissolved		<0.000010		0.000010	mg/L	08-JUL-21	09-JUL-21	R5516685
Sodium (Na)-Dissolved		77.3		0.050	mg/L	08-JUL-21	09-JUL-21	R5516685
Strontium (Sr)-Dissolved		0.308		0.00020	mg/L	08-JUL-21	09-JUL-21	R5516685
Sulfur (S)-Dissolved		70.6		0.50	mg/L	08-JUL-21	09-JUL-21	R5516685
Tellurium (Te)-Dissolved		<0.00020		0.00020	mg/L	08-JUL-21	09-JUL-21	R5516685
Thallium (Tl)-Dissolved		0.000037		0.000010	mg/L	08-JUL-21	09-JUL-21	R5516685
Thorium (Th)-Dissolved		<0.00010		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Tin (Sn)-Dissolved		<0.00010		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Titanium (Ti)-Dissolved		<0.00030		0.00030	mg/L	08-JUL-21	09-JUL-21	R5516685
Tungsten (W)-Dissolved		0.00017		0.00010	mg/L	08-JUL-21	09-JUL-21	R5516685
Uranium (U)-Dissolved		0.551		0.000010	mg/L	08-JUL-21	09-JUL-21	R5516685
Vanadium (V)-Dissolved		<0.00050		0.00050	mg/L	08-JUL-21	09-JUL-21	R5516685
Zinc (Zn)-Dissolved		<0.0010		0.0010	mg/L	08-JUL-21	09-JUL-21	R5516685
Zirconium (Zr)-Dissolved		<0.00020		0.00020	mg/L	08-JUL-21	09-JUL-21	R5516685

* 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)
Matrix Spike	Dissolved Organic Carbon	MS-B	L2609269-1
Matrix Spike	Boron (B)-Dissolved	MS-B	L2609269-1
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2609269-1
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2609269-1
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2609269-1
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2609269-1
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2609269-1
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2609269-1
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2609269-1
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2609269-1
Matrix Spike	Boron (B)-Total	MS-B	L2609269-1
Matrix Spike	Calcium (Ca)-Total	MS-B	L2609269-1
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2609269-1
Matrix Spike	Manganese (Mn)-Total	MS-B	L2609269-1
Matrix Spike	Potassium (K)-Total	MS-B	L2609269-1
Matrix Spike	Sodium (Na)-Total	MS-B	L2609269-1
Matrix Spike	Strontium (Sr)-Total	MS-B	L2609269-1
Matrix Spike	Sulfur (S)-Total	MS-B	L2609269-1
Matrix Spike	Uranium (U)-Total	MS-B	L2609269-1

Sample Parameter Qualifier key listed:

Qualifier	Description
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.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TITR-VA	Water	Alkalinity Species by Titration	APHA 2320 Alkalinity
This analysis is carried out using procedures adapted from APHA Method 2320 "Alkalinity". Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.			
CARBONS-DOC-VA	Water	Dissolved organic carbon by combustion	APHA 5310B
This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". Dissolved carbon (DOC) fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.			
CARBONS-TOC-VA	Water	Total organic carbon by combustion	APHA 5310B TOTAL ORGANIC CARBON (TOC)
This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)".			
CL-IC-N-VA	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
F-IC-N-VA	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
HARDNESS-CALC-VA	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
HG-D-CVAA-VA	Water	Diss. Mercury in Water by CVAAS or CVAFS	APHA 3030B/EPA 1631E (mod)
Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
HG-T-CVAA-VA	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
MET-D-CCMS-VA	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			

MET-T-CCMS-VA	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.

NH3-F-VA	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. Waston et al.

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

P-T-PRES-COL-VA	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 determined colourimetrically after persulphate digestion of the sample.

Samples with very high dissolved solids (i.e. seawaters, brackish waters) may produce a negative bias by this method. Alternate methods are available for these types of samples.

Arsenic (5+), at elevated levels, is a positive interference on colourimetric phosphate analysis.

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-VA	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-VA	Water	TKN in Water by Fluorescence	APHA 4500-NORG D.
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This analysis is carried out using procedures adapted from APHA Method 4500-Norg D. "Block Digestion and Flow Injection Analysis". Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection.

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
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
BF	ALS ENVIRONMENTAL - BAFFIN ISLAND, NUNAVUT, CANADA

Chain of Custody Numbers:

Reference Information

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 ww - 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.

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 2 of 16

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-VA		Water						
Batch	R5516265							
WG3572342-3 DUP		L2609269-1						
Mercury (Hg)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	09-JUL-21
WG3572342-2 LCS								
Mercury (Hg)-Dissolved			97.1		%		80-120	09-JUL-21
WG3572342-1 MB								
Mercury (Hg)-Dissolved			<0.0000050		mg/L		0.000005	09-JUL-21
WG3572342-4 MS		L2610782-1						
Mercury (Hg)-Dissolved			95.7		%		70-130	09-JUL-21
HG-T-CVAA-VA		Water						
Batch	R5516265							
WG3572449-3 DUP		L2610782-2						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	09-JUL-21
WG3572449-2 LCS								
Mercury (Hg)-Total			98.9		%		80-120	09-JUL-21
WG3572449-1 MB								
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	09-JUL-21
WG3572449-4 MS		L2610782-3						
Mercury (Hg)-Total			96.6		%		70-130	09-JUL-21
MET-D-CCMS-VA		Water						
Batch	R5516685							
WG3572313-3 DUP		L2609269-1						
Aluminum (Al)-Dissolved		0.0070	0.0068		mg/L	1.8	20	09-JUL-21
Antimony (Sb)-Dissolved		0.00019	0.00017		mg/L	7.1	20	09-JUL-21
Arsenic (As)-Dissolved		0.00021	0.00022		mg/L	6.6	20	09-JUL-21
Barium (Ba)-Dissolved		0.0193	0.0192		mg/L	1.5	20	09-JUL-21
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-JUL-21
Boron (B)-Dissolved		0.104	0.104		mg/L	0.2	20	09-JUL-21
Cadmium (Cd)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUL-21
Calcium (Ca)-Dissolved		61.8	60.2		mg/L	2.6	20	09-JUL-21
Cesium (Cs)-Dissolved		0.000041	0.000039		mg/L	5.0	20	09-JUL-21
Chromium (Cr)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Cobalt (Co)-Dissolved		0.00037	0.00039		mg/L	3.3	20	09-JUL-21
Copper (Cu)-Dissolved		0.00032	0.00030		mg/L	8.6	20	09-JUL-21
Iron (Fe)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	09-JUL-21
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 3 of 16

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-VA		Water						
Batch	R5516685							
WG3572313-3	DUP	L2609269-1						
Lithium (Li)-Dissolved		0.0252	0.0246		mg/L	2.3	20	09-JUL-21
Magnesium (Mg)-Dissolved		35.2	35.0		mg/L	0.5	20	09-JUL-21
Manganese (Mn)-Dissolved		0.0653	0.0648		mg/L	0.7	20	09-JUL-21
Molybdenum (Mo)-Dissolved		0.00856	0.00842		mg/L	2.4	20	09-JUL-21
Nickel (Ni)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUL-21
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	09-JUL-21
Potassium (K)-Dissolved		11.7	11.5		mg/L	1.3	20	09-JUL-21
Rubidium (Rb)-Dissolved		0.00836	0.00808		mg/L	0.2	20	09-JUL-21
Selenium (Se)-Dissolved		0.000613	0.000557		mg/L	9.5	20	09-JUL-21
Silicon (Si)-Dissolved		1.93	1.96		mg/L	1.6	20	09-JUL-21
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUL-21
Sodium (Na)-Dissolved		77.3	77.6		mg/L	0.4	20	09-JUL-21
Strontium (Sr)-Dissolved		0.308	0.305		mg/L	1.0	20	09-JUL-21
Sulfur (S)-Dissolved		70.6	69.9		mg/L	1.0	20	09-JUL-21
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUL-21
Thallium (Tl)-Dissolved		0.000037	0.000038		mg/L	4.5	20	09-JUL-21
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	09-JUL-21
Tungsten (W)-Dissolved		0.00017	0.00018		mg/L	5.6	20	09-JUL-21
Uranium (U)-Dissolved		0.551	0.552		mg/L	0.2	20	09-JUL-21
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUL-21
Zinc (Zn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-JUL-21
Zirconium (Zr)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUL-21
WG3572313-2	LCS							
Aluminum (Al)-Dissolved			98.3		%		80-120	09-JUL-21
Antimony (Sb)-Dissolved			104.6		%		80-120	09-JUL-21
Arsenic (As)-Dissolved			99.4		%		80-120	09-JUL-21
Barium (Ba)-Dissolved			101.3		%		80-120	09-JUL-21
Beryllium (Be)-Dissolved			101.5		%		80-120	09-JUL-21
Bismuth (Bi)-Dissolved			106.0		%		80-120	09-JUL-21
Boron (B)-Dissolved			92.9		%		80-120	09-JUL-21
Cadmium (Cd)-Dissolved			100.1		%		80-120	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 4 of 16

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-VA		Water						
Batch	R5516685							
WG3572313-2		LCS						
Calcium (Ca)-Dissolved			98.3		%		80-120	09-JUL-21
Cesium (Cs)-Dissolved			101.1		%		80-120	09-JUL-21
Chromium (Cr)-Dissolved			103.4		%		80-120	09-JUL-21
Cobalt (Co)-Dissolved			102.4		%		80-120	09-JUL-21
Copper (Cu)-Dissolved			99.9		%		80-120	09-JUL-21
Iron (Fe)-Dissolved			107.1		%		80-120	09-JUL-21
Lead (Pb)-Dissolved			103.6		%		80-120	09-JUL-21
Lithium (Li)-Dissolved			100.4		%		80-120	09-JUL-21
Magnesium (Mg)-Dissolved			101.3		%		80-120	09-JUL-21
Manganese (Mn)-Dissolved			101.6		%		80-120	09-JUL-21
Molybdenum (Mo)-Dissolved			103.6		%		80-120	09-JUL-21
Nickel (Ni)-Dissolved			99.0		%		80-120	09-JUL-21
Phosphorus (P)-Dissolved			113.0		%		70-130	09-JUL-21
Potassium (K)-Dissolved			105.4		%		80-120	09-JUL-21
Rubidium (Rb)-Dissolved			102.7		%		80-120	09-JUL-21
Selenium (Se)-Dissolved			101.2		%		80-120	09-JUL-21
Silicon (Si)-Dissolved			99.6		%		60-140	09-JUL-21
Silver (Ag)-Dissolved			101.5		%		80-120	09-JUL-21
Sodium (Na)-Dissolved			104.5		%		80-120	09-JUL-21
Strontium (Sr)-Dissolved			103.3		%		80-120	09-JUL-21
Sulfur (S)-Dissolved			98.9		%		80-120	09-JUL-21
Tellurium (Te)-Dissolved			104.5		%		80-120	09-JUL-21
Thallium (Tl)-Dissolved			103.8		%		80-120	09-JUL-21
Thorium (Th)-Dissolved			97.4		%		80-120	09-JUL-21
Tin (Sn)-Dissolved			101.0		%		80-120	09-JUL-21
Titanium (Ti)-Dissolved			98.1		%		80-120	09-JUL-21
Tungsten (W)-Dissolved			106.3		%		80-120	09-JUL-21
Uranium (U)-Dissolved			113.3		%		80-120	09-JUL-21
Vanadium (V)-Dissolved			102.1		%		80-120	09-JUL-21
Zinc (Zn)-Dissolved			102.2		%		80-120	09-JUL-21
Zirconium (Zr)-Dissolved			98.0		%		80-120	09-JUL-21
WG3572313-1		MB						
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	09-JUL-21
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 5 of 16

