APPENDIX E.2

Incinerator Ash Testing Results

Table E.2: Annual Inventory and Status of 2019 Produced Incinerator Ash

Category	Mine Site Bins	Mine Site ~Volume m^3	Mine Site Status	Milne Port Bins	Milne Port ~Volume m^3	Milne Port Status
Landfill	13	43.98	Landfilled	13	41.81	Landfilled
Hazardous	0	N/A	N/A	0	N/A	N/A
Total	13	43.98	N/A	13	41.81	N/A

Table E.2: Annual Exceedances of 2019 Produced Incinerator Ash

Sample ID	Sample Date	Analyte	Minimum Detection Limit	Guideline	Result	Status
N/A		N/A	N/A	N/A	N/A	N/A

Note: TCLP residual analysis tests were performed by ALS Laboratories and compared to Process Residuals Discharge Minimum (GN, 2011) to determine if ash was Landfill compliant.
2019 Incinerator ash volume: bin volumes converted to m^3 and 'Full Bin' = 3.62 m^3 * 0.9.

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

Date Received: 28-JAN-19
Report Date: 29-JAN-19 15:11 (MT)
Version: FINAL REV. 2

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2225505

Project P.O. #: 4500040417
Job Reference: MS-ASH-169
C of C Numbers:
Legal Site Desc:

Comments:
29-JAN-2019 Amendment including Se,Ag,U metals reporting.

Rick Hawthorne
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2225505-1 MS-ASH-169 Sampled By: KB/NC on 22-JAN-19 @ 16:00 Matrix: SOIL							
Sample Preparation							
Initial pH	12.16		0.10	pH units		29-JAN-19	R4473650
Final pH	7.32		0.10	pH units		29-JAN-19	R4473650
Physical Tests							
% Moisture	2.58		0.10	%	28-JAN-19	29-JAN-19	R4473475
TCLP Metals							
Arsenic (As)	0.061		0.050	mg/L		29-JAN-19	R4474510
Barium (Ba)	<0.50		0.50	mg/L		29-JAN-19	R4474510
Cadmium (Cd)	<0.0050		0.0050	mg/L		29-JAN-19	R4474510
Chromium (Cr)	1.62		0.050	mg/L		29-JAN-19	R4474510
Lead (Pb)	<0.050		0.050	mg/L		29-JAN-19	R4474510
Mercury (Hg)	<0.00010		0.00010	mg/L		29-JAN-19	R4474315
Selenium (Se)	<0.025		0.025	mg/L		29-JAN-19	R4474510
Silver (Ag)	<0.0050		0.0050	mg/L		29-JAN-19	R4474510
Uranium (U)	<0.25		0.25	mg/L		29-JAN-19	R4474510
Zinc (Zn)-Total	<1.0		1.0	mg/L		29-JAN-19	R4474510

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chromium (Cr)	MS-B	L2225505-1

Sample Parameter Qualifier key listed:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A
LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).			
MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2225505 Report Date: 29-JAN-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4473475								
WG2978177-3 DUP		**L2225294-18**						
% Moisture		15.3	15.6		%	1.4	20	29-JAN-19
WG2978177-2 LCS								
% Moisture			100.2		%		90-110	29-JAN-19
WG2978177-1 MB								
% Moisture			<0.10		%		0.1	29-JAN-19
HG-TCLP-WT	**Waste**							
Batch R4474315								
WG2978780-3 DUP		**L2225505-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	29-JAN-19
WG2978780-2 LCS								
Mercury (Hg)			101.0		%		70-130	29-JAN-19
WG2978780-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	29-JAN-19
WG2978780-4 MS		**L2225505-1**						
Mercury (Hg)			92.9		%		50-140	29-JAN-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4474510								
WG2978707-4 DUP		**WG2978707-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	29-JAN-19
WG2978707-2 LCS								
Zinc (Zn)-Total			95.4		%		70-130	29-JAN-19
WG2978707-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	29-JAN-19
WG2978707-5 MS		**WG2978707-3**						
Zinc (Zn)-Total			94.0		%		70-130	29-JAN-19
MET-TCLP-WT	**Waste**							
Batch R4474510								
WG2978707-4 DUP		**WG2978707-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-JAN-19
Arsenic (As)		0.061	0.062		mg/L	1.3	50	29-JAN-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	29-JAN-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-JAN-19
Chromium (Cr)		1.62	1.64		mg/L	1.2	50	29-JAN-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-JAN-19
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	29-JAN-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4474510								
WG2978707-4 DUP		**WG2978707-3**						
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	29-JAN-19
WG2978707-2 LCS								
Silver (Ag)			103.0		%		70-130	29-JAN-19
Arsenic (As)			97.9		%		70-130	29-JAN-19
Barium (Ba)			100.0		%		70-130	29-JAN-19
Cadmium (Cd)			98.7		%		70-130	29-JAN-19
Chromium (Cr)			98.1		%		70-130	29-JAN-19
Lead (Pb)			98.1		%		70-130	29-JAN-19
Selenium (Se)			97.4		%		70-130	29-JAN-19
Uranium (U)			102.9		%		70-130	29-JAN-19
WG2978707-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	29-JAN-19
Arsenic (As)			<0.050		mg/L		0.05	29-JAN-19
Barium (Ba)			<0.50		mg/L		0.5	29-JAN-19
Cadmium (Cd)			<0.0050		mg/L		0.005	29-JAN-19
Chromium (Cr)			<0.050		mg/L		0.05	29-JAN-19
Lead (Pb)			<0.050		mg/L		0.05	29-JAN-19
Selenium (Se)			<0.025		mg/L		0.025	29-JAN-19
Uranium (U)			<0.25		mg/L		0.25	29-JAN-19
WG2978707-5 MS		**WG2978707-3**						
Silver (Ag)			116.4		%		50-140	29-JAN-19
Arsenic (As)			101.6		%		50-140	29-JAN-19
Barium (Ba)			95.5		%		50-140	29-JAN-19
Cadmium (Cd)			98.0		%		50-140	29-JAN-19
Chromium (Cr)			N/A	MS-B	%		-	29-JAN-19
Lead (Pb)			95.2		%		50-140	29-JAN-19
Selenium (Se)			99.4		%		50-140	29-JAN-19
Uranium (U)			99.9		%		50-140	29-JAN-19

Quality Control Report

Workorder: L2225505 Report Date: 29-JAN-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L2225505-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	William Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bimcore@alsglobal.com
Email 2	bimww@alsglobal.com
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	ap@baffinland.com
Email 2	commercial@baffinland.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	23642 /Q42455	AFE/Cost Center:	PO#
Job #:	MS-ASH-169	Major/Minor Code:	Routing Code:
PO / AFE:	4500040417	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	L2225505	ALS Contact:	Sampler: KB/NC

Select Service Level Below - Contact your AM to confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) - Moisture	Number of Containers
	MS-ASH-169	22-Jan-19	16:00	Soil	R	2

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human drinking water use? ☐ YES ☑ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☑ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			2.8		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Kendra Button	Date : 22-Jan-19	Time: 17:00	Received by:	Date:	Time:	Received by:	Date: Jan 28/19	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 08-FEB-19
Report Date: 11-FEB-19 12:17 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2230310

Project P.O. #: 4500040417
Job Reference: MP-ASH-218
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2230310-1 MP-ASH-218 Sampled By: DR/MA on 29-JAN-19 @ 17:30 Matrix: WATER							
Sample Preparation							
Initial pH	11.50		0.10	pH units		09-FEB-19	R4498988
Final pH	7.73		0.10	pH units		09-FEB-19	R4498988
Physical Tests							
% Moisture	<0.10		0.10	%	08-FEB-19	09-FEB-19	R4496709
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		11-FEB-19	R4499227
Barium (Ba)	0.66		0.50	mg/L		11-FEB-19	R4499227
Boron (B)	3.7		2.5	mg/L		11-FEB-19	R4499227
Cadmium (Cd)	<0.0050		0.0050	mg/L		11-FEB-19	R4499227
Chromium (Cr)	0.528		0.050	mg/L		11-FEB-19	R4499227
Lead (Pb)	<0.050		0.050	mg/L		11-FEB-19	R4499227
Mercury (Hg)	<0.00010		0.00010	mg/L		11-FEB-19	R4499710
Selenium (Se)	<0.025		0.025	mg/L		11-FEB-19	R4499227
Silver (Ag)	<0.0050		0.0050	mg/L		11-FEB-19	R4499227
Uranium (U)	<0.25		0.25	mg/L		11-FEB-19	R4499227
Zinc (Zn)-Total	<1.0		1.0	mg/L		11-FEB-19	R4499227

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A
LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
		Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).	
MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2230310 Report Date: 11-FEB-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4496709								
WG2985437-3 DUP		**L2230240-5**						
% Moisture		5.94	6.54		%	9.6	20	09-FEB-19
WG2985437-2 LCS								
% Moisture			100.3		%		90-110	09-FEB-19
WG2985437-1 MB								
% Moisture			<0.10		%		0.1	09-FEB-19
HG-TCLP-WT	**Waste**							
Batch R4499710								
WG2986466-3 DUP		**L2230244-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	11-FEB-19
WG2986466-2 LCS								
Mercury (Hg)			98.2		%		70-130	11-FEB-19
WG2986466-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	11-FEB-19
WG2986466-4 MS		**L2230244-1**						
Mercury (Hg)			95.7		%		50-140	11-FEB-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4499227								
WG2986334-4 DUP		**WG2986334-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	11-FEB-19
WG2986334-2 LCS								
Zinc (Zn)-Total			115.6		%		70-130	11-FEB-19
WG2986334-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	11-FEB-19
WG2986334-5 MS		**WG2986334-3**						
Zinc (Zn)-Total			91.7		%		70-130	11-FEB-19
MET-TCLP-WT	**Waste**							
Batch R4499227								
WG2986334-4 DUP		**WG2986334-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	11-FEB-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-FEB-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	11-FEB-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	11-FEB-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	11-FEB-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-FEB-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-FEB-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4499227								
WG2986334-4 DUP		**WG2986334-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	11-FEB-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	11-FEB-19
WG2986334-2 LCS								
Silver (Ag)			102.3		%		70-130	11-FEB-19
Arsenic (As)			102.1		%		70-130	11-FEB-19
Boron (B)			96.1		%		70-130	11-FEB-19
Barium (Ba)			103.9		%		70-130	11-FEB-19
Cadmium (Cd)			98.9		%		70-130	11-FEB-19
Chromium (Cr)			102.8		%		70-130	11-FEB-19
Lead (Pb)			100.3		%		70-130	11-FEB-19
Selenium (Se)			100.6		%		70-130	11-FEB-19
Uranium (U)			99.2		%		70-130	11-FEB-19
WG2986334-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	11-FEB-19
Arsenic (As)			<0.050		mg/L		0.05	11-FEB-19
Boron (B)			<2.5		mg/L		2.5	11-FEB-19
Barium (Ba)			<0.50		mg/L		0.5	11-FEB-19
Cadmium (Cd)			<0.0050		mg/L		0.005	11-FEB-19
Chromium (Cr)			<0.050		mg/L		0.05	11-FEB-19
Lead (Pb)			<0.050		mg/L		0.05	11-FEB-19
Selenium (Se)			<0.025		mg/L		0.025	11-FEB-19
Uranium (U)			<0.25		mg/L		0.25	11-FEB-19
WG2986334-5 MS		**WG2986334-3**						
Silver (Ag)			109.7		%		50-140	11-FEB-19
Arsenic (As)			97.2		%		50-140	11-FEB-19
Boron (B)			87.8		%		50-140	11-FEB-19
Barium (Ba)			98.4		%		50-140	11-FEB-19
Cadmium (Cd)			94.5		%		50-140	11-FEB-19
Chromium (Cr)			95.9		%		50-140	11-FEB-19
Lead (Pb)			92.5		%		50-140	11-FEB-19
Selenium (Se)			96.7		%		50-140	11-FEB-19
Uranium (U)			91.3		%		50-140	11-FEB-19