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-VA		Water						
Batch	R5516685							
WG3572313-1	MB							
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	09-JUL-21
Boron (B)-Dissolved			<0.010		mg/L		0.01	09-JUL-21
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	09-JUL-21
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	09-JUL-21
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	09-JUL-21
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	09-JUL-21
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	09-JUL-21
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	09-JUL-21
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	09-JUL-21
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	09-JUL-21
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	09-JUL-21
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	09-JUL-21
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	09-JUL-21
Potassium (K)-Dissolved			<0.050		mg/L		0.05	09-JUL-21
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	09-JUL-21
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	09-JUL-21
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	09-JUL-21
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	09-JUL-21
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	09-JUL-21
Strontium (Sr)-Dissolved			<0.00020		mg/L		0.0002	09-JUL-21
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	09-JUL-21
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	09-JUL-21
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	09-JUL-21
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	09-JUL-21
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 6 of 16

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-VA		Water						
Batch	R5516685							
WG3572313-1 MB								
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	09-JUL-21
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	09-JUL-21
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	09-JUL-21
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	09-JUL-21
WG3572313-4 MS		L2609269-1						
Aluminum (Al)-Dissolved			93.4		%		70-130	09-JUL-21
Antimony (Sb)-Dissolved			100.5		%		70-130	09-JUL-21
Arsenic (As)-Dissolved			95.5		%		70-130	09-JUL-21
Beryllium (Be)-Dissolved			97.1		%		70-130	09-JUL-21
Bismuth (Bi)-Dissolved			97.9		%		70-130	09-JUL-21
Boron (B)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Cadmium (Cd)-Dissolved			98.1		%		70-130	09-JUL-21
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Cesium (Cs)-Dissolved			100.2		%		70-130	09-JUL-21
Chromium (Cr)-Dissolved			99.7		%		70-130	09-JUL-21
Cobalt (Co)-Dissolved			96.6		%		70-130	09-JUL-21
Copper (Cu)-Dissolved			95.1		%		70-130	09-JUL-21
Iron (Fe)-Dissolved			97.8		%		70-130	09-JUL-21
Lead (Pb)-Dissolved			100.1		%		70-130	09-JUL-21
Lithium (Li)-Dissolved			72.6		%		70-130	09-JUL-21
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Nickel (Ni)-Dissolved			95.5		%		70-130	09-JUL-21
Phosphorus (P)-Dissolved			98.7		%		70-130	09-JUL-21
Potassium (K)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Selenium (Se)-Dissolved			98.2		%		70-130	09-JUL-21
Silicon (Si)-Dissolved			71.7		%		70-130	09-JUL-21
Silver (Ag)-Dissolved			100.3		%		70-130	09-JUL-21
Sodium (Na)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Sulfur (S)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Tellurium (Te)-Dissolved			100.1		%		70-130	09-JUL-21
Thallium (Tl)-Dissolved			96.9		%		70-130	09-JUL-21
Thorium (Th)-Dissolved			95.7		%		70-130	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 7 of 16

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-VA		Water						
Batch	R5516685							
WG3572313-4 MS		L2609269-1						
Tin (Sn)-Dissolved			95.9		%		70-130	09-JUL-21
Titanium (Ti)-Dissolved			94.0		%		70-130	09-JUL-21
Tungsten (W)-Dissolved			98.0		%		70-130	09-JUL-21
Uranium (U)-Dissolved			N/A	MS-B	%		-	09-JUL-21
Vanadium (V)-Dissolved			97.6		%		70-130	09-JUL-21
Zinc (Zn)-Dissolved			101.0		%		70-130	09-JUL-21
Zirconium (Zr)-Dissolved			100.0		%		70-130	09-JUL-21
MET-T-CCMS-VA		Water						
Batch	R5516685							
WG3572206-3 DUP		L2609269-1						
Aluminum (Al)-Total		0.0302	0.0284		mg/L	6.0	20	09-JUL-21
Antimony (Sb)-Total		0.00017	0.00019		mg/L	7.6	20	09-JUL-21
Arsenic (As)-Total		0.00023	0.00022		mg/L	3.3	20	09-JUL-21
Barium (Ba)-Total		0.0191	0.0195		mg/L	2.5	20	09-JUL-21
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	09-JUL-21
Boron (B)-Total		0.108	0.107		mg/L	0.3	20	09-JUL-21
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUL-21
Calcium (Ca)-Total		63.8	62.5		mg/L	2.1	20	09-JUL-21
Cesium (Cs)-Total		0.000040	0.000038		mg/L	5.6	20	09-JUL-21
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Cobalt (Co)-Total		0.00048	0.00047		mg/L	3.4	20	09-JUL-21
Copper (Cu)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUL-21
Iron (Fe)-Total		0.040	0.037		mg/L	8.8	20	09-JUL-21
Lead (Pb)-Total		0.000061	0.000064		mg/L	4.2	20	09-JUL-21
Lithium (Li)-Total		0.0252	0.0249		mg/L	0.9	20	09-JUL-21
Magnesium (Mg)-Total		34.9	34.3		mg/L	1.8	20	09-JUL-21
Manganese (Mn)-Total		0.0858	0.0856		mg/L	0.3	20	09-JUL-21
Molybdenum (Mo)-Total		0.00862	0.00874		mg/L	1.4	20	09-JUL-21
Nickel (Ni)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUL-21
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	09-JUL-21
Potassium (K)-Total		11.6	11.7		mg/L	0.6	20	09-JUL-21
Rubidium (Rb)-Total		0.00806	0.00805		mg/L	0.2	20	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 8 of 16

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-VA		Water						
Batch	R5516685							
WG3572206-3	DUP	L2609269-1						
Selenium (Se)-Total		0.000532	0.000587		mg/L	10	20	09-JUL-21
Silicon (Si)-Total		2.08	2.11		mg/L	1.3	20	09-JUL-21
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	09-JUL-21
Sodium (Na)-Total		76.1	75.9		mg/L	0.3	20	09-JUL-21
Strontium (Sr)-Total		0.306	0.310		mg/L	1.3	20	09-JUL-21
Sulfur (S)-Total		70.3	70.2		mg/L	0.2	20	09-JUL-21
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUL-21
Thallium (Tl)-Total		0.000039	0.000035		mg/L	11	20	09-JUL-21
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-JUL-21
Titanium (Ti)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	09-JUL-21
Tungsten (W)-Total		0.00019	0.00018		mg/L	4.8	20	09-JUL-21
Uranium (U)-Total		0.576	0.567		mg/L	1.7	20	09-JUL-21
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-JUL-21
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	09-JUL-21
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	09-JUL-21
WG3572206-2	LCS							
Aluminum (Al)-Total			102.5		%		80-120	09-JUL-21
Antimony (Sb)-Total			106.2		%		80-120	09-JUL-21
Arsenic (As)-Total			103.8		%		80-120	09-JUL-21
Barium (Ba)-Total			101.1		%		80-120	09-JUL-21
Beryllium (Be)-Total			102.0		%		80-120	09-JUL-21
Bismuth (Bi)-Total			105.1		%		80-120	09-JUL-21
Boron (B)-Total			98.6		%		80-120	09-JUL-21
Cadmium (Cd)-Total			103.1		%		80-120	09-JUL-21
Calcium (Ca)-Total			101.1		%		80-120	09-JUL-21
Cesium (Cs)-Total			103.8		%		80-120	09-JUL-21
Chromium (Cr)-Total			104.2		%		80-120	09-JUL-21
Cobalt (Co)-Total			105.5		%		80-120	09-JUL-21
Copper (Cu)-Total			102.1		%		80-120	09-JUL-21
Iron (Fe)-Total			109.3		%		80-120	09-JUL-21
Lead (Pb)-Total			106.5		%		80-120	09-JUL-21
Lithium (Li)-Total			103.0		%		80-120	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 9 of 16

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-VA		Water						
Batch	R5516685							
WG3572206-2	LCS							
Magnesium (Mg)-Total			104.1		%		80-120	09-JUL-21
Manganese (Mn)-Total			103.9		%		80-120	09-JUL-21
Molybdenum (Mo)-Total			104.7		%		80-120	09-JUL-21
Nickel (Ni)-Total			102.2		%		80-120	09-JUL-21
Phosphorus (P)-Total			109.6		%		80-120	09-JUL-21
Potassium (K)-Total			109.7		%		80-120	09-JUL-21
Rubidium (Rb)-Total			109.7		%		80-120	09-JUL-21
Selenium (Se)-Total			104.9		%		80-120	09-JUL-21
Silicon (Si)-Total			104.4		%		80-120	09-JUL-21
Silver (Ag)-Total			103.4		%		80-120	09-JUL-21
Sodium (Na)-Total			109.6		%		80-120	09-JUL-21
Strontium (Sr)-Total			105.8		%		80-120	09-JUL-21
Sulfur (S)-Total			99.1		%		80-120	09-JUL-21
Tellurium (Te)-Total			102.8		%		80-120	09-JUL-21
Thallium (Tl)-Total			106.2		%		80-120	09-JUL-21
Thorium (Th)-Total			100.3		%		80-120	09-JUL-21
Tin (Sn)-Total			104.3		%		80-120	09-JUL-21
Titanium (Ti)-Total			101.3		%		80-120	09-JUL-21
Tungsten (W)-Total			109.0		%		80-120	09-JUL-21
Uranium (U)-Total			105.3		%		80-120	09-JUL-21
Vanadium (V)-Total			103.9		%		80-120	09-JUL-21
Zinc (Zn)-Total			108.1		%		80-120	09-JUL-21
Zirconium (Zr)-Total			100.8		%		80-120	09-JUL-21
WG3572206-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	09-JUL-21
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Arsenic (As)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Barium (Ba)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	09-JUL-21
Boron (B)-Total			<0.010		mg/L		0.01	09-JUL-21
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	09-JUL-21
Calcium (Ca)-Total			<0.050		mg/L		0.05	09-JUL-21
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 10 of 16

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-VA		Water						
Batch	R5516685							
WG3572206-1 MB								
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Copper (Cu)-Total			<0.00050		mg/L		0.0005	09-JUL-21
Iron (Fe)-Total			<0.010		mg/L		0.01	09-JUL-21
Lead (Pb)-Total			<0.000050		mg/L		0.00005	09-JUL-21
Lithium (Li)-Total			<0.0010		mg/L		0.001	09-JUL-21
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	09-JUL-21
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	09-JUL-21
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	09-JUL-21
Phosphorus (P)-Total			<0.050		mg/L		0.05	09-JUL-21
Potassium (K)-Total			<0.050		mg/L		0.05	09-JUL-21
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	09-JUL-21
Selenium (Se)-Total			<0.000050		mg/L		0.00005	09-JUL-21
Silicon (Si)-Total			<0.10		mg/L		0.1	09-JUL-21
Silver (Ag)-Total			<0.000010		mg/L		0.00001	09-JUL-21
Sodium (Na)-Total			<0.050		mg/L		0.05	09-JUL-21
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	09-JUL-21
Sulfur (S)-Total			<0.50		mg/L		0.5	09-JUL-21
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	09-JUL-21
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	09-JUL-21
Thorium (Th)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Tin (Sn)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	09-JUL-21
Tungsten (W)-Total			<0.00010		mg/L		0.0001	09-JUL-21
Uranium (U)-Total			<0.000010		mg/L		0.00001	09-JUL-21
Vanadium (V)-Total			<0.00050		mg/L		0.0005	09-JUL-21
Zinc (Zn)-Total			<0.0030		mg/L		0.003	09-JUL-21
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	09-JUL-21
WG3572206-4 MS		L2609269-1						
Aluminum (Al)-Total			94.0		%		70-130	09-JUL-21
Antimony (Sb)-Total			101.0		%		70-130	09-JUL-21
Arsenic (As)-Total			97.5		%		70-130	09-JUL-21
Barium (Ba)-Total			93.6		%		70-130	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 11 of 16

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-VA		Water						
Batch	R5516685							
WG3572206-4	MS	L2609269-1						
Beryllium (Be)-Total			97.9		%		70-130	09-JUL-21
Bismuth (Bi)-Total			89.5		%		70-130	09-JUL-21
Boron (B)-Total			N/A	MS-B	%		-	09-JUL-21
Cadmium (Cd)-Total			94.1		%		70-130	09-JUL-21
Calcium (Ca)-Total			N/A	MS-B	%		-	09-JUL-21
Cesium (Cs)-Total			99.9		%		70-130	09-JUL-21
Chromium (Cr)-Total			98.1		%		70-130	09-JUL-21
Cobalt (Co)-Total			94.0		%		70-130	09-JUL-21
Copper (Cu)-Total			90.2		%		70-130	09-JUL-21
Iron (Fe)-Total			93.9		%		70-130	09-JUL-21
Lead (Pb)-Total			94.4		%		70-130	09-JUL-21
Lithium (Li)-Total			96.2		%		70-130	09-JUL-21
Magnesium (Mg)-Total			N/A	MS-B	%		-	09-JUL-21
Manganese (Mn)-Total			N/A	MS-B	%		-	09-JUL-21
Molybdenum (Mo)-Total			102.3		%		70-130	09-JUL-21
Nickel (Ni)-Total			91.0		%		70-130	09-JUL-21
Phosphorus (P)-Total			102.7		%		70-130	09-JUL-21
Potassium (K)-Total			N/A	MS-B	%		-	09-JUL-21
Rubidium (Rb)-Total			99.7		%		70-130	09-JUL-21
Selenium (Se)-Total			101.5		%		70-130	09-JUL-21
Silicon (Si)-Total			92.0		%		70-130	09-JUL-21
Silver (Ag)-Total			96.2		%		70-130	09-JUL-21
Sodium (Na)-Total			N/A	MS-B	%		-	09-JUL-21
Strontium (Sr)-Total			N/A	MS-B	%		-	09-JUL-21
Sulfur (S)-Total			N/A	MS-B	%		-	09-JUL-21
Tellurium (Te)-Total			97.0		%		70-130	09-JUL-21
Thallium (Tl)-Total			92.7		%		70-130	09-JUL-21
Thorium (Th)-Total			94.9		%		70-130	09-JUL-21
Tin (Sn)-Total			96.1		%		70-130	09-JUL-21
Titanium (Ti)-Total			96.2		%		70-130	09-JUL-21
Tungsten (W)-Total			100.8		%		70-130	09-JUL-21
Uranium (U)-Total			N/A	MS-B	%		-	09-JUL-21
Vanadium (V)-Total			99.8		%		70-130	09-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 12 of 16

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-VA	Water							
Batch R5516685								
WG3572206-4 MS		L2609269-1						
Zinc (Zn)-Total			94.5		%		70-130	09-JUL-21
Zirconium (Zr)-Total			101.8		%		70-130	09-JUL-21
NH3-F-VA	Water							
Batch R5516693								
WG3572845-3 DUP		L2609269-1						
Ammonia, Total (as N)		0.173	0.171		mg/L	1.4	20	09-JUL-21
WG3572845-2 LCS								
Ammonia, Total (as N)			96.2		%		85-115	09-JUL-21
WG3572845-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	09-JUL-21
NO3-L-IC-N-VA	Water							
Batch R5516579								
WG3572676-3 DUP		L2609269-1						
Nitrate (as N)		4.79	4.78		mg/L	0.1	20	09-JUL-21
WG3572676-2 LCS								
Nitrate (as N)			100.9		%		90-110	09-JUL-21
WG3572676-1 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	09-JUL-21
P-T-PRES-COL-VA	Water							
Batch R5516761								
WG3572847-3 DUP		L2609269-1						
Phosphorus (P)-Total		0.0036	0.0038		mg/L	5.4	20	09-JUL-21
WG3572847-2 LCS								
Phosphorus (P)-Total			89.2		%		80-120	09-JUL-21
WG3572847-1 MB								
Phosphorus (P)-Total			<0.0020		mg/L		0.002	09-JUL-21
WG3572847-4 MS		L2609269-1						
Phosphorus (P)-Total			88.3		%		70-130	09-JUL-21
PH-BF	Water							
Batch R5509580								
WG3568414-2 DUP		L2609265-1						
pH		8.04	8.06	J	pH units	0.02	0.2	03-JUL-21
WG3568414-1 LCS								
pH			7.01		pH units		6.9-7.1	03-JUL-21
SO4-IC-N-VA	Water							



Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

Page 14 of 16

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	R5509377							
WG3568477-1 MB								
Turbidity			<0.10		NTU		0.1	03-JUL-21

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

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

Page 15 of 16

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
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.

Quality Control Report

Workorder: L2609269

Report Date: 13-JUL-21

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

Page 16 of 16

Contact: Connor Devereaux/Kendra Button

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate in Water by IC (Low Level)	1	02-JUL-21 14:55	09-JUL-21 10:51	3	7	days	EHT

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2609269 were received on 03-JUL-21 07:00.

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.

[illegible]

WHITE - LABORATORY COPY	YELLOW - CLIENT COPY
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AUG 2020 FRONT

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

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

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW CCR form**.
2. If you are completing a patient's environmental history, please use this form. **Do not use this form with the patient and informant as respondents on the back page of the intake report copy.**



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

Date Received: 14-JUL-21
Report Date: 27-JUL-21 11:45 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2613426
Project P.O. #: 4500090295
Job Reference: MP-POND3
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2613426-1	MP-POND3_2021-07-13_0645							
Sampled By:	CL/JH on 13-JUL-21 @ 06:45							
Matrix:	Water							
Physical Tests								
Hardness (as CaCO3)		353		1.3	mg/L		19-JUL-21	
pH		7.86		0.10	pH units		15-JUL-21	R5521927
Total Suspended Solids		5.3		2.0	mg/L		15-JUL-21	R5521953
Total Dissolved Solids		746		10	mg/L		16-JUL-21	R5522680
Turbidity		2.39		0.10	NTU		15-JUL-21	R5521921
Anions and Nutrients								
Alkalinity, Total (as CaCO3)		109		1.0	mg/L		16-JUL-21	R5524442
Ammonia, Total (as N)		0.235		0.010	mg/L		23-JUL-21	R5528108
Chloride (Cl)		119	DLDS	2.5	mg/L		16-JUL-21	R5525250
Fluoride (F)		0.47	DLDS	0.10	mg/L		16-JUL-21	R5525250
Nitrate (as N)		5.22	DLDS	0.10	mg/L		16-JUL-21	R5525250
Total Kjeldahl Nitrogen		1.14		0.050	mg/L	22-JUL-21	23-JUL-21	R5528415
Phosphorus, Total		0.0043		0.0030	mg/L	20-JUL-21	21-JUL-21	R5526568
Sulfate (SO4)		256	DLDS	1.5	mg/L		16-JUL-21	R5525250
Organic / Inorganic Carbon								
Dissolved Carbon Filtration Location		FIELD				13-JUL-21	16-JUL-21	R5524232
Dissolved Organic Carbon		18.6		0.50	mg/L	13-JUL-21	20-JUL-21	R5526254
Total Organic Carbon		19.3		0.50	mg/L		22-JUL-21	R5527963
Total Metals								
Aluminum (Al)-Total		<0.050	DLHC	0.050	mg/L	16-JUL-21	16-JUL-21	R5524834
Antimony (Sb)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Arsenic (As)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Barium (Ba)-Total		0.0220	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Beryllium (Be)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Bismuth (Bi)-Total		<0.00050	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524834
Boron (B)-Total		0.13	DLHC	0.10	mg/L	16-JUL-21	16-JUL-21	R5524834
Cadmium (Cd)-Total		<0.000050	DLHC	0.000050	mg/L	16-JUL-21	16-JUL-21	R5524834
Calcium (Ca)-Total		79.8	DLHC	0.50	mg/L	16-JUL-21	16-JUL-21	R5524834
Cesium (Cs)-Total		<0.00010	DLHC	0.00010	mg/L	16-JUL-21	16-JUL-21	R5524834
Chromium (Cr)-Total		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524834
Cobalt (Co)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Copper (Cu)-Total		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524834
Iron (Fe)-Total		<0.10	DLHC	0.10	mg/L	16-JUL-21	16-JUL-21	R5524834
Lead (Pb)-Total		<0.00050	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524834
Lithium (Li)-Total		0.031	DLHC	0.010	mg/L	16-JUL-21	16-JUL-21	R5524834
Magnesium (Mg)-Total		46.7	DLHC	0.050	mg/L	16-JUL-21	16-JUL-21	R5524834
Manganese (Mn)-Total		0.0375	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524834
Mercury (Hg)-Total		<0.0000050		0.0000050	mg/L		20-JUL-21	R5525688
Molybdenum (Mo)-Total		0.00980	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524834
Nickel (Ni)-Total		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524834
Phosphorus (P)-Total		<0.50	DLHC	0.50	mg/L	16-JUL-21	16-JUL-21	R5524834
Potassium (K)-Total		12.6	DLHC	0.50	mg/L	16-JUL-21	16-JUL-21	R5524834