Quality Control Report

Workorder: L2230310 Report Date: 11-FEB-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2230310-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report	Report Form	Please confirm all E&P TATs with your AM - surcharges will apply
Company:	Baffinland Iron Mines Corp.	Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)	Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:	William Bowden and Connor Devereaux	Quality Control (QC) Report with Report ☑ YES ☐ NO	PRIORITY (Business Days): 4 day [P4] ☐ / 3 day [P3] ☐ / 2 day [P2] ☐ — EMERGENCY: 1 Business day [E1] ☐ / Same Day, Weekend or Statutory holiday [E0] ☐
Phone:	647-253-0596 EXT 6016	☐ Compare Results to Criteria on Report - provide details below if box checked	
	Company address below will appear on the final report	Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	
Street:	2275 Upper Middle Rd. E., Suite #300	Email 1 or Fax: bimcore@alsglobal.com	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:	Oakville, ON	Email 2: bimww@alsglobal.com	For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:	L6H 0C3	Email 3:	
Invoice To	Same as Report To ☑ YES ☐ NO	Invoice Distribution	Analysis Request
	Copy of Invoice with Report ☐ YES ☑ NO	Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
Company:		Email 1 or Fax: ap@baffinland.com	
Contact:		Email 2: commercial@baffinland.com	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	23642 /Q42455	AFE/Cost Center:	PO#:
Job #:	MP-ASH-218	Major/Minor Code:	Routing Code:
PO / AFE:	4500040417	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	L2230310	ALS Contact:	Sampler: DR/MA

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn)	Number of Containers
	MP-ASH-218	29-Jan-19	17:30	Soil	R	2

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human drinking water use? ☐ YES ☑ NO	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			3.8		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Connor Paquette	Date : 19 01 29	Time: 17:45	Received by:	Date:	Time:	Received by: AP	Date: 8-2-19	Time: 9:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION — WHITE - LABORATORY COPY — YELLOW - CLIENT COPY — OCTOBER 2015 FRONT

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**.

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

Date Received: 14-MAR-19
Report Date: 19-MAR-19 16:48 (MT)
Version: FINAL REV. 2

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2244538

Project P.O. #: 4500057496
Job Reference: MS-ASH-170
C of C Numbers:
Legal Site Desc:

Comments:
19-MAR-2019 Revised Job ID as per correspondence.

Rick Hawthorne
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2244538-1 MS-ASH-170 Sampled By: KB/NC on 12-MAR-19 @ 15:49 Matrix: SOIL							
Sample Preparation							
Initial pH	11.98		0.10	pH units		16-MAR-19	R4568131
Final pH	8.50		0.10	pH units		16-MAR-19	R4568131
Physical Tests							
% Moisture	0.47		0.10	%	18-MAR-19	19-MAR-19	R4569908
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		18-MAR-19	R4568535
Barium (Ba)	<0.50		0.50	mg/L		18-MAR-19	R4568535
Boron (B)	3.1		2.5	mg/L		18-MAR-19	R4568535
Cadmium (Cd)	<0.0050		0.0050	mg/L		18-MAR-19	R4568535
Chromium (Cr)	2.06		0.050	mg/L		18-MAR-19	R4568535
Lead (Pb)	<0.050		0.050	mg/L		18-MAR-19	R4568535
Mercury (Hg)	<0.00010		0.00010	mg/L		18-MAR-19	R4568582
Selenium (Se)	<0.025		0.025	mg/L		18-MAR-19	R4568535
Silver (Ag)	<0.0050		0.0050	mg/L		18-MAR-19	R4568535
Uranium (U)	<0.25		0.25	mg/L		18-MAR-19	R4568535
Zinc (Zn)-Total	<1.0		1.0	mg/L		18-MAR-19	R4568535

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A
LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
		Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).	
MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2244538 Report Date: 19-MAR-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4569908								
WG3008217-3 DUP		**L2244705-1**						
% Moisture		7.66	9.10		%	17	20	19-MAR-19
WG3008217-2 LCS								
% Moisture			99.9		%		90-110	19-MAR-19
WG3008217-1 MB								
% Moisture			<0.10		%		0.1	19-MAR-19
HG-TCLP-WT	**Waste**							
Batch R4568582								
WG3008207-3 DUP		**L2244259-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	18-MAR-19
WG3008207-2 LCS								
Mercury (Hg)			97.2		%		70-130	18-MAR-19
WG3008207-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	18-MAR-19
WG3008207-4 MS		**L2244259-1**						
Mercury (Hg)			102.7		%		50-140	18-MAR-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4568535								
WG3008128-4 DUP		**WG3008128-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	18-MAR-19
WG3008128-2 LCS								
Zinc (Zn)-Total			94.5		%		70-130	18-MAR-19
WG3008128-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	18-MAR-19
WG3008128-5 MS		**WG3008128-3**						
Zinc (Zn)-Total			95.0		%		70-130	18-MAR-19
MET-TCLP-WT	**Waste**							
Batch R4568535								
WG3008128-4 DUP		**WG3008128-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-MAR-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-MAR-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	18-MAR-19
Barium (Ba)		0.52	0.51		mg/L	0.6	50	18-MAR-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	18-MAR-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-MAR-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	18-MAR-19

Quality Control Report

Workorder: L2244538 Report Date: 19-MAR-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4568535								
WG3008128-4 DUP		**WG3008128-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	18-MAR-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	18-MAR-19
WG3008128-2 LCS								
Silver (Ag)			105.9		%		70-130	18-MAR-19
Arsenic (As)			99.4		%		70-130	18-MAR-19
Boron (B)			96.7		%		70-130	18-MAR-19
Barium (Ba)			103.4		%		70-130	18-MAR-19
Cadmium (Cd)			102.1		%		70-130	18-MAR-19
Chromium (Cr)			99.5		%		70-130	18-MAR-19
Lead (Pb)			105.8		%		70-130	18-MAR-19
Selenium (Se)			95.6		%		70-130	18-MAR-19
Uranium (U)			106.3		%		70-130	18-MAR-19
WG3008128-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	18-MAR-19
Arsenic (As)			<0.050		mg/L		0.05	18-MAR-19
Boron (B)			<2.5		mg/L		2.5	18-MAR-19
Barium (Ba)			<0.50		mg/L		0.5	18-MAR-19
Cadmium (Cd)			<0.0050		mg/L		0.005	18-MAR-19
Chromium (Cr)			<0.050		mg/L		0.05	18-MAR-19
Lead (Pb)			<0.050		mg/L		0.05	18-MAR-19
Selenium (Se)			<0.025		mg/L		0.025	18-MAR-19
Uranium (U)			<0.25		mg/L		0.25	18-MAR-19
WG3008128-5 MS		**WG3008128-3**						
Silver (Ag)			120.9		%		50-140	18-MAR-19
Arsenic (As)			102.3		%		50-140	18-MAR-19
Boron (B)			90.1		%		50-140	18-MAR-19
Barium (Ba)			103.1		%		50-140	18-MAR-19
Cadmium (Cd)			100.2		%		50-140	18-MAR-19
Chromium (Cr)			100.3		%		50-140	18-MAR-19
Lead (Pb)			100.9		%		50-140	18-MAR-19
Selenium (Se)			98.2		%		50-140	18-MAR-19
Uranium (U)			101.6		%		50-140	18-MAR-19

Quality Control Report

Workorder: L2244538 Report Date: 19-MAR-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2244538-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: bimcore@alsglobal.com

Email 2: bimww@alsglobal.com

Email 3:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: ap@baffinland.com

Email 2: commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-169
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#:
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2244538 14D.

ALS Contact: Sampler: KB/NC

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
1.	MS-ASH-170	12-Mar-19	15:49	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C	
			20.1°C	

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By: Stephanie Sawchuk	Date: 12-Mar-19	Time: 17:00	Received by:	Date:	Time:	Received by:	Date: 14/Mar/2019	Time: 17:00.

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 01-APR-19
Report Date: 04-APR-19 11:35 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2251554

Project P.O. #: 4500057496
Job Reference: MS-ASH-171
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2251554-1 MS-ASH-171 Sampled By: CP on 25-MAR-19 @ 16:00 Matrix: SOIL							
Sample Preparation							
Initial pH	12.26		0.10	pH units		03-APR-19	R4589796
Final pH	5.97		0.10	pH units		03-APR-19	R4589796
Physical Tests							
% Moisture	10.2		0.10	%	02-APR-19	03-APR-19	R4589310
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		03-APR-19	R4590155
Barium (Ba)	<0.50		0.50	mg/L		03-APR-19	R4590155
Boron (B)	3.5		2.5	mg/L		03-APR-19	R4590155
Cadmium (Cd)	<0.0050		0.0050	mg/L		03-APR-19	R4590155
Chromium (Cr)	<0.050		0.050	mg/L		03-APR-19	R4590155
Lead (Pb)	<0.050		0.050	mg/L		03-APR-19	R4590155
Mercury (Hg)	<0.00010		0.00010	mg/L		03-APR-19	R4589616
Selenium (Se)	<0.025		0.025	mg/L		03-APR-19	R4590155
Silver (Ag)	<0.0050		0.0050	mg/L		03-APR-19	R4590155
Uranium (U)	<0.25		0.25	mg/L		03-APR-19	R4590155
Zinc (Zn)-Total	<1.0		1.0	mg/L		03-APR-19	R4590155

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A
LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).			
MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2251554 Report Date: 04-APR-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4589310								
WG3018903-3 DUP		**L2251529-20**						
% Moisture		5.34	5.71		%	6.7	20	03-APR-19
WG3018903-2 LCS								
% Moisture			100.2		%		90-110	03-APR-19
WG3018903-1 MB								
% Moisture			<0.10		%		0.1	03-APR-19
HG-TCLP-WT	**Waste**							
Batch R4589616								
WG3019944-3 DUP		**L2251463-2**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	03-APR-19
WG3019944-2 LCS								
Mercury (Hg)			99.8		%		70-130	03-APR-19
WG3019944-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	03-APR-19
WG3019944-4 MS		**L2251463-2**						
Mercury (Hg)			94.2		%		50-140	03-APR-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4590155								
WG3020223-4 DUP		**WG3020223-3**						
Zinc (Zn)-Total		1.9	1.9		mg/L	2.0	30	03-APR-19
WG3020223-2 LCS								
Zinc (Zn)-Total			97.1		%		70-130	03-APR-19
WG3020223-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	03-APR-19
WG3020223-5 MS		**WG3020223-3**						
Zinc (Zn)-Total			105.8		%		70-130	03-APR-19
MET-TCLP-WT	**Waste**							
Batch R4590155								
WG3020223-4 DUP		**WG3020223-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	03-APR-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	03-APR-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	03-APR-19
Barium (Ba)		0.85	0.85		mg/L	0.2	50	03-APR-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	03-APR-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	03-APR-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	03-APR-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4590155								
WG3020223-4 DUP		**WG3020223-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	03-APR-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	03-APR-19
WG3020223-2 LCS								
Silver (Ag)			93.6		%		70-130	03-APR-19
Arsenic (As)			98.5		%		70-130	03-APR-19
Boron (B)			98.1		%		70-130	03-APR-19
Barium (Ba)			96.0		%		70-130	03-APR-19
Cadmium (Cd)			94.7		%		70-130	03-APR-19
Chromium (Cr)			97.3		%		70-130	03-APR-19
Lead (Pb)			102.6		%		70-130	03-APR-19
Selenium (Se)			101.0		%		70-130	03-APR-19
Uranium (U)			90.5		%		70-130	03-APR-19
WG3020223-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	03-APR-19
Arsenic (As)			<0.050		mg/L		0.05	03-APR-19
Boron (B)			<2.5		mg/L		2.5	03-APR-19
Barium (Ba)			<0.50		mg/L		0.5	03-APR-19
Cadmium (Cd)			<0.0050		mg/L		0.005	03-APR-19
Chromium (Cr)			<0.050		mg/L		0.05	03-APR-19
Lead (Pb)			<0.050		mg/L		0.05	03-APR-19
Selenium (Se)			<0.025		mg/L		0.025	03-APR-19
Uranium (U)			<0.25		mg/L		0.25	03-APR-19
WG3020223-5 MS		**WG3020223-3**						
Silver (Ag)			113.1		%		50-140	03-APR-19
Arsenic (As)			111.9		%		50-140	03-APR-19
Boron (B)			102.6		%		50-140	03-APR-19
Barium (Ba)			100.8		%		50-140	03-APR-19
Cadmium (Cd)			102.4		%		50-140	03-APR-19
Chromium (Cr)			107.1		%		50-140	03-APR-19
Lead (Pb)			105.7		%		50-140	03-APR-19
Selenium (Se)			111.1		%		50-140	03-APR-19
Uranium (U)			107.8		%		50-140	03-APR-19

Quality Control Report

Workorder: L2251554 Report Date: 04-APR-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2251554-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	William Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: bimcore@alsglobal.com

Email 2: bimww@alsglobal.com

Email 3:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: ap@baffinland.com

Email 2: commercial@baffinland.com

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-171
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#:
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2251554

ALS Contact: **Sampler:** CP

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-171	25-Mar-19	16:00	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			7.3		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By: Kendra Button	Date: 26-Mar-19	Time: 17:00	Received by:	Date:	Time:	Received by: AP	Date: 1-4-19	Time: 11:50

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 07-MAY-19
Report Date: 09-MAY-19 13:24 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2268369

Project P.O. #: 4500057496
Job Reference: MP-ASH-219
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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2268369-1 MP-ASH-219 Sampled By: BC/SS on 03-MAY-19 @ 13:15 Matrix: SOIL							
Sample Preparation							
Initial pH	11.62		0.10	pH units		09-MAY-19	R4629280
Final pH	11.31		0.10	pH units		09-MAY-19	R4629280
Physical Tests							
% Moisture	<0.10		0.10	%	08-MAY-19	09-MAY-19	R4628885
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		09-MAY-19	R4629322
Barium (Ba)	<0.50		0.50	mg/L		09-MAY-19	R4629322
Boron (B)	<2.5		2.5	mg/L		09-MAY-19	R4629322
Cadmium (Cd)	<0.0050		0.0050	mg/L		09-MAY-19	R4629322
Chromium (Cr)	5.70		0.050	mg/L		09-MAY-19	R4629322
Lead (Pb)	<0.050		0.050	mg/L		09-MAY-19	R4629322
Mercury (Hg)	<0.00010		0.00010	mg/L		09-MAY-19	R4629112
Selenium (Se)	<0.025		0.025	mg/L		09-MAY-19	R4629322
Silver (Ag)	<0.0050		0.0050	mg/L		09-MAY-19	R4629322
Uranium (U)	<0.25		0.25	mg/L		09-MAY-19	R4629322
Zinc (Zn)-Total	<1.0		1.0	mg/L		09-MAY-19	R4629322

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2268369 Report Date: 09-MAY-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4628885								
WG3044067-3 DUP		**L2268474-1**						
% Moisture		15.8	18.2		%	14	20	09-MAY-19
WG3044067-2 LCS								
% Moisture			99.5		%		90-110	09-MAY-19
WG3044067-1 MB								
% Moisture			<0.10		%		0.1	09-MAY-19
HG-TCLP-WT	**Waste**							
Batch R4629112								
WG3045236-3 DUP		**L2268368-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	09-MAY-19
WG3045236-2 LCS								
Mercury (Hg)			108.0		%		70-130	09-MAY-19
WG3045236-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	09-MAY-19
WG3045236-4 MS		**L2268368-1**						
Mercury (Hg)			112.7		%		50-140	09-MAY-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4629322								
WG3045142-4 DUP		**WG3045142-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	09-MAY-19
WG3045142-2 LCS								
Zinc (Zn)-Total			100.0		%		70-130	09-MAY-19
WG3045142-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	09-MAY-19
WG3045142-5 MS		**WG3045142-3**						
Zinc (Zn)-Total			101.9		%		70-130	09-MAY-19
MET-TCLP-WT	**Waste**							
Batch R4629322								
WG3045142-4 DUP		**WG3045142-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	09-MAY-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	09-MAY-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	09-MAY-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	09-MAY-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	09-MAY-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	09-MAY-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	09-MAY-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4629322								
WG3045142-4 DUP		**WG3045142-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	09-MAY-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	09-MAY-19
WG3045142-2 LCS								
Silver (Ag)			101.8		%		70-130	09-MAY-19
Arsenic (As)			99.9		%		70-130	09-MAY-19
Boron (B)			103.7		%		70-130	09-MAY-19
Barium (Ba)			94.6		%		70-130	09-MAY-19
Cadmium (Cd)			95.1		%		70-130	09-MAY-19
Chromium (Cr)			103.0		%		70-130	09-MAY-19
Lead (Pb)			95.7		%		70-130	09-MAY-19
Selenium (Se)			97.7		%		70-130	09-MAY-19
Uranium (U)			96.2		%		70-130	09-MAY-19
WG3045142-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	09-MAY-19
Arsenic (As)			<0.050		mg/L		0.05	09-MAY-19
Boron (B)			<2.5		mg/L		2.5	09-MAY-19
Barium (Ba)			<0.50		mg/L		0.5	09-MAY-19
Cadmium (Cd)			<0.0050		mg/L		0.005	09-MAY-19
Chromium (Cr)			<0.050		mg/L		0.05	09-MAY-19
Lead (Pb)			<0.050		mg/L		0.05	09-MAY-19
Selenium (Se)			<0.025		mg/L		0.025	09-MAY-19
Uranium (U)			<0.25		mg/L		0.25	09-MAY-19
WG3045142-5 MS		**WG3045142-3**						
Silver (Ag)			129.9		%		50-140	09-MAY-19
Arsenic (As)			109.0		%		50-140	09-MAY-19
Boron (B)			108.7		%		50-140	09-MAY-19
Barium (Ba)			107.3		%		50-140	09-MAY-19
Cadmium (Cd)			105.3		%		50-140	09-MAY-19
Chromium (Cr)			112.1		%		50-140	09-MAY-19
Lead (Pb)			101.1		%		50-140	09-MAY-19
Selenium (Se)			106.6		%		50-140	09-MAY-19
Uranium (U)			105.5		%		50-140	09-MAY-19

Quality Control Report

Workorder: L2268369 Report Date: 09-MAY-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2268369-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bimcore@alsglobal.com
Email 2	bimww@alsglobal.com
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	ap@baffinland.com
Email 2	commercial@baffinland.com

Project Information	
ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-219
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2268369

ALS Contact: Sampler: BC/SS

Confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-219	3-May-19	13:15	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☐ NO

Are samples for human drinking water use?

☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			16.0		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Sten Sundin	Date: 2019 05 03	Time: 14:15	Received by:	Date:	Time:	Received by:	Date: 7-MAY-19	Time: 9:32

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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.**

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

Date Received: 23-MAY-19
Report Date: 27-MAY-19 11:01 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2277728

Project P.O. #: 4500057496
Job Reference: MS-ASH-173
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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2277728-1 MS-ASH-17 Sampled By: KB/NC on 16-MAY-19 @ 13:00 Matrix: SOIL							
Sample Preparation							
Initial pH	11.47		0.10	pH units		24-MAY-19	R4644493
Final pH	5.66		0.10	pH units		24-MAY-19	R4644493
Physical Tests							
% Moisture	<0.10		0.10	%	23-MAY-19	24-MAY-19	R4641761
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		24-MAY-19	R4642756
Barium (Ba)	<0.50		0.50	mg/L		24-MAY-19	R4642756
Boron (B)	<2.5		2.5	mg/L		24-MAY-19	R4642756
Cadmium (Cd)	0.0144		0.0050	mg/L		24-MAY-19	R4642756
Chromium (Cr)	<0.050		0.050	mg/L		24-MAY-19	R4642756
Lead (Pb)	<0.050		0.050	mg/L		24-MAY-19	R4642756
Mercury (Hg)	<0.00010		0.00010	mg/L		24-MAY-19	R4642507
Selenium (Se)	<0.025		0.025	mg/L		24-MAY-19	R4642756
Silver (Ag)	<0.0050		0.0050	mg/L		24-MAY-19	R4642756
Uranium (U)	<0.25		0.25	mg/L		24-MAY-19	R4642756
Zinc (Zn)-Total	27.2		1.0	mg/L		24-MAY-19	R4642756

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2277728 Report Date: 27-MAY-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4641761								
WG3057186-3 DUP		**L2278051-1**						
% Moisture		13.3	13.1		%	1.5	20	24-MAY-19
WG3057186-2 LCS								
% Moisture			99.8		%		90-110	24-MAY-19
WG3057186-1 MB								
% Moisture			<0.10		%		0.1	24-MAY-19
HG-TCLP-WT	**Waste**							
Batch R4642507								
WG3057525-7 DUP		**WG3057525-9**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	24-MAY-19
WG3057525-6 LCS								
Mercury (Hg)			100.0		%		70-130	24-MAY-19
WG3057525-5 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	24-MAY-19
WG3057525-8 MS		**WG3057525-9**						
Mercury (Hg)			96.1		%		50-140	24-MAY-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4642756								
WG3057403-4 DUP		**WG3057403-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	24-MAY-19
WG3057403-2 LCS								
Zinc (Zn)-Total			107.0		%		70-130	24-MAY-19
WG3057403-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	24-MAY-19
WG3057403-5 MS		**WG3057403-3**						
Zinc (Zn)-Total			101.6		%		70-130	24-MAY-19
MET-TCLP-WT	**Waste**							
Batch R4642756								
WG3057403-4 DUP		**WG3057403-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	24-MAY-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	24-MAY-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	24-MAY-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	24-MAY-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	24-MAY-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	24-MAY-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	24-MAY-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4642756								
WG3057403-4 DUP		**WG3057403-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	24-MAY-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	24-MAY-19
WG3057403-2 LCS								
Silver (Ag)			97.8		%		70-130	24-MAY-19
Arsenic (As)			104.0		%		70-130	24-MAY-19
Boron (B)			88.2		%		70-130	24-MAY-19
Barium (Ba)			99.4		%		70-130	24-MAY-19
Cadmium (Cd)			100.9		%		70-130	24-MAY-19
Chromium (Cr)			99.6		%		70-130	24-MAY-19
Lead (Pb)			98.5		%		70-130	24-MAY-19
Selenium (Se)			110.0		%		70-130	24-MAY-19
Uranium (U)			97.7		%		70-130	24-MAY-19
WG3057403-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	24-MAY-19
Arsenic (As)			<0.050		mg/L		0.05	24-MAY-19
Boron (B)			<2.5		mg/L		2.5	24-MAY-19
Barium (Ba)			<0.50		mg/L		0.5	24-MAY-19
Cadmium (Cd)			<0.0050		mg/L		0.005	24-MAY-19
Chromium (Cr)			<0.050		mg/L		0.05	24-MAY-19
Lead (Pb)			<0.050		mg/L		0.05	24-MAY-19
Selenium (Se)			<0.025		mg/L		0.025	24-MAY-19
Uranium (U)			<0.25		mg/L		0.25	24-MAY-19
WG3057403-5 MS		**WG3057403-3**						
Silver (Ag)			114.7		%		50-140	24-MAY-19
Arsenic (As)			104.0		%		50-140	24-MAY-19
Boron (B)			88.4		%		50-140	24-MAY-19
Barium (Ba)			99.1		%		50-140	24-MAY-19
Cadmium (Cd)			98.5		%		50-140	24-MAY-19
Chromium (Cr)			97.9		%		50-140	24-MAY-19
Lead (Pb)			95.9		%		50-140	24-MAY-19
Selenium (Se)			108.1		%		50-140	24-MAY-19
Uranium (U)			94.8		%		50-140	24-MAY-19

Quality Control Report

Workorder: L2277728 Report Date: 27-MAY-19

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

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
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.