* 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
L2613426-1	MP-POND3_2021-07-13_0645							
Sampled By:	CL/JH on 13-JUL-21 @ 06:45							
Matrix:	Water							
Total Metals								
Rubidium (Rb)-Total		0.0097	DLHC	0.0020	mg/L	16-JUL-21	16-JUL-21	R5524834
Selenium (Se)-Total		0.00062	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524834
Silicon (Si)-Total		2.1	DLHC	1.0	mg/L	16-JUL-21	16-JUL-21	R5524834
Silver (Ag)-Total		<0.00050	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524834
Sodium (Na)-Total		76.4	DLHC	0.50	mg/L	16-JUL-21	16-JUL-21	R5524834
Strontium (Sr)-Total		0.364	DLHC	0.010	mg/L	16-JUL-21	16-JUL-21	R5524834
Sulfur (S)-Total		85.7	DLHC	5.0	mg/L	16-JUL-21	16-JUL-21	R5524834
Tellurium (Te)-Total		<0.0020	DLHC	0.0020	mg/L	16-JUL-21	16-JUL-21	R5524834
Thallium (Tl)-Total		<0.00010	DLHC	0.00010	mg/L	16-JUL-21	16-JUL-21	R5524834
Thorium (Th)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Tin (Sn)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Titanium (Ti)-Total		<0.0030	DLHC	0.0030	mg/L	16-JUL-21	16-JUL-21	R5524834
Tungsten (W)-Total		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524834
Uranium (U)-Total		0.734	DLHC	0.00010	mg/L	16-JUL-21	16-JUL-21	R5524834
Vanadium (V)-Total		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524834
Zinc (Zn)-Total		<0.030	DLHC	0.030	mg/L	16-JUL-21	16-JUL-21	R5524834
Zirconium (Zr)-Total		<0.0020	DLHC	0.0020	mg/L	16-JUL-21	16-JUL-21	R5524834
Dissolved Metals								
Dissolved Mercury Filtration Location		FIELD					19-JUL-21	R5524888
Dissolved Metals Filtration Location		FIELD					16-JUL-21	R5524394
Aluminum (Al)-Dissolved		<0.050	DLHC	0.050	mg/L	16-JUL-21	16-JUL-21	R5524808
Antimony (Sb)-Dissolved		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524808
Arsenic (As)-Dissolved		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524808
Barium (Ba)-Dissolved		0.0192	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524808
Beryllium (Be)-Dissolved		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524808
Bismuth (Bi)-Dissolved		<0.00050	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524808
Boron (B)-Dissolved		0.11	DLHC	0.10	mg/L	16-JUL-21	16-JUL-21	R5524808
Cadmium (Cd)-Dissolved		<0.000050	DLHC	0.000050	mg/L	16-JUL-21	16-JUL-21	R5524808
Calcium (Ca)-Dissolved		71.9	DLHC	0.50	mg/L	16-JUL-21	16-JUL-21	R5524808
Cesium (Cs)-Dissolved		<0.00010	DLHC	0.00010	mg/L	16-JUL-21	16-JUL-21	R5524808
Chromium (Cr)-Dissolved		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524808
Cobalt (Co)-Dissolved		<0.0010	DLHC	0.0010	mg/L	16-JUL-21	16-JUL-21	R5524808
Copper (Cu)-Dissolved		<0.0020	DLHC	0.0020	mg/L	16-JUL-21	16-JUL-21	R5524808
Iron (Fe)-Dissolved		<0.10	DLHC	0.10	mg/L	16-JUL-21	16-JUL-21	R5524808
Lead (Pb)-Dissolved		<0.00050	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524808
Lithium (Li)-Dissolved		0.030	DLHC	0.010	mg/L	16-JUL-21	16-JUL-21	R5524808
Magnesium (Mg)-Dissolved		42.2	DLHC	0.050	mg/L	16-JUL-21	16-JUL-21	R5524808
Manganese (Mn)-Dissolved		0.0310	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524808
Mercury (Hg)-Dissolved		<0.0000050		0.0000050	mg/L	19-JUL-21	19-JUL-21	R5525034
Molybdenum (Mo)-Dissolved		0.00897	DLHC	0.00050	mg/L	16-JUL-21	16-JUL-21	R5524808
Nickel (Ni)-Dissolved		<0.0050	DLHC	0.0050	mg/L	16-JUL-21	16-JUL-21	R5524808

* 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)
Matrix Spike	Dissolved Organic Carbon	MS-B	L2613426-1
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L2613426-1
Matrix Spike	Boron (B)-Dissolved	MS-B	L2613426-1
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L2613426-1
Matrix Spike	Lithium (Li)-Dissolved	MS-B	L2613426-1
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L2613426-1
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L2613426-1
Matrix Spike	Potassium (K)-Dissolved	MS-B	L2613426-1
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L2613426-1
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L2613426-1
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L2613426-1
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L2613426-1
Matrix Spike	Uranium (U)-Dissolved	MS-B	L2613426-1
Matrix Spike	Zinc (Zn)-Dissolved	MS-B	L2613426-1
Matrix Spike	Barium (Ba)-Total	MS-B	L2613426-1
Matrix Spike	Boron (B)-Total	MS-B	L2613426-1
Matrix Spike	Calcium (Ca)-Total	MS-B	L2613426-1
Matrix Spike	Lithium (Li)-Total	MS-B	L2613426-1
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2613426-1
Matrix Spike	Manganese (Mn)-Total	MS-B	L2613426-1
Matrix Spike	Potassium (K)-Total	MS-B	L2613426-1
Matrix Spike	Rubidium (Rb)-Total	MS-B	L2613426-1
Matrix Spike	Silicon (Si)-Total	MS-B	L2613426-1
Matrix Spike	Sodium (Na)-Total	MS-B	L2613426-1
Matrix Spike	Strontium (Sr)-Total	MS-B	L2613426-1
Matrix Spike	Sulfur (S)-Total	MS-B	L2613426-1
Matrix Spike	Uranium (U)-Total	MS-B	L2613426-1
Matrix Spike	Ammonia, Total (as N)	MS-B	L2613426-1
Matrix Spike	Total Kjeldahl Nitrogen	MS-B	L2613426-1

Sample Parameter Qualifier key listed:

Qualifier	Description
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).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

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

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)
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
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

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

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)
--------------	-------	---------------------------------	-----------------

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. Waston 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
Total Kjeldahl Nitrogen is determined using block digestion followed by Flow-injection analysis with fluorescence detection			
TOC-WT	Water	Total Organic Carbon	APHA 5310B
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
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.

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 2 of 15

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	R5525034							
WG3578633-4 DUP		WG3578633-3						
Mercury (Hg)-Dissolved		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	19-JUL-21
WG3578633-2 LCS								
Mercury (Hg)-Dissolved			109.0		%		80-120	19-JUL-21
WG3578633-1 MB								
Mercury (Hg)-Dissolved			<0.0000050		mg/L		0.000005	19-JUL-21
WG3578633-7 MS		WG3578633-5						
Mercury (Hg)-Dissolved			120.1		%		70-130	19-JUL-21
HG-T-CVAA-WT		Water						
Batch	R5525688							
WG3579069-3 DUP		L2613426-1						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	20-JUL-21
WG3579069-2 LCS								
Mercury (Hg)-Total			96.3		%		80-120	20-JUL-21
WG3579069-1 MB								
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	20-JUL-21
WG3579069-4 MS		L2614276-2						
Mercury (Hg)-Total			96.0		%		70-130	20-JUL-21
MET-D-CCMS-WT		Water						
Batch	R5524808							
WG3577968-4 DUP		WG3577968-3						
Aluminum (Al)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	19-JUL-21
Antimony (Sb)-Dissolved		0.00026	0.00027		mg/L	1.7	20	19-JUL-21
Arsenic (As)-Dissolved		0.00041	0.00040		mg/L	0.9	20	19-JUL-21
Barium (Ba)-Dissolved		0.0605	0.0634		mg/L	4.5	20	19-JUL-21
Beryllium (Be)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	19-JUL-21
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	19-JUL-21
Boron (B)-Dissolved		0.134	0.131		mg/L	2.2	20	19-JUL-21
Cadmium (Cd)-Dissolved		0.0000142	0.0000127		mg/L	11	20	19-JUL-21
Calcium (Ca)-Dissolved		109	110		mg/L	0.3	20	19-JUL-21
Cesium (Cs)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	19-JUL-21
Chromium (Cr)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	19-JUL-21
Cobalt (Co)-Dissolved		0.00015	0.00015		mg/L	4.8	20	19-JUL-21
Copper (Cu)-Dissolved		0.0113	0.0119		mg/L	5.3	20	19-JUL-21
Iron (Fe)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	19-JUL-21
Lead (Pb)-Dissolved		0.000476	0.000481		mg/L	0.9	20	19-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 3 of 15