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

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 15 -

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax bimcore@alsglobal.com
Email 2 bimww@alsglobal.com
Email 3

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☐ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
	4 day [P4] ☐		1 Business day [E1] ☑
	3 day [P3] ☐		Same Day, Weekend or Statutory holiday [E0] ☐
	2 day [P2] ☐		

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax ap@baffinland.com
Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-173
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only)

ALS Contact: **Sampler:** KB/NC

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-173	16-May-19	13:00	Soil	E1	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☑ NO

Are samples for human drinking water use?
☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES ºC			FINAL COOLER TEMPERATURES ºC		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Connor Paquette	Date : 16-May-19	Time: 15:00	Received by:	Date:	Time:	Received by:	Date:	Time:

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

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2277728-COFC

COC Number: 15 -

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bimcore@alsglobal.com
Email 2	bimww@alsglobal.com
Email 3	
Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	ap@baffinland.com
Email 2	commercial@baffinland.com

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	23642 /Q42455	AFE/Cost Center:	PO#
Job #:	MS-ASH-173	Major/Minor Code:	Routing Code:
PO / AFE:	4500057496	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only)	L2277728	**ALS Contact:**	**Sampler:** KB/NC

Regular [R] - d TAT if received by 3 pm - business days - no surcharges apply

ll E&P TATs with your AM - surcharges will apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-173	16-May-19	13:00	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			20.9		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Connor Paquette	Date : 16-May-19	Time: 15:00	Received by:	Date:	Time:	Received by: AP	Date: 23-5-19	Time: 10:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 24-MAY-19
Report Date: 28-MAY-19 11:48 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2278522

Project P.O. #: 4500057496
Job Reference: MP-ASH-220
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2278522-1 MP-ASH-220 Sampled By: BC/SS on 18-MAY-19 @ 12:25 Matrix: SOIL							
Sample Preparation							
Initial pH	12.30		0.10	pH units		25-MAY-19	R4645509
Final pH	11.12		0.10	pH units		25-MAY-19	R4645509
Physical Tests							
% Moisture	0.17		0.10	%	28-MAY-19	28-MAY-19	R4645521
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		27-MAY-19	R4644747
Barium (Ba)	0.52		0.50	mg/L		27-MAY-19	R4644747
Boron (B)	<2.5		2.5	mg/L		27-MAY-19	R4644747
Cadmium (Cd)	<0.0050		0.0050	mg/L		27-MAY-19	R4644747
Chromium (Cr)	0.817		0.050	mg/L		27-MAY-19	R4644747
Lead (Pb)	<0.050		0.050	mg/L		27-MAY-19	R4644747
Mercury (Hg)	<0.00010		0.00010	mg/L		27-MAY-19	R4644698
Selenium (Se)	<0.025		0.025	mg/L		27-MAY-19	R4644747
Silver (Ag)	<0.0050		0.0050	mg/L		27-MAY-19	R4644747
Uranium (U)	<0.25		0.25	mg/L		27-MAY-19	R4644747
Zinc (Zn)-Total	<1.0		1.0	mg/L		27-MAY-19	R4644747

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2278522 Report Date: 28-MAY-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4645521								
WG3060003-3 DUP		**L2279060-2**						
% Moisture		4.65	4.43		%	4.8	20	28-MAY-19
WG3060003-2 LCS								
% Moisture			99.5		%		90-110	28-MAY-19
WG3060003-1 MB								
% Moisture			<0.10		%		0.1	28-MAY-19
HG-TCLP-WT	**Waste**							
Batch R4644698								
WG3059018-3 DUP		**L2276718-2**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	27-MAY-19
WG3059018-2 LCS								
Mercury (Hg)			102.0		%		70-130	27-MAY-19
WG3059018-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	27-MAY-19
WG3059018-4 MS		**L2276718-2**						
Mercury (Hg)			82.6		%		50-140	27-MAY-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4644747								
WG3058981-4 DUP		**WG3058981-3**						
Zinc (Zn)-Total		2.9	3.0		mg/L	2.8	30	27-MAY-19
WG3058981-2 LCS								
Zinc (Zn)-Total			93.4		%		70-130	27-MAY-19
WG3058981-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	27-MAY-19
WG3058981-5 MS		**WG3058981-3**						
Zinc (Zn)-Total			90.6		%		70-130	27-MAY-19
MET-TCLP-WT	**Waste**							
Batch R4644747								
WG3058981-4 DUP		**WG3058981-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	27-MAY-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	27-MAY-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	27-MAY-19
Barium (Ba)		0.63	0.64		mg/L	1.8	50	27-MAY-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	27-MAY-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	27-MAY-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	27-MAY-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4644747								
WG3058981-4 DUP		**WG3058981-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	27-MAY-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	27-MAY-19
WG3058981-2 LCS								
Silver (Ag)			94.6		%		70-130	27-MAY-19
Arsenic (As)			95.1		%		70-130	27-MAY-19
Boron (B)			95.3		%		70-130	27-MAY-19
Barium (Ba)			91.5		%		70-130	27-MAY-19
Cadmium (Cd)			94.6		%		70-130	27-MAY-19
Chromium (Cr)			94.9		%		70-130	27-MAY-19
Lead (Pb)			97.1		%		70-130	27-MAY-19
Selenium (Se)			91.2		%		70-130	27-MAY-19
Uranium (U)			94.4		%		70-130	27-MAY-19
WG3058981-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	27-MAY-19
Arsenic (As)			<0.050		mg/L		0.05	27-MAY-19
Boron (B)			<2.5		mg/L		2.5	27-MAY-19
Barium (Ba)			<0.50		mg/L		0.5	27-MAY-19
Cadmium (Cd)			<0.0050		mg/L		0.005	27-MAY-19
Chromium (Cr)			<0.050		mg/L		0.05	27-MAY-19
Lead (Pb)			<0.050		mg/L		0.05	27-MAY-19
Selenium (Se)			<0.025		mg/L		0.025	27-MAY-19
Uranium (U)			<0.25		mg/L		0.25	27-MAY-19
WG3058981-5 MS		**WG3058981-3**						
Silver (Ag)			108.3		%		50-140	27-MAY-19
Arsenic (As)			97.4		%		50-140	27-MAY-19
Boron (B)			94.0		%		50-140	27-MAY-19
Barium (Ba)			92.1		%		50-140	27-MAY-19
Cadmium (Cd)			90.4		%		50-140	27-MAY-19
Chromium (Cr)			93.4		%		50-140	27-MAY-19
Lead (Pb)			94.5		%		50-140	27-MAY-19
Selenium (Se)			94.4		%		50-140	27-MAY-19
Uranium (U)			97.9		%		50-140	27-MAY-19

Quality Control Report

Workorder: L2278522 Report Date: 28-MAY-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2278522-COFC

COC Number: 15 -

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bimcore@alsglobal.com
Email 2	bimww@alsglobal.com
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	ap@baffinland.com
Email 2	commercial@baffinland.com

Confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information	
ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-220
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2278522 **ALS Contact:** **Sampler:** BC/SS

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-220	18-May-19	12:25	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human drinking water use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			17.0		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Dominic Ritgen	Date: 2019 05 22	Time: 15:00	Received by:	Date:	Time:	Received by: AP	Date: 24-5-19	Time: 10:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 24-MAY-19
Report Date: 28-MAY-19 13:27 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2278592

Project P.O. #: 4500057496
Job Reference: MS-ASH-174
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2278592-1 MS-ASH-174 Sampled By: BR/BC on 22-MAY-19 @ 12:20 Matrix: SOIL							
Sample Preparation							
Initial pH	12.26		0.10	pH units		28-MAY-19	R4645519
Final pH	11.29		0.10	pH units		28-MAY-19	R4645519
Physical Tests							
% Moisture	2.87		0.10	%	24-MAY-19	24-MAY-19	R4643028
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		28-MAY-19	R4645690
Barium (Ba)	0.90		0.50	mg/L		28-MAY-19	R4645690
Boron (B)	<2.5		2.5	mg/L		28-MAY-19	R4645690
Cadmium (Cd)	<0.0050		0.0050	mg/L		28-MAY-19	R4645690
Chromium (Cr)	2.09		0.050	mg/L		28-MAY-19	R4645690
Lead (Pb)	<0.050		0.050	mg/L		28-MAY-19	R4645690
Mercury (Hg)	<0.00010		0.00010	mg/L		28-MAY-19	R4645686
Selenium (Se)	<0.025		0.025	mg/L		28-MAY-19	R4645690
Silver (Ag)	<0.0050		0.0050	mg/L		28-MAY-19	R4645690
Uranium (U)	<0.25		0.25	mg/L		28-MAY-19	R4645690
Zinc (Zn)-Total	<1.0		1.0	mg/L		28-MAY-19	R4645690

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chromium (Cr)	MS-B	L2278592-1

Sample Parameter Qualifier key listed:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

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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: L2278592 Report Date: 28-MAY-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4643028								
WG3057700-3 DUP		**L2278143-1**						
% Moisture		17.3	18.1		%	4.4	20	24-MAY-19
WG3057700-2 LCS								
% Moisture			100.1		%		90-110	24-MAY-19
WG3057700-1 MB								
% Moisture			<0.10		%		0.1	24-MAY-19
HG-TCLP-WT	**Waste**							
Batch R4645686								
WG3060205-3 DUP		**L2278592-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	28-MAY-19
WG3060205-2 LCS								
Mercury (Hg)			95.1		%		70-130	28-MAY-19
WG3060205-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	28-MAY-19
WG3060205-4 MS		**L2278592-1**						
Mercury (Hg)			89.3		%		50-140	28-MAY-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4645690								
WG3060181-4 DUP		**WG3060181-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	28-MAY-19
WG3060181-2 LCS								
Zinc (Zn)-Total			98.8		%		70-130	28-MAY-19
WG3060181-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	28-MAY-19
WG3060181-5 MS		**WG3060181-3**						
Zinc (Zn)-Total			97.7		%		70-130	28-MAY-19
MET-TCLP-WT	**Waste**							
Batch R4645690								
WG3060181-4 DUP		**WG3060181-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	28-MAY-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	28-MAY-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	28-MAY-19
Barium (Ba)		0.90	0.95		mg/L	5.3	50	28-MAY-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	28-MAY-19
Chromium (Cr)		2.09	2.16		mg/L	3.3	50	28-MAY-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	28-MAY-19

Quality Control Report

Workorder: L2278592 Report Date: 28-MAY-19

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

Contact: William Bowden/Connor Devereaux

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4645690								
WG3060181-4 DUP		**WG3060181-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	28-MAY-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	28-MAY-19
WG3060181-2 LCS								
Silver (Ag)			95.4		%		70-130	28-MAY-19
Arsenic (As)			100.9		%		70-130	28-MAY-19
Boron (B)			90.6		%		70-130	28-MAY-19
Barium (Ba)			102.2		%		70-130	28-MAY-19
Cadmium (Cd)			97.9		%		70-130	28-MAY-19
Chromium (Cr)			99.5		%		70-130	28-MAY-19
Lead (Pb)			100.4		%		70-130	28-MAY-19
Selenium (Se)			97.4		%		70-130	28-MAY-19
Uranium (U)			96.2		%		70-130	28-MAY-19
WG3060181-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	28-MAY-19
Arsenic (As)			<0.050		mg/L		0.05	28-MAY-19
Boron (B)			<2.5		mg/L		2.5	28-MAY-19
Barium (Ba)			<0.50		mg/L		0.5	28-MAY-19
Cadmium (Cd)			<0.0050		mg/L		0.005	28-MAY-19
Chromium (Cr)			<0.050		mg/L		0.05	28-MAY-19
Lead (Pb)			<0.050		mg/L		0.05	28-MAY-19
Selenium (Se)			<0.025		mg/L		0.025	28-MAY-19
Uranium (U)			<0.25		mg/L		0.25	28-MAY-19
WG3060181-5 MS		**WG3060181-3**						
Silver (Ag)			112.6		%		50-140	28-MAY-19
Arsenic (As)			105.7		%		50-140	28-MAY-19
Boron (B)			95.3		%		50-140	28-MAY-19
Barium (Ba)			104.6		%		50-140	28-MAY-19
Cadmium (Cd)			97.5		%		50-140	28-MAY-19
Chromium (Cr)			N/A	MS-B	%		-	28-MAY-19
Lead (Pb)			99.5		%		50-140	28-MAY-19
Selenium (Se)			100.4		%		50-140	28-MAY-19
Uranium (U)			101.5		%		50-140	28-MAY-19

Quality Control Report

Workorder: L2278592 Report Date: 28-MAY-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2278592-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2 bimww@alsglobal.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-174
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#:
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2278592

ALS Contact:

Sampler: BR/BC

m all E&P TATs with your AM - surcharges will apply

Regular [R] - dard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
	4 day [P4] ☐		1 Business day [E1] ☑
	3 day [P3] ☐		Same Day, Weekend or Statutory holiday [E0] ☐
	2 day [P2] ☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-174	22-May-19	12:20	Soil	E1	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			5.7		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By: Connor Paquette	Date: 19 05 22	Time: 15:30	Received by:	Date:	Time:	Received by:	Date: 24-5-19	Time: 11:15

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 04-JUN-19
Report Date: 10-JUN-19 09:29 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2284702

Project P.O. #: 4500057496
Job Reference: MS-ASH-172
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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2284702-1 MS-ASH-172 Sampled By: LC/SJS on 04-MAY-19 @ 09:45 Matrix: SOIL							
Sample Preparation							
Initial pH	12.61		0.10	pH units		06-JUN-19	R4661319
Final pH	9.45		0.10	pH units		06-JUN-19	R4661319
Physical Tests							
% Moisture	<0.10		0.10	%	05-JUN-19	06-JUN-19	R4659710
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		06-JUN-19	R4660237
Barium (Ba)	<0.50		0.50	mg/L		06-JUN-19	R4660237
Boron (B)	3.4		2.5	mg/L		06-JUN-19	R4660237
Cadmium (Cd)	<0.0050		0.0050	mg/L		06-JUN-19	R4660237
Chromium (Cr)	2.50		0.050	mg/L		06-JUN-19	R4660237
Lead (Pb)	<0.050		0.050	mg/L		06-JUN-19	R4660237
Mercury (Hg)	<0.00010	PEHR	0.00010	mg/L		06-JUN-19	R4660199
Selenium (Se)	<0.025		0.025	mg/L		06-JUN-19	R4660237
Silver (Ag)	<0.0050		0.0050	mg/L		06-JUN-19	R4660237
Uranium (U)	<0.25		0.25	mg/L		06-JUN-19	R4660237
Zinc (Zn)-Total	<1.0		1.0	mg/L		06-JUN-19	R4660237

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

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2284702 Report Date: 10-JUN-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4659710								
WG3067846-3 DUP		**L2284971-6**						
% Moisture		14.2	15.1		%	5.8	20	06-JUN-19
WG3067846-2 LCS								
% Moisture			99.9		%		90-110	06-JUN-19
WG3067846-1 MB								
% Moisture			<0.10		%		0.1	06-JUN-19
HG-TCLP-WT	**Waste**							
Batch R4660199								
WG3069263-3 DUP		**L2280119-6**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	06-JUN-19
WG3069263-2 LCS								
Mercury (Hg)			95.6		%		70-130	06-JUN-19
WG3069263-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	06-JUN-19
WG3069263-4 MS		**L2280119-6**						
Mercury (Hg)			87.8		%		50-140	06-JUN-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4660237								
WG3069236-4 DUP		**WG3069236-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	06-JUN-19
WG3069236-2 LCS								
Zinc (Zn)-Total			94.0		%		70-130	06-JUN-19
WG3069236-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	06-JUN-19
WG3069236-5 MS		**WG3069236-3**						
Zinc (Zn)-Total			96.2		%		70-130	06-JUN-19
MET-TCLP-WT	**Waste**							
Batch R4660237								
WG3069236-4 DUP		**WG3069236-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-JUN-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-JUN-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	06-JUN-19
Barium (Ba)		0.62	0.62		mg/L	0.4	50	06-JUN-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	06-JUN-19
Chromium (Cr)		0.477	0.476		mg/L	0.2	50	06-JUN-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	06-JUN-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4660237								
WG3069236-4 DUP		**WG3069236-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	06-JUN-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	06-JUN-19
WG3069236-2 LCS								
Silver (Ag)			95.0		%		70-130	06-JUN-19
Arsenic (As)			97.1		%		70-130	06-JUN-19
Boron (B)			96.5		%		70-130	06-JUN-19
Barium (Ba)			101.3		%		70-130	06-JUN-19
Cadmium (Cd)			95.7		%		70-130	06-JUN-19
Chromium (Cr)			100.1		%		70-130	06-JUN-19
Lead (Pb)			101.1		%		70-130	06-JUN-19
Selenium (Se)			93.1		%		70-130	06-JUN-19
Uranium (U)			102.6		%		70-130	06-JUN-19
WG3069236-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	06-JUN-19
Arsenic (As)			<0.050		mg/L		0.05	06-JUN-19
Boron (B)			<2.5		mg/L		2.5	06-JUN-19
Barium (Ba)			<0.50		mg/L		0.5	06-JUN-19
Cadmium (Cd)			<0.0050		mg/L		0.005	06-JUN-19
Chromium (Cr)			<0.050		mg/L		0.05	06-JUN-19
Lead (Pb)			<0.050		mg/L		0.05	06-JUN-19
Selenium (Se)			<0.025		mg/L		0.025	06-JUN-19
Uranium (U)			<0.25		mg/L		0.25	06-JUN-19
WG3069236-5 MS		**WG3069236-3**						
Silver (Ag)			109.3		%		50-140	06-JUN-19
Arsenic (As)			103.9		%		50-140	06-JUN-19
Boron (B)			94.1		%		50-140	06-JUN-19
Barium (Ba)			105.2		%		50-140	06-JUN-19
Cadmium (Cd)			98.1		%		50-140	06-JUN-19
Chromium (Cr)			100.4		%		50-140	06-JUN-19
Lead (Pb)			102.8		%		50-140	06-JUN-19
Selenium (Se)			106.0		%		50-140	06-JUN-19
Uranium (U)			102.1		%		50-140	06-JUN-19

Quality Control Report

Workorder: L2284702 Report Date: 10-JUN-19

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

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2284702 Report Date: 10-JUN-19

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

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
% Moisture							
	1	04-MAY-19 09:45	06-JUN-19 10:29	14	33	days	EHTR
TCLP Metals							
Mercury (CVAA) for O.Reg 347							
	1	04-MAY-19 09:45	06-JUN-19 00:00	28	33	days	EHTR

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 L2284702 were received on 04-JUN-19 11:30.

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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2284702-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / ...

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2 bimww@alsglobal.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-172
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2284702 AP

ALS Contact:

Sampler: LC/SJS

...firm all E&P TATs with your AM - surcharges will apply

...andard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-172	4-May-19	9:45	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			19.7		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Stephanie Sawchuk	Date : 05-May-19	Time: 17:00	Received by:	Date:	Time:	Received by: AP	Date: 4-6-19	Time: 1130

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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.**

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

Date Received: 18-JUN-19
Report Date: 24-JUN-19 15:07 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2293532

Project P.O. #: 4500057496
Job Reference: MP-ASH-221
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2293532-1 MP-ASH-221 Sampled By: DR/AM on 15-JUN-19 @ 13:15 Matrix: SOIL							
Sample Preparation							
Initial pH	11.92		0.10	pH units		20-JUN-19	R4678008
Final pH	11.30		0.10	pH units		20-JUN-19	R4678008
Physical Tests							
% Moisture	0.31		0.10	%	18-JUN-19	19-JUN-19	R4673139
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		20-JUN-19	R4681625
Barium (Ba)	0.63		0.50	mg/L		20-JUN-19	R4681625
Boron (B)	4.6		2.5	mg/L		20-JUN-19	R4681625
Cadmium (Cd)	<0.0050		0.0050	mg/L		20-JUN-19	R4681625
Chromium (Cr)	3.29		0.050	mg/L		20-JUN-19	R4681625
Lead (Pb)	<0.050		0.050	mg/L		20-JUN-19	R4681625
Mercury (Hg)	<0.00010		0.00010	mg/L		20-JUN-19	R4677786
Selenium (Se)	<0.025		0.025	mg/L		20-JUN-19	R4681625
Silver (Ag)	<0.0050		0.0050	mg/L		20-JUN-19	R4681625
Uranium (U)	<0.25		0.25	mg/L		20-JUN-19	R4681625
Zinc (Zn)-Total	<1.0		1.0	mg/L		20-JUN-19	R4681625

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chromium (Cr)	MS-B	L2293532-1

Sample Parameter Qualifier key listed:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2293532 Report Date: 24-JUN-19

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

Contact: William Bowden/Connor Devereaux

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4673139								
WG3080622-6 DUP		**L2292621-1**						
% Moisture		40.9	41.0		%	0.3	20	19-JUN-19
WG3080622-5 LCS								
% Moisture			99.8		%		90-110	19-JUN-19
WG3080622-4 MB								
% Moisture			<0.10		%		0.1	19-JUN-19
HG-TCLP-WT	**Waste**							
Batch R4677786								
WG3082838-3 DUP		**L2293532-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	20-JUN-19
WG3082838-2 LCS								
Mercury (Hg)			97.9		%		70-130	20-JUN-19
WG3082838-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	20-JUN-19
WG3082838-4 MS		**L2293532-1**						
Mercury (Hg)			88.0		%		50-140	20-JUN-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4681625								
WG3082631-4 DUP		**WG3082631-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	20-JUN-19
WG3082631-2 LCS								
Zinc (Zn)-Total			97.6		%		70-130	20-JUN-19
WG3082631-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	20-JUN-19
WG3082631-5 MS		**WG3082631-3**						
Zinc (Zn)-Total			95.0		%		70-130	20-JUN-19
MET-TCLP-WT	**Waste**							
Batch R4681625								
WG3082631-4 DUP		**WG3082631-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	20-JUN-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	20-JUN-19
Boron (B)		4.6	4.5		mg/L	0.9	50	20-JUN-19
Barium (Ba)		0.63	0.63		mg/L	0.3	50	20-JUN-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	20-JUN-19
Chromium (Cr)		3.29	3.29		mg/L	0.2	50	20-JUN-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	20-JUN-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4681625								
WG3082631-4 DUP		**WG3082631-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	20-JUN-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	20-JUN-19
WG3082631-2 LCS								
Silver (Ag)			100.3		%		70-130	20-JUN-19
Arsenic (As)			102.9		%		70-130	20-JUN-19
Boron (B)			94.8		%		70-130	20-JUN-19
Barium (Ba)			101.0		%		70-130	20-JUN-19
Cadmium (Cd)			104.2		%		70-130	20-JUN-19
Chromium (Cr)			99.9		%		70-130	20-JUN-19
Lead (Pb)			99.6		%		70-130	20-JUN-19
Selenium (Se)			104.3		%		70-130	20-JUN-19
Uranium (U)			97.6		%		70-130	20-JUN-19
WG3082631-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	20-JUN-19
Arsenic (As)			<0.050		mg/L		0.05	20-JUN-19
Boron (B)			<2.5		mg/L		2.5	20-JUN-19
Barium (Ba)			<0.50		mg/L		0.5	20-JUN-19
Cadmium (Cd)			<0.0050		mg/L		0.005	20-JUN-19
Chromium (Cr)			<0.050		mg/L		0.05	20-JUN-19
Lead (Pb)			<0.050		mg/L		0.05	20-JUN-19
Selenium (Se)			<0.025		mg/L		0.025	20-JUN-19
Uranium (U)			<0.25		mg/L		0.25	20-JUN-19
WG3082631-5 MS		**WG3082631-3**						
Silver (Ag)			110.0		%		50-140	20-JUN-19
Arsenic (As)			105.6		%		50-140	20-JUN-19
Boron (B)			88.4		%		50-140	20-JUN-19
Barium (Ba)			104.3		%		50-140	20-JUN-19
Cadmium (Cd)			97.3		%		50-140	20-JUN-19
Chromium (Cr)			N/A	MS-B	%		-	20-JUN-19
Lead (Pb)			97.1		%		50-140	20-JUN-19
Selenium (Se)			103.9		%		50-140	20-JUN-19
Uranium (U)			98.2		%		50-140	20-JUN-19

Quality Control Report

Workorder: L2293532 Report Date: 24-JUN-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2293532-COFC

COC Number: 15 -

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: bimcore@alsglobal.com

Email 2: bimww@alsglobal.com

Email 3:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: ap@baffinland.com

Email 2: commercial@baffinland.com

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-221
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2293532 18.