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	R5524808							
WG3577968-4	DUP	WG3577968-3						
Lithium (Li)-Dissolved		0.0731	0.0676		mg/L	7.9	20	19-JUL-21
Magnesium (Mg)-Dissolved		112	120		mg/L	7.1	20	19-JUL-21
Manganese (Mn)-Dissolved		0.0438	0.0465		mg/L	6.1	20	19-JUL-21
Molybdenum (Mo)-Dissolved		0.00316	0.00322		mg/L	2.0	20	19-JUL-21
Nickel (Ni)-Dissolved		0.00213	0.00218		mg/L	2.2	20	19-JUL-21
Phosphorus (P)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-JUL-21
Potassium (K)-Dissolved		11.8	12.4		mg/L	5.0	20	19-JUL-21
Rubidium (Rb)-Dissolved		0.00152	0.00162		mg/L	6.5	20	19-JUL-21
Selenium (Se)-Dissolved		0.000486	0.000420		mg/L	15	20	19-JUL-21
Silicon (Si)-Dissolved		9.34	9.41		mg/L	0.8	20	19-JUL-21
Silver (Ag)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	19-JUL-21
Sodium (Na)-Dissolved		72.5	76.6		mg/L	5.5	20	19-JUL-21
Strontium (Sr)-Dissolved		0.948	0.970		mg/L	2.3	20	19-JUL-21
Sulfur (S)-Dissolved		139	142		mg/L	2.7	20	19-JUL-21
Tellurium (Te)-Dissolved		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	19-JUL-21
Thallium (Tl)-Dissolved		0.000015	0.000014		mg/L	4.1	20	19-JUL-21
Thorium (Th)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	19-JUL-21
Tin (Sn)-Dissolved		0.00107	0.00108		mg/L	1.1	20	19-JUL-21
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	19-JUL-21
Tungsten (W)-Dissolved		0.00062	0.00063		mg/L	1.2	20	19-JUL-21
Uranium (U)-Dissolved		0.0138	0.0137		mg/L	0.4	20	19-JUL-21
Vanadium (V)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	19-JUL-21
Zinc (Zn)-Dissolved		0.0324	0.0343		mg/L	5.6	20	19-JUL-21
Zirconium (Zr)-Dissolved		0.00031	0.00032		mg/L	4.7	20	19-JUL-21
WG3577968-2	LCS							
Aluminum (Al)-Dissolved			102.7		%		80-120	16-JUL-21
Antimony (Sb)-Dissolved			96.7		%		80-120	16-JUL-21
Arsenic (As)-Dissolved			100.2		%		80-120	16-JUL-21
Barium (Ba)-Dissolved			98.7		%		80-120	16-JUL-21
Beryllium (Be)-Dissolved			97.4		%		80-120	16-JUL-21
Bismuth (Bi)-Dissolved			101.9		%		80-120	16-JUL-21
Boron (B)-Dissolved			93.3		%		80-120	16-JUL-21
Cadmium (Cd)-Dissolved			100.5		%		80-120	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 4 of 15

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	R5524808							
WG3577968-2	LCS							
Calcium (Ca)-Dissolved			95.5		%		80-120	16-JUL-21
Cesium (Cs)-Dissolved			98.2		%		80-120	16-JUL-21
Chromium (Cr)-Dissolved			98.6		%		80-120	16-JUL-21
Cobalt (Co)-Dissolved			100.5		%		80-120	16-JUL-21
Copper (Cu)-Dissolved			98.7		%		80-120	16-JUL-21
Iron (Fe)-Dissolved			95.1		%		80-120	16-JUL-21
Lead (Pb)-Dissolved			100.9		%		80-120	16-JUL-21
Lithium (Li)-Dissolved			104.8		%		80-120	16-JUL-21
Magnesium (Mg)-Dissolved			104.4		%		80-120	16-JUL-21
Manganese (Mn)-Dissolved			100.7		%		80-120	16-JUL-21
Molybdenum (Mo)-Dissolved			93.4		%		80-120	16-JUL-21
Nickel (Ni)-Dissolved			97.4		%		80-120	16-JUL-21
Phosphorus (P)-Dissolved			101.9		%		80-120	16-JUL-21
Potassium (K)-Dissolved			94.7		%		80-120	16-JUL-21
Rubidium (Rb)-Dissolved			105.5		%		80-120	16-JUL-21
Selenium (Se)-Dissolved			95.4		%		80-120	16-JUL-21
Silicon (Si)-Dissolved			94.2		%		60-140	16-JUL-21
Silver (Ag)-Dissolved			99.9		%		80-120	16-JUL-21
Sodium (Na)-Dissolved			101.7		%		80-120	16-JUL-21
Strontium (Sr)-Dissolved			101.9		%		80-120	16-JUL-21
Sulfur (S)-Dissolved			91.8		%		80-120	16-JUL-21
Tellurium (Te)-Dissolved			96.9		%		80-120	16-JUL-21
Thallium (Tl)-Dissolved			100.2		%		80-120	16-JUL-21
Thorium (Th)-Dissolved			101.5		%		80-120	16-JUL-21
Tin (Sn)-Dissolved			95.4		%		80-120	16-JUL-21
Titanium (Ti)-Dissolved			93.5		%		80-120	16-JUL-21
Tungsten (W)-Dissolved			103.6		%		80-120	16-JUL-21
Uranium (U)-Dissolved			103.4		%		80-120	16-JUL-21
Vanadium (V)-Dissolved			99.98		%		80-120	16-JUL-21
Zinc (Zn)-Dissolved			99.1		%		80-120	16-JUL-21
Zirconium (Zr)-Dissolved			94.3		%		80-120	16-JUL-21
WG3577968-1	MB							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	16-JUL-21
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 5 of 15

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	R5524808							
WG3577968-1	MB							
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Barium (Ba)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	16-JUL-21
Boron (B)-Dissolved			<0.010		mg/L		0.01	16-JUL-21
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	16-JUL-21
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	16-JUL-21
Cesium (Cs)-Dissolved			<0.000010		mg/L		0.00001	16-JUL-21
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	16-JUL-21
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Copper (Cu)-Dissolved			<0.00020		mg/L		0.0002	16-JUL-21
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	16-JUL-21
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	16-JUL-21
Lithium (Li)-Dissolved			<0.0010		mg/L		0.001	16-JUL-21
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	16-JUL-21
Manganese (Mn)-Dissolved			<0.00050		mg/L		0.0005	16-JUL-21
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	16-JUL-21
Nickel (Ni)-Dissolved			<0.00050		mg/L		0.0005	16-JUL-21
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	16-JUL-21
Potassium (K)-Dissolved			<0.050		mg/L		0.05	16-JUL-21
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0002	16-JUL-21
Selenium (Se)-Dissolved			<0.000050		mg/L		0.00005	16-JUL-21
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	16-JUL-21
Silver (Ag)-Dissolved			<0.000050		mg/L		0.00005	16-JUL-21
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	16-JUL-21
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	16-JUL-21
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	16-JUL-21
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.0002	16-JUL-21
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	16-JUL-21
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	16-JUL-21
Tungsten (W)-Dissolved			<0.00010		mg/L		0.0001	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 6 of 15

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	R5524808							
WG3577968-1 MB								
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	16-JUL-21
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	16-JUL-21
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	16-JUL-21
Zirconium (Zr)-Dissolved			<0.00020		mg/L		0.0002	16-JUL-21
WG3577968-5 MS		WG3577968-3						
Aluminum (Al)-Dissolved			102.5		%		70-130	19-JUL-21
Antimony (Sb)-Dissolved			103.8		%		70-130	19-JUL-21
Arsenic (As)-Dissolved			111.9		%		70-130	19-JUL-21
Barium (Ba)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Beryllium (Be)-Dissolved			99.0		%		70-130	19-JUL-21
Bismuth (Bi)-Dissolved			91.3		%		70-130	19-JUL-21
Boron (B)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Cadmium (Cd)-Dissolved			102.6		%		70-130	19-JUL-21
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Cesium (Cs)-Dissolved			104.5		%		70-130	19-JUL-21
Chromium (Cr)-Dissolved			100.3		%		70-130	19-JUL-21
Cobalt (Co)-Dissolved			98.2		%		70-130	19-JUL-21
Copper (Cu)-Dissolved			93.5		%		70-130	19-JUL-21
Iron (Fe)-Dissolved			97.3		%		70-130	19-JUL-21
Lead (Pb)-Dissolved			98.7		%		70-130	19-JUL-21
Lithium (Li)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Molybdenum (Mo)-Dissolved			103.7		%		70-130	19-JUL-21
Nickel (Ni)-Dissolved			93.7		%		70-130	19-JUL-21
Phosphorus (P)-Dissolved			107.4		%		70-130	19-JUL-21
Potassium (K)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Rubidium (Rb)-Dissolved			99.3		%		70-130	19-JUL-21
Selenium (Se)-Dissolved			122.8		%		70-130	19-JUL-21
Silicon (Si)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Silver (Ag)-Dissolved			98.1		%		70-130	19-JUL-21
Sodium (Na)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Sulfur (S)-Dissolved			N/A	MS-B	%		-	19-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 7 of 15