ALS Contact: **Sampler:** DR/AM

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
1.	MP-ASH-221	15-Jun-19	13:15	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human drinking water use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ | Ice Cubes ☐ | Custody seal intact ☑ Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			11.3		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Dominic Ritgen	Date: 2019 06 15	Time: 15:00	Received by:	Date:	Time:	Received by:	Date: June 18 2019	Time: 11:40

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 FRONT

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**.

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

Date Received: 24-JUL-19
Report Date: 30-JUL-19 13:43 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2315686

Project P.O. #: 4500057496
Job Reference: MP-ASH-222
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2315686-1 MP-ASH-222 Sampled By: EA on 22-JUL-19 @ 09:45 Matrix: SOIL							
Sample Preparation							
Initial pH	12.05		0.10	pH units		27-JUL-19	R4729573
Final pH	12.20		0.10	pH units		27-JUL-19	R4729573
Physical Tests							
% Moisture	0.22		0.10	%	25-JUL-19	26-JUL-19	R4727278
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		29-JUL-19	R4729011
Barium (Ba)	1.01		0.50	mg/L		29-JUL-19	R4729011
Boron (B)	<2.5		2.5	mg/L		29-JUL-19	R4729011
Cadmium (Cd)	<0.0050		0.0050	mg/L		29-JUL-19	R4729011
Chromium (Cr)	0.100		0.050	mg/L		29-JUL-19	R4729011
Lead (Pb)	<0.050		0.050	mg/L		29-JUL-19	R4729011
Mercury (Hg)	<0.00010		0.00010	mg/L		29-JUL-19	R4729442
Selenium (Se)	<0.025		0.025	mg/L		29-JUL-19	R4729011
Silver (Ag)	<0.0050		0.0050	mg/L		29-JUL-19	R4729011
Uranium (U)	<0.25		0.25	mg/L		29-JUL-19	R4729011
Zinc (Zn)-Total	<1.0		1.0	mg/L		29-JUL-19	R4729011

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2315686 Report Date: 30-JUL-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4727278								
WG3115361-3 DUP		**L2316710-15**						
% Moisture		21.1	20.9		%	1.1	20	26-JUL-19
WG3115361-2 LCS								
% Moisture			100.7		%		90-110	26-JUL-19
WG3115361-1 MB								
% Moisture			<0.10		%		0.1	26-JUL-19
HG-TCLP-WT	**Waste**							
Batch R4729442								
WG3117853-3 DUP		**L2315477-5**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	29-JUL-19
WG3117853-2 LCS								
Mercury (Hg)			100.0		%		70-130	29-JUL-19
WG3117853-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	29-JUL-19
WG3117853-4 MS		**L2315477-5**						
Mercury (Hg)			98.0		%		50-140	29-JUL-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4729011								
WG3117691-4 DUP		**WG3117691-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	29-JUL-19
WG3117691-2 LCS								
Zinc (Zn)-Total			95.3		%		70-130	29-JUL-19
WG3117691-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	29-JUL-19
WG3117691-5 MS		**WG3117691-3**						
Zinc (Zn)-Total			91.6		%		70-130	29-JUL-19
MET-TCLP-WT	**Waste**							
Batch R4729011								
WG3117691-4 DUP		**WG3117691-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-JUL-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-JUL-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	29-JUL-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	29-JUL-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-JUL-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-JUL-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-JUL-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4729011								
WG3117691-4 DUP		**WG3117691-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	29-JUL-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	29-JUL-19
WG3117691-2 LCS								
Silver (Ag)			101.8		%		70-130	29-JUL-19
Arsenic (As)			96.4		%		70-130	29-JUL-19
Boron (B)			96.9		%		70-130	29-JUL-19
Barium (Ba)			101.4		%		70-130	29-JUL-19
Cadmium (Cd)			98.0		%		70-130	29-JUL-19
Chromium (Cr)			98.3		%		70-130	29-JUL-19
Lead (Pb)			99.3		%		70-130	29-JUL-19
Selenium (Se)			97.1		%		70-130	29-JUL-19
Uranium (U)			97.3		%		70-130	29-JUL-19
WG3117691-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	29-JUL-19
Arsenic (As)			<0.050		mg/L		0.05	29-JUL-19
Boron (B)			<2.5		mg/L		2.5	29-JUL-19
Barium (Ba)			<0.50		mg/L		0.5	29-JUL-19
Cadmium (Cd)			<0.0050		mg/L		0.005	29-JUL-19
Chromium (Cr)			<0.050		mg/L		0.05	29-JUL-19
Lead (Pb)			<0.050		mg/L		0.05	29-JUL-19
Selenium (Se)			<0.025		mg/L		0.025	29-JUL-19
Uranium (U)			<0.25		mg/L		0.25	29-JUL-19
WG3117691-5 MS		**WG3117691-3**						
Silver (Ag)			118.0		%		50-140	29-JUL-19
Arsenic (As)			93.6		%		50-140	29-JUL-19
Boron (B)			100.7		%		50-140	29-JUL-19
Barium (Ba)			92.0		%		50-140	29-JUL-19
Cadmium (Cd)			92.4		%		50-140	29-JUL-19
Chromium (Cr)			95.5		%		50-140	29-JUL-19
Lead (Pb)			100.2		%		50-140	29-JUL-19
Selenium (Se)			93.4		%		50-140	29-JUL-19
Uranium (U)			97.8		%		50-140	29-JUL-19

Quality Control Report

Workorder: L2315686 Report Date: 30-JUL-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2315686-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Forma

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2 bimww@alsglobal.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-222
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2315686 AP

ALS Contact:

Sampler: EA

Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-222	22-Jul-19	9:45	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human drinking water use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			7.9		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Sten Sundin	Date: 2019 07 22	Time: 11:25	Received by:	Date:	Time:	Received by: AP	Date: 24-7-19	Time: 9:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 08-AUG-19
Report Date: 13-AUG-19 10:03 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2324663

Project P.O. #: 4500057496
Job Reference: MS-ASH-175
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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2324663-1 MS-ASH-175 Sampled By: CP/BC on 06-AUG-19 @ 10:35 Matrix: SOIL							
Sample Preparation							
Initial pH	11.73		0.10	pH units		09-AUG-19	R4747211
Final pH	5.70		0.10	pH units		09-AUG-19	R4747211
Physical Tests							
% Moisture	4.15		0.10	%	09-AUG-19	09-AUG-19	R4745841
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		12-AUG-19	R4746602
Barium (Ba)	<0.50		0.50	mg/L		12-AUG-19	R4746602
Boron (B)	<2.5		2.5	mg/L		12-AUG-19	R4746602
Cadmium (Cd)	<0.0050		0.0050	mg/L		12-AUG-19	R4746602
Chromium (Cr)	<0.050		0.050	mg/L		12-AUG-19	R4746602
Lead (Pb)	<0.050		0.050	mg/L		12-AUG-19	R4746602
Mercury (Hg)	<0.00010		0.00010	mg/L		12-AUG-19	R4746761
Selenium (Se)	<0.025		0.025	mg/L		12-AUG-19	R4746602
Silver (Ag)	<0.0050		0.0050	mg/L		12-AUG-19	R4746602
Uranium (U)	<0.25		0.25	mg/L		12-AUG-19	R4746602
Zinc (Zn)-Total	18.6		1.0	mg/L		12-AUG-19	R4746602

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2324663 Report Date: 13-AUG-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4745841								
WG3128023-6 DUP		**L2324759-5**						
% Moisture		4.11	3.85		%	6.5	20	09-AUG-19
WG3128023-5 LCS								
% Moisture			100.2		%		90-110	09-AUG-19
WG3128023-4 MB								
% Moisture			<0.10		%		0.1	09-AUG-19
HG-TCLP-WT	**Waste**							
Batch R4746761								
WG3129816-3 DUP		**L2324845-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-AUG-19
WG3129816-2 LCS								
Mercury (Hg)			93.7		%		70-130	12-AUG-19
WG3129816-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	12-AUG-19
WG3129816-4 MS		**L2324845-1**						
Mercury (Hg)			96.2		%		50-140	12-AUG-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4746602								
WG3129668-4 DUP		**WG3129668-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	12-AUG-19
WG3129668-2 LCS								
Zinc (Zn)-Total			93.2		%		70-130	12-AUG-19
WG3129668-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	12-AUG-19
WG3129668-5 MS		**WG3129668-3**						
Zinc (Zn)-Total			89.4		%		70-130	12-AUG-19
MET-TCLP-WT	**Waste**							
Batch R4746602								
WG3129668-4 DUP		**WG3129668-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-AUG-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-AUG-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	12-AUG-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	12-AUG-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	12-AUG-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-AUG-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	12-AUG-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4746602								
WG3129668-4 DUP		**WG3129668-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	12-AUG-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	12-AUG-19
WG3129668-2 LCS								
Silver (Ag)			96.0		%		70-130	12-AUG-19
Arsenic (As)			93.1		%		70-130	12-AUG-19
Boron (B)			82.1		%		70-130	12-AUG-19
Barium (Ba)			95.4		%		70-130	12-AUG-19
Cadmium (Cd)			94.9		%		70-130	12-AUG-19
Chromium (Cr)			94.2		%		70-130	12-AUG-19
Lead (Pb)			96.9		%		70-130	12-AUG-19
Selenium (Se)			94.2		%		70-130	12-AUG-19
Uranium (U)			98.6		%		70-130	12-AUG-19
WG3129668-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	12-AUG-19
Arsenic (As)			<0.050		mg/L		0.05	12-AUG-19
Boron (B)			<2.5		mg/L		2.5	12-AUG-19
Barium (Ba)			<0.50		mg/L		0.5	12-AUG-19
Cadmium (Cd)			<0.0050		mg/L		0.005	12-AUG-19
Chromium (Cr)			<0.050		mg/L		0.05	12-AUG-19
Lead (Pb)			<0.050		mg/L		0.05	12-AUG-19
Selenium (Se)			<0.025		mg/L		0.025	12-AUG-19
Uranium (U)			<0.25		mg/L		0.25	12-AUG-19
WG3129668-5 MS		**WG3129668-3**						
Silver (Ag)			102.4		%		50-140	12-AUG-19
Arsenic (As)			92.4		%		50-140	12-AUG-19
Boron (B)			80.0		%		50-140	12-AUG-19
Barium (Ba)			91.9		%		50-140	12-AUG-19
Cadmium (Cd)			91.2		%		50-140	12-AUG-19
Chromium (Cr)			94.2		%		50-140	12-AUG-19
Lead (Pb)			94.1		%		50-140	12-AUG-19
Selenium (Se)			93.5		%		50-140	12-AUG-19
Uranium (U)			94.0		%		50-140	12-AUG-19

Quality Control Report

Workorder: L2324663 Report Date: 13-AUG-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L2324663-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2 bimww@alsglobal.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-175
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2324663 AP

ALS Contact:

Sampler: CP/BC

Turnaround Time (TAT) Options — confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-175	6-Aug-19	10:35	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			17.8		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Kendra Button	Date : 6-Aug-19	Time: 15:20	Received by:	Date:	Time:	Received by: AP	Date: 8 Aug 19	Time: 9:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.

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

Date Received: 14-AUG-19
Report Date: 19-AUG-19 11:47 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2328345

Project P.O. #: 4500057496
Job Reference: MP-ASH-223
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2328345-1 MP-ASH-223 Sampled By: LC/SJP/AK on 12-AUG-19 @ 08:25 Matrix: SOIL							
Sample Preparation							
Initial pH	12.01		0.10	pH units		16-AUG-19	R4757170
Final pH	6.12		0.10	pH units		16-AUG-19	R4757170
Physical Tests							
% Moisture	1.52		0.10	%	16-AUG-19	17-AUG-19	R4758559
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		16-AUG-19	R4758536
Barium (Ba)	<0.50		0.50	mg/L		16-AUG-19	R4758536
Boron (B)	<2.5		2.5	mg/L		16-AUG-19	R4758536
Cadmium (Cd)	0.230		0.0050	mg/L		16-AUG-19	R4758536
Chromium (Cr)	<0.050		0.050	mg/L		16-AUG-19	R4758536
Lead (Pb)	<0.050		0.050	mg/L		16-AUG-19	R4758536
Mercury (Hg)	<0.00010		0.00010	mg/L		16-AUG-19	R4757538
Selenium (Se)	<0.025		0.025	mg/L		16-AUG-19	R4758536
Silver (Ag)	<0.0050		0.0050	mg/L		16-AUG-19	R4758536
Uranium (U)	<0.25		0.25	mg/L		16-AUG-19	R4758536
Zinc (Zn)-Total	1.8		1.0	mg/L		16-AUG-19	R4758536

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2328345 Report Date: 19-AUG-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4758559								
WG3134609-3 DUP		**L2328812-5**						
% Moisture		6.51	6.86		%	5.2	20	17-AUG-19
WG3134609-2 LCS								
% Moisture			101.7		%		90-110	17-AUG-19
WG3134609-1 MB								
% Moisture			<0.10		%		0.1	17-AUG-19
HG-TCLP-WT	**Waste**							
Batch R4757538								
WG3134842-3 DUP		**L2328345-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	16-AUG-19
WG3134842-2 LCS								
Mercury (Hg)			93.9		%		70-130	16-AUG-19
WG3134842-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	16-AUG-19
WG3134842-4 MS		**L2328345-1**						
Mercury (Hg)			95.6		%		50-140	16-AUG-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4758536								
WG3134746-4 DUP		**WG3134746-3**						
Zinc (Zn)-Total		1.8	1.8		mg/L	0.8	30	16-AUG-19
WG3134746-2 LCS								
Zinc (Zn)-Total			93.1		%		70-130	16-AUG-19
WG3134746-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	16-AUG-19
WG3134746-5 MS		**WG3134746-3**						
Zinc (Zn)-Total			94.9		%		70-130	16-AUG-19
MET-TCLP-WT	**Waste**							
Batch R4758536								
WG3134746-4 DUP		**WG3134746-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	16-AUG-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	16-AUG-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	16-AUG-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	16-AUG-19
Cadmium (Cd)		0.230	0.223		mg/L	3.3	50	16-AUG-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	16-AUG-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	16-AUG-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4758536								
WG3134746-4 DUP		**WG3134746-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	16-AUG-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	16-AUG-19
WG3134746-2 LCS								
Silver (Ag)			96.9		%		70-130	16-AUG-19
Arsenic (As)			93.7		%		70-130	16-AUG-19
Boron (B)			88.4		%		70-130	16-AUG-19
Barium (Ba)			95.1		%		70-130	16-AUG-19
Cadmium (Cd)			96.3		%		70-130	16-AUG-19
Chromium (Cr)			97.7		%		70-130	16-AUG-19
Lead (Pb)			97.8		%		70-130	16-AUG-19
Selenium (Se)			97.1		%		70-130	16-AUG-19
Uranium (U)			101.4		%		70-130	16-AUG-19
WG3134746-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	16-AUG-19
Arsenic (As)			<0.050		mg/L		0.05	16-AUG-19
Boron (B)			<2.5		mg/L		2.5	16-AUG-19
Barium (Ba)			<0.50		mg/L		0.5	16-AUG-19
Cadmium (Cd)			<0.0050		mg/L		0.005	16-AUG-19
Chromium (Cr)			<0.050		mg/L		0.05	16-AUG-19
Lead (Pb)			<0.050		mg/L		0.05	16-AUG-19
Selenium (Se)			<0.025		mg/L		0.025	16-AUG-19
Uranium (U)			<0.25		mg/L		0.25	16-AUG-19
WG3134746-5 MS		**WG3134746-3**						
Silver (Ag)			93.2		%		50-140	16-AUG-19
Arsenic (As)			99.0		%		50-140	16-AUG-19
Boron (B)			95.9		%		50-140	16-AUG-19
Barium (Ba)			104.6		%		50-140	16-AUG-19
Cadmium (Cd)			92.5		%		50-140	16-AUG-19
Chromium (Cr)			101.5		%		50-140	16-AUG-19
Lead (Pb)			99.9		%		50-140	16-AUG-19
Selenium (Se)			101.7		%		50-140	16-AUG-19
Uranium (U)			100.7		%		50-140	16-AUG-19

Quality Control Report

Workorder: L2328345 Report Date: 19-AUG-19

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

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
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.

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2328345-COFC

COC Number: 15 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2 bimww@alsglobal.com

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-223
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2328345 AP

ALS Contact: **Sampler:** LC/SJP/AK

. confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☐ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-223	12-Aug-19	8:25	Soil	R	1

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human drinking water use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			14.1		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Dominic Ritgen	Date: 2019 08 13	Time: 16:00	Received by:	Date:	Time:	Received by: AP	Date: 14-Aug-19	Time: 9:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 FRONT

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**.

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

Date Received: 23-AUG-19
Report Date: 29-AUG-19 15:15 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2334527

Project P.O. #: 4500057496
Job Reference: MP-ASH-224
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2334527-1 MP-ASH-224 Sampled By: EA/MA on 20-AUG-19 @ 16:45 Matrix: SOIL							
Sample Preparation							
Initial pH	12.04		0.10	pH units		29-AUG-19	R4777546
Final pH	8.27		0.10	pH units		29-AUG-19	R4777546
Physical Tests							
% Moisture	0.43		0.10	%	26-AUG-19	26-AUG-19	R4768382
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		29-AUG-19	R4776936
Barium (Ba)	<0.50		0.50	mg/L		29-AUG-19	R4776936
Boron (B)	<2.5		2.5	mg/L		29-AUG-19	R4776936
Cadmium (Cd)	<0.0050		0.0050	mg/L		29-AUG-19	R4776936
Chromium (Cr)	1.23		0.050	mg/L		29-AUG-19	R4776936
Lead (Pb)	<0.050		0.050	mg/L		29-AUG-19	R4776936
Mercury (Hg)	<0.00010		0.00010	mg/L		29-AUG-19	R4777109
Selenium (Se)	<0.025		0.025	mg/L		29-AUG-19	R4776936
Silver (Ag)	<0.0050		0.0050	mg/L		29-AUG-19	R4776936
Uranium (U)	<0.25		0.25	mg/L		29-AUG-19	R4776936
Zinc (Zn)-Total	<1.0		1.0	mg/L		29-AUG-19	R4776936

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2334527 Report Date: 29-AUG-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4768382								
WG3143027-3 DUP		**L2334805-2**						
% Moisture		5.35	5.38		%	0.5	20	26-AUG-19
WG3143027-2 LCS								
% Moisture			100.5		%		90-110	26-AUG-19
WG3143027-1 MB								
% Moisture			<0.10		%		0.1	26-AUG-19
HG-TCLP-WT	**Waste**							
Batch R4777109								
WG3147234-3 DUP		**L2334527-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	29-AUG-19
WG3147234-2 LCS								
Mercury (Hg)			93.3		%		70-130	29-AUG-19
WG3147234-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	29-AUG-19
WG3147234-4 MS		**L2334527-1**						
Mercury (Hg)			91.3		%		50-140	29-AUG-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4776936								
WG3147005-4 DUP		**WG3147005-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	29-AUG-19
WG3147005-2 LCS								
Zinc (Zn)-Total			96.9		%		70-130	29-AUG-19
WG3147005-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	29-AUG-19
WG3147005-5 MS		**WG3147005-3**						
Zinc (Zn)-Total			98.3		%		70-130	29-AUG-19
MET-TCLP-WT	**Waste**							
Batch R4776936								
WG3147005-4 DUP		**WG3147005-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-AUG-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-AUG-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	29-AUG-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	29-AUG-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	29-AUG-19
Chromium (Cr)		1.23	1.24		mg/L	0.8	50	29-AUG-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	29-AUG-19

Quality Control Report

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4776936								
WG3147005-4 DUP		**WG3147005-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	29-AUG-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	29-AUG-19
WG3147005-2 LCS								
Silver (Ag)			101.3		%		70-130	29-AUG-19
Arsenic (As)			98.2		%		70-130	29-AUG-19
Boron (B)			95.9		%		70-130	29-AUG-19
Barium (Ba)			97.1		%		70-130	29-AUG-19
Cadmium (Cd)			95.2		%		70-130	29-AUG-19
Chromium (Cr)			100.3		%		70-130	29-AUG-19
Lead (Pb)			101.4		%		70-130	29-AUG-19
Selenium (Se)			96.9		%		70-130	29-AUG-19
Uranium (U)			98.2		%		70-130	29-AUG-19
WG3147005-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	29-AUG-19
Arsenic (As)			<0.050		mg/L		0.05	29-AUG-19
Boron (B)			<2.5		mg/L		2.5	29-AUG-19
Barium (Ba)			<0.50		mg/L		0.5	29-AUG-19
Cadmium (Cd)			<0.0050		mg/L		0.005	29-AUG-19
Chromium (Cr)			<0.050		mg/L		0.05	29-AUG-19
Lead (Pb)			<0.050		mg/L		0.05	29-AUG-19
Selenium (Se)			<0.025		mg/L		0.025	29-AUG-19
Uranium (U)			<0.25		mg/L		0.25	29-AUG-19
WG3147005-5 MS		**WG3147005-3**						
Silver (Ag)			124.5		%		50-140	29-AUG-19
Arsenic (As)			103.9		%		50-140	29-AUG-19
Boron (B)			99.9		%		50-140	29-AUG-19
Barium (Ba)			108.7		%		50-140	29-AUG-19
Cadmium (Cd)			101.3		%		50-140	29-AUG-19
Chromium (Cr)			108.0		%		50-140	29-AUG-19
Lead (Pb)			103.4		%		50-140	29-AUG-19
Selenium (Se)			102.8		%		50-140	29-AUG-19
Uranium (U)			102.5		%		50-140	29-AUG-19

Quality Control Report

Workorder: L2334527 Report Date: 29-AUG-19

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

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
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.