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	R5524808							
WG3577968-5 MS		WG3577968-3						
Tellurium (Te)-Dissolved			106.4		%		70-130	19-JUL-21
Thallium (Tl)-Dissolved			98.7		%		70-130	19-JUL-21
Thorium (Th)-Dissolved			103.2		%		70-130	19-JUL-21
Tin (Sn)-Dissolved			102.6		%		70-130	19-JUL-21
Titanium (Ti)-Dissolved			103.5		%		70-130	19-JUL-21
Tungsten (W)-Dissolved			104.2		%		70-130	19-JUL-21
Uranium (U)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Vanadium (V)-Dissolved			106.2		%		70-130	19-JUL-21
Zinc (Zn)-Dissolved			N/A	MS-B	%		-	19-JUL-21
Zirconium (Zr)-Dissolved			104.4		%		70-130	19-JUL-21
MET-T-CCMS-WT		Water						
Batch	R5524834							
WG3577849-4 DUP		WG3577849-3						
Aluminum (Al)-Total		0.0915	0.0926		mg/L	1.3	20	16-JUL-21
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-JUL-21
Arsenic (As)-Total		0.00027	0.00027		mg/L	3.0	20	16-JUL-21
Barium (Ba)-Total		0.0499	0.0492		mg/L	1.4	20	16-JUL-21
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-JUL-21
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-JUL-21
Boron (B)-Total		0.196	0.194		mg/L	1.0	20	16-JUL-21
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	16-JUL-21
Calcium (Ca)-Total		233	224		mg/L	3.8	20	16-JUL-21
Chromium (Cr)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	16-JUL-21
Cesium (Cs)-Total		0.000154	0.000149		mg/L	2.9	20	16-JUL-21
Cobalt (Co)-Total		0.00035	0.00034		mg/L	1.7	20	16-JUL-21
Copper (Cu)-Total		0.00075	0.00075		mg/L	0.4	20	16-JUL-21
Iron (Fe)-Total		<0.010	0.010	RPD-NA	mg/L	N/A	20	16-JUL-21
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-JUL-21
Lithium (Li)-Total		0.0147	0.0140		mg/L	4.9	20	16-JUL-21
Magnesium (Mg)-Total		35.1	34.9		mg/L	0.5	20	16-JUL-21
Manganese (Mn)-Total		0.0228	0.0226		mg/L	0.8	20	16-JUL-21
Molybdenum (Mo)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-JUL-21
Nickel (Ni)-Total		0.00056	0.00054		mg/L	2.1	20	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 8 of 15

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	R5524834							
WG3577849-4 DUP		WG3577849-3						
Phosphorus (P)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	16-JUL-21
Potassium (K)-Total		8.46	8.52		mg/L	0.7	20	16-JUL-21
Rubidium (Rb)-Total		0.00893	0.00881		mg/L	1.4	20	16-JUL-21
Selenium (Se)-Total		0.000293	0.000295		mg/L	0.7	20	16-JUL-21
Silicon (Si)-Total		5.38	5.43		mg/L	0.9	20	16-JUL-21
Silver (Ag)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	16-JUL-21
Sodium (Na)-Total		245	261		mg/L	6.3	20	16-JUL-21
Strontium (Sr)-Total		1.19	1.18		mg/L	1.0	20	16-JUL-21
Sulfur (S)-Total		45.6	47.6		mg/L	4.4	20	16-JUL-21
Thallium (Tl)-Total		0.000072	0.000074		mg/L	3.3	20	16-JUL-21
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	16-JUL-21
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-JUL-21
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-JUL-21
Titanium (Ti)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	16-JUL-21
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	16-JUL-21
Uranium (U)-Total		0.000470	0.000469		mg/L	0.3	20	16-JUL-21
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	16-JUL-21
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	16-JUL-21
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	16-JUL-21
WG3577849-2 LCS								
Aluminum (Al)-Total			103.5		%		80-120	16-JUL-21
Antimony (Sb)-Total			106.3		%		80-120	16-JUL-21
Arsenic (As)-Total			106.6		%		80-120	16-JUL-21
Barium (Ba)-Total			106.3		%		80-120	16-JUL-21
Beryllium (Be)-Total			101.9		%		80-120	16-JUL-21
Bismuth (Bi)-Total			106.3		%		80-120	16-JUL-21
Boron (B)-Total			95.0		%		80-120	16-JUL-21
Cadmium (Cd)-Total			104.4		%		80-120	16-JUL-21
Calcium (Ca)-Total			101.2		%		80-120	16-JUL-21
Chromium (Cr)-Total			104.7		%		80-120	16-JUL-21
Cesium (Cs)-Total			104.7		%		80-120	16-JUL-21
Cobalt (Co)-Total			104.3		%		80-120	16-JUL-21
Copper (Cu)-Total			103.9		%		80-120	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 9 of 15

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	R5524834							
WG3577849-2	LCS							
Iron (Fe)-Total			100.8		%		80-120	16-JUL-21
Lead (Pb)-Total			105.3		%		80-120	16-JUL-21
Lithium (Li)-Total			103.7		%		80-120	16-JUL-21
Magnesium (Mg)-Total			104.5		%		80-120	16-JUL-21
Manganese (Mn)-Total			103.5		%		80-120	16-JUL-21
Molybdenum (Mo)-Total			104.7		%		80-120	16-JUL-21
Nickel (Ni)-Total			102.4		%		80-120	16-JUL-21
Phosphorus (P)-Total			107.9		%		70-130	16-JUL-21
Potassium (K)-Total			100.4		%		80-120	16-JUL-21
Rubidium (Rb)-Total			111.0		%		80-120	16-JUL-21
Selenium (Se)-Total			98.9		%		80-120	16-JUL-21
Silicon (Si)-Total			99.1		%		60-140	16-JUL-21
Silver (Ag)-Total			108.7		%		80-120	16-JUL-21
Sodium (Na)-Total			109.3		%		80-120	16-JUL-21
Strontium (Sr)-Total			107.7		%		80-120	16-JUL-21
Sulfur (S)-Total			99.0		%		80-120	16-JUL-21
Thallium (Tl)-Total			103.3		%		80-120	16-JUL-21
Tellurium (Te)-Total			97.4		%		80-120	16-JUL-21
Thorium (Th)-Total			105.2		%		80-120	16-JUL-21
Tin (Sn)-Total			102.4		%		80-120	16-JUL-21
Titanium (Ti)-Total			101.5		%		80-120	16-JUL-21
Tungsten (W)-Total			108.1		%		80-120	16-JUL-21
Uranium (U)-Total			106.6		%		80-120	16-JUL-21
Vanadium (V)-Total			106.0		%		80-120	16-JUL-21
Zinc (Zn)-Total			105.6		%		80-120	16-JUL-21
Zirconium (Zr)-Total			103.0		%		80-120	16-JUL-21
WG3577849-1	MB							
Aluminum (Al)-Total			<0.0050		mg/L		0.005	16-JUL-21
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Arsenic (As)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Barium (Ba)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	16-JUL-21
Boron (B)-Total			<0.010		mg/L		0.01	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 10 of 15

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	R5524834							
WG3577849-1 MB								
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	16-JUL-21
Calcium (Ca)-Total			<0.050		mg/L		0.05	16-JUL-21
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	16-JUL-21
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	16-JUL-21
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Copper (Cu)-Total			<0.00050		mg/L		0.0005	16-JUL-21
Iron (Fe)-Total			<0.010		mg/L		0.01	16-JUL-21
Lead (Pb)-Total			<0.000050		mg/L		0.00005	16-JUL-21
Lithium (Li)-Total			<0.0010		mg/L		0.001	16-JUL-21
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	16-JUL-21
Manganese (Mn)-Total			<0.00050		mg/L		0.0005	16-JUL-21
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	16-JUL-21
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	16-JUL-21
Phosphorus (P)-Total			<0.050		mg/L		0.05	16-JUL-21
Potassium (K)-Total			<0.050		mg/L		0.05	16-JUL-21
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	16-JUL-21
Selenium (Se)-Total			<0.000050		mg/L		0.00005	16-JUL-21
Silicon (Si)-Total			<0.10		mg/L		0.1	16-JUL-21
Silver (Ag)-Total			<0.000050		mg/L		0.00005	16-JUL-21
Sodium (Na)-Total			<0.050		mg/L		0.05	16-JUL-21
Strontium (Sr)-Total			<0.0010		mg/L		0.001	16-JUL-21
Sulfur (S)-Total			<0.50		mg/L		0.5	16-JUL-21
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	16-JUL-21
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	16-JUL-21
Thorium (Th)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Tin (Sn)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	16-JUL-21
Tungsten (W)-Total			<0.00010		mg/L		0.0001	16-JUL-21
Uranium (U)-Total			<0.000010		mg/L		0.00001	16-JUL-21
Vanadium (V)-Total			<0.00050		mg/L		0.0005	16-JUL-21
Zinc (Zn)-Total			<0.0030		mg/L		0.003	16-JUL-21
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	16-JUL-21
WG3577849-5 MS		WG3577849-3						
Aluminum (Al)-Total			99.2		%		70-130	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 11 of 15

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	R5524834							
WG3577849-5	MS	WG3577849-3						
Antimony (Sb)-Total			105.2		%		70-130	16-JUL-21
Arsenic (As)-Total			104.6		%		70-130	16-JUL-21
Barium (Ba)-Total			N/A	MS-B	%		-	16-JUL-21
Beryllium (Be)-Total			94.1		%		70-130	16-JUL-21
Bismuth (Bi)-Total			93.7		%		70-130	16-JUL-21
Boron (B)-Total			N/A	MS-B	%		-	16-JUL-21
Cadmium (Cd)-Total			97.3		%		70-130	16-JUL-21
Calcium (Ca)-Total			N/A	MS-B	%		-	16-JUL-21
Chromium (Cr)-Total			99.7		%		70-130	16-JUL-21
Cesium (Cs)-Total			102.2		%		70-130	16-JUL-21
Cobalt (Co)-Total			96.6		%		70-130	16-JUL-21
Copper (Cu)-Total			94.6		%		70-130	16-JUL-21
Iron (Fe)-Total			100.3		%		70-130	16-JUL-21
Lead (Pb)-Total			93.3		%		70-130	16-JUL-21
Lithium (Li)-Total			N/A	MS-B	%		-	16-JUL-21
Magnesium (Mg)-Total			N/A	MS-B	%		-	16-JUL-21
Manganese (Mn)-Total			N/A	MS-B	%		-	16-JUL-21
Molybdenum (Mo)-Total			104.9		%		70-130	16-JUL-21
Nickel (Ni)-Total			94.1		%		70-130	16-JUL-21
Phosphorus (P)-Total			99.3		%		70-130	16-JUL-21
Potassium (K)-Total			N/A	MS-B	%		-	16-JUL-21
Rubidium (Rb)-Total			N/A	MS-B	%		-	16-JUL-21
Selenium (Se)-Total			101.9		%		70-130	16-JUL-21
Silicon (Si)-Total			N/A	MS-B	%		-	16-JUL-21
Silver (Ag)-Total			99.2		%		70-130	16-JUL-21
Sodium (Na)-Total			N/A	MS-B	%		-	16-JUL-21
Strontium (Sr)-Total			N/A	MS-B	%		-	16-JUL-21
Sulfur (S)-Total			N/A	MS-B	%		-	16-JUL-21
Thallium (Tl)-Total			94.4		%		70-130	16-JUL-21
Tellurium (Te)-Total			96.8		%		70-130	16-JUL-21
Thorium (Th)-Total			100.5		%		70-130	16-JUL-21
Tin (Sn)-Total			99.97		%		70-130	16-JUL-21
Titanium (Ti)-Total			99.5		%		70-130	16-JUL-21

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

Page 14 of 15

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
TKN-F-WT	Water							
Batch R5528415								
WG3578550-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	23-JUL-21
WG3578550-4 MS		L2614785-1	N/A	MS-B	%		-	26-JUL-21
Total Kjeldahl Nitrogen								
TOC-WT	Water							
Batch R5527963								
WG3578648-3 DUP		L2614170-1						
Total Organic Carbon		5.32	5.18		mg/L	2.5	20	22-JUL-21
WG3578648-2 LCS			103.7		%		80-120	22-JUL-21
Total Organic Carbon								
WG3578648-1 MB			<0.50		mg/L		0.5	22-JUL-21
Total Organic Carbon								
WG3578648-4 MS		L2614170-1	100.9		%		70-130	22-JUL-21
Total Organic Carbon								
TURBIDITY-BF	Water							
Batch R5521921								
WG3576462-3 DUP		L2612809-16						
Turbidity		0.33	0.33		NTU	1.8	15	15-JUL-21
WG3576462-2 LCS			104.0		%		85-115	15-JUL-21
Turbidity								
WG3576462-1 MB			<0.10		NTU		0.1	15-JUL-21
Turbidity								

Quality Control Report

Workorder: L2613426

Report Date: 27-JUL-21

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

Page 15 of 15

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
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 : 245886

Sample Number : 68820

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-13
Location :	Waterloo ON	Time Collected :	06:45
Job Number :	L2613426-1	Date Received :	2021-07-16
Substance :	MP-POND3	Time Received :	12:00
Sampling Method :	Grab	Temperature on Receipt :	14 °C
Sampled By :	C. Li/J. Hromyk	Date Tested :	2021-07-16
Sample Description :	Clear, colourless		

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 :	7.5 days
Organism Batch :	Dm21-14	Average Brood Size :	33.9 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 :	2021-07-06	Warning Limits ($\pm$ 2SD) :	5.7 - 6.9 g/L
LC50 :	6.8 g/L	Organism Batch :	Dm21-14
95% Confidence Limits :	6.5 - 7.2 g/L	Analyst(s) :	JD
Statistical Method :	Spearman-Kärber		

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 : 245886

Sample Number : 68820

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*	Hardness (as CaCO ₃) 410 mg/L
Initial Chemistry (100%) :	8.0	10.1	1142	20	115	

0 HOURS

Date & Time 2021-07-16 14:15
Analyst(s) : JD (SV)/SV

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*	Hardness
100	A	0	0	8.0	9.2	1141	20	105	410
100	B	0	0	8.0	9.2	1141	20	105	410
100	C	0	0	8.0	9.2	1141	20	105	410
Control	A	0	0	8.5	8.7	699	20	100	210
Control	B	0	0	8.5	8.7	699	20	100	210
Control	C	0	0	8.5	8.7	699	20	100	210

Notes:

24 HOURS

Date & Time 2021-07-17 14:15
Analyst(s) : JD (SV)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	—	0	—	—	—	21
100	B	—	0	—	—	—	21
100	C	—	0	—	—	—	21
Control	A	—	0	—	—	—	21
Control	B	—	0	—	—	—	21
Control	C	—	0	—	—	—	21

Notes:

48 HOURS

Date & Time 2021-07-18 14:15
Analyst(s) : AGP (JW)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O ₂	Conductivity	Temperature
100	A	0	0	8.2	8.3	1143	20
100	B	0	0	8.3	8.4	1149	20
100	C	0	0	8.3	8.3	1152	20
Control	A	0	0	8.5	8.3	699	20
Control	B	0	0	8.5	8.4	703	20
Control	C	0	0	8.5	8.4	703	20

Notes:

Number immobile does not include number dead.

"—" = not measured/not required

* adjusted for temperature and barometric pressure

Test Data Reviewed By : JL

Date : 2021-07-20



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
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TOXICITY TEST REPORT

Rainbow Trout

EPS 1/RM/13

Page 1 of 2

Work Order : 245886

Sample Number : 68820

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sample Date :	2021-07-13
Location :	Waterloo ON	Time Collected :	06:45
Job Number :	L2613426-1	Date Received :	2021-07-16
Substance :	MP-POND3	Time Received :	12:00
Sampling Method :	Grab	Temperature on Receipt :	14 °C
Sampled By :	C. Li/J. Hromyk	Date Tested :	2021-07-16
Sample Description :	Clear, colourless		

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) :	38.9 mm (± 7.2)
Organism Batch :	T21-17	Range of Fork Lengths :	34 - 44 mm
Control Sample Size :	10	Average Wet Weight (± 2 SD) :	0.59 g (± 0.36)
Cumulative stock tank mortality rate :	0% (previous 7 days)	Range of Wet Weights :	0.37 - 0.89 g
Control organisms showing stress :	0 (at test completion)	Organism Loading Rate :	0.3 g/L

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	20
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 :	2021-07-11
Organism Batch :	T21-17	Analyst(s) :	KP, JCS, LL
LC50 :	3737 mg/L	Historical Mean LC50 :	3723 mg/L
95% Confidence Limits :	3386 - 4053 mg/L	Warning Limits (± 2 SD) :	3172 - 4370 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 : 245886

Sample Number : 68820

TEST DATA

	pH	Dissolved O ₂ (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O ₂ Saturation (%)*
Initial Water Chemistry (100%) :	8.0	10.3	1184	14	106
After 30 min pre-aeration :	8.5	10.1	1182	14	105

0 HOURS

Date & Time	2021-07-16	14:55					
Analyst(s) :	LL (SV)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	O ₂ Saturation*
100%	0	0	8.4	9.3	1180	15	98
Control	0	0	8.4	9.5	756	14	99

Notes:

24 HOURS

Date & Time	2021-07-17	14:55					
Analyst(s) :	LL (SV)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

48 HOURS

Date & Time	2021-07-18	14:55					
Analyst(s) :	KP						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	15	
Control	0	0	—	—	—	15	

Notes:

72 HOURS

Date & Time	2021-07-19	14:55					
Analyst(s) :	JCS (AW)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	—	—	—	14	
Control	0	0	—	—	—	14	

Notes:

96 HOURS

Date & Time	2021-07-20	14:55					
Analyst(s) :	JCS (AW)						
Concentration	Dead	Impaired	pH	Dissolved O ₂	Conductivity	Temperature	
100%	0	0	8.1	9.3	1180	15	
Control	0	0	8.3	9.4	702	15	

Notes:

"—" = not measured/not required

Number impaired does not include number dead.

* adjusted for temperature and barometric pressure

Test Data Reviewed By : EMDate : 2021-07-21

AQUATOX

245886

Date/Time Shipped: 2021-07-13 17:00

Contact: Rick Hawthorne (ALS) / Martina Rendas (Aquatox)

For Lab Use Only	SSW/JD
Received By:	7021-03-16
Date:	12:00
Time:	
Storage Location:	
Storage Temp. (°C)	

Storage Temp. (°C)

rick.hawthorne@alsglobal.com

**L2613426**

WATERLOO

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# L2613426
ALS requires QC data to be provided with your final results.*2 via Carboy**LBH / Naphin*Please see enclosed 2 sample(s) in 2 Container(s)**SAMPLE
NUMBER****ANALYTICAL REQUIRED****DATE SAMPLED****DUE DATE****Priority
Flag****L2613426-1 MP-
POND3_2021-07-13_0645****7/13/2021**

Special Request Aquatox (SPECIAL REQUEST2-AQT 14)

8/3/2021

Special Request Aquatox (SPECIAL REQUEST-AQT 14)

8/3/2021

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: ALSDate Shipped: 16 Jul 21

Received By: _____

Date Received: _____

Verified By: _____

Date Verified: _____

Temperature: _____

Sample Integrity Issues: _____



L2613426-COCF

Custody (COC) / Analytical Request Form

COC Number: 20 -

Canada Toll Free: 1 800 668 9878

Page 1 of 1

www.alsglobal.com



Report To Contact and company name below will appear on the final report		Reports / Recipients Select Report Format: ☒ PDF ☒ EXCEL ☒ EDD (DIGITAL) Merge QC/QCI Reports with COA ☒ YES ☐ NO ☐ FAX ☐ Compare Results to Criteria on Report - provide details below if box checked Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: BIM-ENV-LABRESULTS@baffinland.com Email 2: bim.equissa@baffinland.com Email 3:		Turnaround Time (TAT) Requested ☒ Routine [R] If received by 3pm M-F - no surcharges apply ☐ day [P1] If received by 3pm M-F - 20% rush surcharge minimum ☐ day [P2] If received by 3pm M-F - 25% rush surcharge minimum ☐ day [P3] 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. Date and Time Required for all EAP TATs: 06-07-2021 08:00 am (gmt)		AFFIX ALS BARCODE LABEL HERE (ALS use only)							
Company: Baffinland Iron Mine Corporation Contact: Connor Devereaux / Kendra Button Phone: 647-253-0596 Company address below will appear on the final report Street: 2275 Upper Middle Rd E, Suite 300 City/Province: Oakville, Ontario Postal Code: L6H 0C3 Invoice To: Same as Report To ☒ YES ☐ NO Copy of Invoice with Report: ☐ YES ☒ NO Company: Baffinland Iron Mine Corporation Contact: Accounts Payable Project Information: ALS Account # / Quote #: 23642, Q83450 Job #: MP-POND3 PO / AFE: 460090295 LSD: ALS Lab Work Order # (lab use only): L2613426		Invoice Recipients Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: ap@baffinland.com Email 2: commercial@baffinland.com Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location: ALS Contact: Rick Hawthorne Sampler: CL/JH		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below F/P		NUMBER OF CONTAINERS Group 7: 10 R Group 8: 10 R		SAMPLES ON HOLD		EXTENDED STORAGE REQUIRED		SUSPECTED HAZARD (see notes)	
Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)		Sample Location (SYS_LOC_CODE) MP-POND3		Sampling Date (dd-mm-yy) 13-Jul-21	Time (hh:mm) 6:45	Field Matrix VV							
Drinking Water (DW) Samples¹ (client use)													
Are samples taken from a Regulated DW System? ☐ YES ☐ NO Are samples for human consumption/ use? ☐ YES ☐ NO													
SHIPPING RELEASE (client use) Released by: Justin Dee Date: 13-Jul-21 Time: 17:00		INITIAL SHIPMENT RECEPTION (lab use only) Received by: [Signature] Date: July 14, 2021		FINAL SHIPMENT RECEPTION (lab use only) Received by: [Signature] Date: 16-Jul-21 Time: 11:00									
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION 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:

21-322



August 27, 2021

Resource Management Officer
Crown Indigenous Relations and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0
Jonathan.Mesher@canada.ca

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

Enforcement Officer
Environment and Climate Change Canada
933 Mivvik Street
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #2021-322
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On July 27 2021, at approximately 18:00, seepage was observed from the toe of the Crusher Facility Pond MS-06 at four (4) locations along a 10m stretch. At the time the seepage was observed, Crusher Facility collection ditches were dry. Initial field readings of the release and at the down-gradient tributary were compliant with applicable water license and Metal and Diamond Mining Effluent Regulations (MDMER) criteria. Subsequent water samples collected from the seepage locations to characterize the water quality of the seepage were submitted to an external laboratory for analysis. Table 1 below shows the coordinates of the seepage locations and down-gradient tributary sampling location MS-C-E. The incident occurred on IOL located greater than 1km from Sheardown Lake tributary, the nearest fish bearing waters, and did not migrate from the vicinity of release. Rhodamine dye investigation thus far suggests the seepage is not originating from Crusher Facility Pond MS-06 or from the Crusher Facility; however, further investigation of additional water sources on and around the Crusher Facility is ongoing to determine the root cause of the seepage.

At the time of the seepage event, the contingency plan previously established to manage water at the Crusher Facility until remediation of the compromised ditch system is completed was in place. The contingency plan involves monitoring contact water, capturing contact water runoff with a diversion berm and active pumping of contact water from the pad directly to the MS-06 Pond. An additional collection sump was constructed to capture this newly identified seepage, to ensure it can be pumped into MS-06 Pond.

Table 1: Crusher Facility Seepage and Sample Locations

Sample Location	Description	Coordinates (Lat/Long)
CP-SEEPAGE-05	Location of seepage observed downslope of Crusher Facility Pond MS-06 on July 27, 2021	N71° 18' 38.2" W-79° 16' 45.89"
CP-SEEPAGE-06	Location of seepage observed downslope of Crusher Facility Pond MS-06 on July 27, 2021	N71° 18' 38.2" W-79° 16' 45.99"
CP-SEEPAGE-07	Location of seepage observed downslope of Crusher Facility Pond MS-06 on July 27, 2021	N71° 18' 38.3" W-79° 16' 46.59"
CP-SEEPAGE-08	Location of seepage observed downslope of Crusher Facility Pond MS-06 on July 27, 2021	N71° 18' 38.3" W-79° 16' 46.89"

MS-C-E	Surveillance Network Program (SNP) monitoring station downstream of the Crusher Facility	N71° 18' 53.9" W-79° 17' 39.6"
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Photos of the seepage event and mitigation measures, and a figure showing the seepage locations are provided in Attachment 1 and Attachment 2, respectively. The spill was reported to the NT-NU Spill Reporting Line on July 28, 2021. The NT-NU Spill Report (#2021-322) is included as Attachment 3. The external laboratory water quality results, and laboratory Certificates of Analysis (COAs) are included as Attachment 4 and Attachment 5, respectively.

Immediate and Follow-Up Action:

Upon discovery of the seepage from the toe of Crusher Facility Pond MS-06, water samples were collected on July 27, 2021 and submitted to an external laboratory for analyses. The laboratory water quality results confirmed the seepage was compliant with all applicable water license and MDMER criteria with the exception of Total Suspended Solids (TSS) at sample locations CP-SEEPAGE-05 (65.7 mg/L), CP-SEEPAGE-06 (19.2 mg/L), CP-SEEPAGE-07 (18.1 mg/L), and CP-SEEPAGE-08 (17.5 mg/L). TSS results are not representative of water quality at the seepage locations due to the low flow conditions and substrate of the tundra at the sample locations, which resulted in poor sampling conditions and elevated TSS measurements from disturbance of the substrate during sampling that could not be mitigated by sampling technique. Results of toxicity samples collected at CP-SEEPAGE-05, CP-SEEPAGE-06, CP-SEEPAGE-07, and CP-SEEPAGE-08 on July 27, 2021 showed the seepage water was not acutely toxic. Results of an additional toxicity sample, collected downstream of the Crusher Facility at Surveillance Network Program (SNP) monitoring station MS-C-E on July 27, 2021, were also found to be not acutely toxic.

Rhodamine tracer dye testing of the Crusher Facility Pond MS-06 and subsequently of water present on the Crusher Facility pad was conducted to determine the source of the seepage. Initial findings indicate that the source of the seepage is not from the water in the Crusher Facility Pond MS-06 or from water on the Crusher Facility pad. Further monitoring of seepage locations for evidence of tracer dye is being conducted to verify this conclusion due to the potential for slow movement of the tracer dye through the Crusher Facility pad.

Current Status:

The Rhodamine dye investigation is not indicating that the seepage along the toe of the Crusher Facility Pond MS-06 is originating either from the pond or from the pad. Further investigation is being conducted to determine the root cause and to subsequently determine appropriate corrective actions, if warranted, to effectively resolve the seepage. Water management measures for the Crusher Facility are being addressed as part of the ongoing implementation of Baffinland's Long Term Water Management Plan. Baffinland continues to implement the Ore Crusher pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad.

As per Section 31 of the Metal and Diamond Mining Effluent Regulations (MDMER):

- Seepage from the toe of Crusher Facility Pond MS-06.
- Unknown quantity.
- The release was first observed at approximately 18:00 on July 27, 2021. A summary of the sampling events that occurred upon observation of the uncontrolled release, which includes date, time and respective water quality results is included in Table 2.



- d. The quantity of seepage water released is unknown, therefore; the quantity of deleterious substance cannot be determined. The locations of the release are listed in Table 1 and shown in Figure 1.
- e. Not applicable as the release did not occur through the final discharge point.
- f. The incident occurred on IOL land located >1km from Sheardown Lake tributary, the nearest fish bearing waters and did not migrate from the vicinity of the release.
- g. Toxicity samples collected at CP-SEEPAGE-05, CP-SEEPAGE-06, CP-SEEPAGE-07, and CP-SEEPAGE-08 indicated that the seepage water was not acutely toxic. Results of an additional toxicity sample, collected downstream of the Crusher Facility at Surveillance Network Program (SNP) monitoring station MS-C-E on July 27, 2021, were also found to be not acutely toxic. The external laboratory Certificates of Analysis (COAs) are included as Attachment 5.
- h. See the summary above for the circumstances of the seepage release. As per Baffinland's MDMER Emergency Response Plan, an excavator was dispatched to dig a sump to allow for water to be pumped to the MS-06 Pond.
- i. Ground works were completed to ensure all contact water reports to the MS-06 Pond. Inspections of the Crusher Facility continue on a regular basis and no further releases have been observed.

Should you require further information or clarification on the incident described above, please feel free to contact Connor Devereaux or Kendra Button (647) 253-0596 (ext. 6016).

Prepared by:

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

Kendra Button
Environmental Superintendent

Reviewed by:

Matthew
Mayo

Digitally signed by
Matthew Mayo
Date: 2021.08.27
18:23:16 -04'00'

Matt Mayo
Crusher Superintendent

Cc: Justin Hack (CIRNAC)
Chris Spencer, Hugh Karpik (QIA)
Robert Arsenault, Curtis Didham, Shauna Seeteenak (ECCC)
Sylvain Proulx, Tim Sewell, Shawn Stevens, Megan Lord-Hoyle, Lou Kamermans, Francois Gaudreau,
Martin Beausejour, Christopher Murray, Allison Parker, Connor Devereaux, Lee Miller, Matt Mayo
(Baffinland)

Attachments

- Attachment 1: Photos
- Attachment 2: Spill Location Map
- Attachment 3: Baffinland NT-NU Spill Report #2021-322
- Attachment 4: Summary of Surface Water Quality Results
- Attachment 5: Laboratory Certificates of Analysis (COAs)



Attachment 1

Photos



Photo 1. Seepage from toe of Crusher Facility Pond MS-06 on July 27, 2021



Photo 2. Tundra down gradient of seepage from toe of Crusher Facility Pond MS-06



Photo 3. Crusher Facility Pond MS-06 south ditch showing dry conditions within ditch



Photo 4. New emergency sump constructed down gradient of the seepage locations



Photo 5. New sump pictured beside the existing emergency sump



Attachment 2

Spill Location Map





Attachment 3

Baffinland NT-NU Spill Report #2021-322



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 07-28-2021	REPORT TIME 18:00	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 21 - 322
B	OCCURRENCE DATE: MONTH – DAY – YEAR 07-27-2021	OCCURRENCE TIME 18:00			
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 Mine Site, Baffin Island, NU		REGION ☐ NWT ☒ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 38		LONGITUDE DEGREES 79 MINUTES 16 SECONDS 47		
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 Surface Water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unknown	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 Under investigation	SPILL CAUSE Under investigation	AREA OF CONTAMINATION IN SQUARE METRES N/A		
J	FACTORS AFFECTING SPILL OR RECOVERY Drainage to tundra and access	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On July 27 2021, personnel conducting routine monitoring at the Crusher Facility observed seepage from the toe of the Crusher Pond in four locations along a 10m stretch. Collection ditches were dry at the time. Monitoring was actioned, and initial field readings of the release and the down-gradient tributary were compliant with applicable water license and MDMER criteria. The investigation is ongoing to determine the source, as there is no indication the water is sourced from the surface of the Crusher Facility. Water quality and corrective actions will be presented in the follow-up report, which will include capturing and diverting the seepage back to the pond. This area is addressed in the ongoing implementation of our Long Term Water Management Plan. The incident occurred on IOL located >1km from Sheardown Lake tributary, the nearest fish bearing waters and did not migrate from the vicinity of release. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b) and section 31 of the MDMER under the Fisheries Act.				
L	REPORTED TO SPILL LINE BY Kendra Button	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 416-364-8820	TELEPHONE ext. 6255
M	ANY ALTERNATE CONTACT Shawn Stevens	POSITION Manager of HSEST	EMPLOYER Baffinland	ALTERNATE CONTACT 416-364-8820	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					