Chain of Custody (COC) / Analytica Request Form

L2334527-COFC

COC Number: 15 -

Page 1 of 1

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax bimcore@alsglobal.com
Email 2 bimww@alsglobal.com
Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax ap@baffinland.com
Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-224
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2334527-AP

ALS Contact: **Sampler:** EA/MA

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☐
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-224	20-Aug-19	16:45	Soil	R	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human drinking water use? ☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

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

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			14.0		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by: Sten Sundin	Date: 19 08 21	Time: 14:15	Received by:	Date:	Time:	Received by: AP	Date: 23-8-19	Time: 9:45

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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.**

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

Date Received: 09-OCT-19
Report Date: 11-OCT-19 17:08 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2362326

Project P.O. #: 4500057496
Job Reference: MS-ASH-177
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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2362326-1 MS-ASH-177 Sampled By: BM/BC on 06-OCT-19 @ 17:15 Matrix: SOIL							
Sample Preparation							
Initial pH	12.10		0.10	pH units		11-OCT-19	R4867373
Final pH	5.27		0.10	pH units		11-OCT-19	R4867373
Physical Tests							
% Moisture	4.11		0.25	%	09-OCT-19	09-OCT-19	R4863231
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		11-OCT-19	R4867665
Barium (Ba)	<0.50		0.50	mg/L		11-OCT-19	R4867665
Boron (B)	<2.5		2.5	mg/L		11-OCT-19	R4867665
Cadmium (Cd)	0.0107		0.0050	mg/L		11-OCT-19	R4867665
Chromium (Cr)	<0.050		0.050	mg/L		11-OCT-19	R4867665
Lead (Pb)	<0.050		0.050	mg/L		11-OCT-19	R4867665
Mercury (Hg)	<0.00010		0.00010	mg/L		11-OCT-19	R4867369
Selenium (Se)	<0.025		0.025	mg/L		11-OCT-19	R4867665
Silver (Ag)	<0.0050		0.0050	mg/L		11-OCT-19	R4867665
Uranium (U)	<0.25		0.25	mg/L		11-OCT-19	R4867665
Zinc (Zn)-Total	5.0		1.0	mg/L		11-OCT-19	R4867665

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2362326 Report Date: 11-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4863231								
WG3186252-3 DUP		**L2362248-1**						
% Moisture		7.32	7.78		%	6.0	20	09-OCT-19
WG3186252-2 LCS								
% Moisture			100.3		%		90-110	09-OCT-19
WG3186252-1 MB								
% Moisture			<0.25		%		0.25	09-OCT-19
HG-TCLP-WT	**Waste**							
Batch R4867369								
WG3188992-3 DUP		**L2359664-2**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	11-OCT-19
WG3188992-2 LCS								
Mercury (Hg)			89.4		%		70-130	11-OCT-19
WG3188992-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	11-OCT-19
WG3188992-4 MS		**L2359664-2**						
Mercury (Hg)			85.6		%		50-140	11-OCT-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4867665								
WG3189126-4 DUP		**WG3189126-3**						
Zinc (Zn)-Total		<1.0	1.1	RPD-NA	mg/L	N/A	30	11-OCT-19
WG3189126-2 LCS								
Zinc (Zn)-Total			96.1		%		70-130	11-OCT-19
WG3189126-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	11-OCT-19
WG3189126-5 MS		**WG3189126-3**						
Zinc (Zn)-Total			95.1		%		70-130	11-OCT-19
MET-TCLP-WT	**Waste**							
Batch R4867665								
WG3189126-4 DUP		**WG3189126-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	11-OCT-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-OCT-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	11-OCT-19
Barium (Ba)		0.63	0.67		mg/L	5.6	50	11-OCT-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	11-OCT-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-OCT-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	11-OCT-19

Quality Control Report

Workorder: L2362326 Report Date: 11-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4867665								
WG3189126-4 DUP		**WG3189126-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	11-OCT-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	11-OCT-19
WG3189126-2 LCS								
Silver (Ag)			97.9		%		70-130	11-OCT-19
Arsenic (As)			97.3		%		70-130	11-OCT-19
Boron (B)			96.1		%		70-130	11-OCT-19
Barium (Ba)			101.7		%		70-130	11-OCT-19
Cadmium (Cd)			103.1		%		70-130	11-OCT-19
Chromium (Cr)			103.0		%		70-130	11-OCT-19
Lead (Pb)			97.7		%		70-130	11-OCT-19
Selenium (Se)			101.4		%		70-130	11-OCT-19
Uranium (U)			100.8		%		70-130	11-OCT-19
WG3189126-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	11-OCT-19
Arsenic (As)			<0.050		mg/L		0.05	11-OCT-19
Boron (B)			<2.5		mg/L		2.5	11-OCT-19
Barium (Ba)			<0.50		mg/L		0.5	11-OCT-19
Cadmium (Cd)			<0.0050		mg/L		0.005	11-OCT-19
Chromium (Cr)			<0.050		mg/L		0.05	11-OCT-19
Lead (Pb)			<0.050		mg/L		0.05	11-OCT-19
Selenium (Se)			<0.025		mg/L		0.025	11-OCT-19
Uranium (U)			<0.25		mg/L		0.25	11-OCT-19
WG3189126-5 MS		**WG3189126-3**						
Silver (Ag)			109.4		%		50-140	11-OCT-19
Arsenic (As)			97.9		%		50-140	11-OCT-19
Boron (B)			96.7		%		50-140	11-OCT-19
Barium (Ba)			102.6		%		50-140	11-OCT-19
Cadmium (Cd)			101.6		%		50-140	11-OCT-19
Chromium (Cr)			104.1		%		50-140	11-OCT-19
Lead (Pb)			96.6		%		50-140	11-OCT-19
Selenium (Se)			102.5		%		50-140	11-OCT-19
Uranium (U)			97.8		%		50-140	11-OCT-19

Quality Control Report

Workorder: L2362326 Report Date: 11-OCT-19

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

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
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.

Chain of Custody (COC) / Analyti Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L2362326-COFC

COC Number: 15 -

e

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-177
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2362326 AP

ALS Contact:

Sampler: BM/BC

Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☐ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4] ☐ | 3 day [P3] ☐ | 2 day [P2] ☐

EMERGENCY: 1 Business day [E1] ☑ | Same Day, Weekend or Statutory holiday [E0] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-177	6-Oct-19	17:15	Soil	E1	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			11.3		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Kendra Button	Date : 6-Oct-19	Time: 18:15	Received by:	Date:	Time:	Received by: AP	Date: 9-Oct-19	Time: 9:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 FRONT

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**.

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

Date Received: 16-OCT-19
Report Date: 17-OCT-19 15:03 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2365589

Project P.O. #: 4500057496
Job Reference: MS-ASH-178
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2365589-1 MS-ASH-178 Sampled By: BC/SJS on 12-OCT-19 @ 11:00 Matrix: SOIL							
Sample Preparation							
Initial pH	11.69		0.10	pH units		17-OCT-19	R4873107
Final pH	7.56		0.10	pH units		17-OCT-19	R4873107
Physical Tests							
% Moisture	0.26		0.25	%	16-OCT-19	16-OCT-19	R4871796
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		17-OCT-19	R4873293
Barium (Ba)	<0.50		0.50	mg/L		17-OCT-19	R4873293
Boron (B)	4.0		2.5	mg/L		17-OCT-19	R4873293
Cadmium (Cd)	0.0375		0.0050	mg/L		17-OCT-19	R4873293
Chromium (Cr)	1.70		0.050	mg/L		17-OCT-19	R4873293
Lead (Pb)	<0.050		0.050	mg/L		17-OCT-19	R4873293
Mercury (Hg)	<0.00010		0.00010	mg/L		17-OCT-19	R4872753
Selenium (Se)	<0.025		0.025	mg/L		17-OCT-19	R4873293
Silver (Ag)	<0.0050		0.0050	mg/L		17-OCT-19	R4873293
Uranium (U)	<0.25		0.25	mg/L		17-OCT-19	R4873293
Zinc (Zn)-Total	<1.0		1.0	mg/L		17-OCT-19	R4873293

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2365589 Report Date: 17-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4871796								
WG3192041-3 DUP		**L2365199-3**						
% Moisture		14.2	13.7		%	3.8	20	16-OCT-19
WG3192041-2 LCS								
% Moisture			100.3		%		90-110	16-OCT-19
WG3192041-1 MB								
% Moisture			<0.25		%		0.25	16-OCT-19
HG-TCLP-WT	**Waste**							
Batch R4872753								
WG3193423-3 DUP		**L2362291-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	17-OCT-19
WG3193423-2 LCS								
Mercury (Hg)			99.2		%		70-130	17-OCT-19
WG3193423-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	17-OCT-19
WG3193423-4 MS		**L2362291-1**						
Mercury (Hg)			89.6		%		50-140	17-OCT-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	17-OCT-19
WG3193449-2 LCS								
Zinc (Zn)-Total			94.4		%		70-130	17-OCT-19
WG3193449-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	17-OCT-19
WG3193449-5 MS		**WG3193449-3**						
Zinc (Zn)-Total			95.1		%		70-130	17-OCT-19
MET-TCLP-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	17-OCT-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	17-OCT-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	17-OCT-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	17-OCT-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19

Quality Control Report

Workorder: L2365589 Report Date: 17-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	17-OCT-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	17-OCT-19
WG3193449-2 LCS								
Silver (Ag)			96.8		%		70-130	17-OCT-19
Arsenic (As)			95.5		%		70-130	17-OCT-19
Boron (B)			91.3		%		70-130	17-OCT-19
Barium (Ba)			98.0		%		70-130	17-OCT-19
Cadmium (Cd)			96.3		%		70-130	17-OCT-19
Chromium (Cr)			98.1		%		70-130	17-OCT-19
Lead (Pb)			98.2		%		70-130	17-OCT-19
Selenium (Se)			95.6		%		70-130	17-OCT-19
Uranium (U)			98.6		%		70-130	17-OCT-19
WG3193449-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	17-OCT-19
Arsenic (As)			<0.050		mg/L		0.05	17-OCT-19
Boron (B)			<2.5		mg/L		2.5	17-OCT-19
Barium (Ba)			<0.50		mg/L		0.5	17-OCT-19
Cadmium (Cd)			<0.0050		mg/L		0.005	17-OCT-19
Chromium (Cr)			<0.050		mg/L		0.05	17-OCT-19
Lead (Pb)			<0.050		mg/L		0.05	17-OCT-19
Selenium (Se)			<0.025		mg/L		0.025	17-OCT-19
Uranium (U)			<0.25		mg/L		0.25	17-OCT-19
WG3193449-5 MS		**WG3193449-3**						
Silver (Ag)			105.2		%		50-140	17-OCT-19
Arsenic (As)			96.4		%		50-140	17-OCT-19
Boron (B)			94.3		%		50-140	17-OCT-19
Barium (Ba)			97.2		%		50-140	17-OCT-19
Cadmium (Cd)			96.9		%		50-140	17-OCT-19
Chromium (Cr)			97.8		%		50-140	17-OCT-19
Lead (Pb)			99.2		%		50-140	17-OCT-19
Selenium (Se)			97.6		%		50-140	17-OCT-19
Uranium (U)			98.2		%		50-140	17-OCT-19

Quality Control Report

Workorder: L2365589 Report Date: 17-OCT-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

L2365589-COFC

COC Number: 15 -

Page 1 of 1

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)

Quality Control (QC) Report with Report ☑ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax bimcore@alsglobal.com

Email 2

Email 3

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax ap@baffinland.com

Email 2 commercial@baffinland.com

Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply

Regular [R] ☐ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days)		EMERGENCY	
4 day [P4]	☐	1 Business day [E1]	☑
3 day [P3]	☐	Same Day, Weekend or Statutory holiday [E0]	☐
2 day [P2]	☐		

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #:	23642 /Q42455
Job #:	MS-ASH-178
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only) L2365589-AP

ALS Contact: **Sampler:** BC/SJS

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MS-ASH-178	12-Oct-19	11:00	Soil	E1	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☑ NO

Are samples for human drinking water use?

☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			15.8		

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released By : Megan LaCarte	Date : Oct 14, 2019	Time: 10:36	Received by:	Date:	Time:	Received by: AP	Date: 16-10-19	Time: 9:45

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

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

Date Received: 16-OCT-19
Report Date: 17-OCT-19 15:04 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2365592

Project P.O. #: 4500057496
Job Reference: MP-ASH-226
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2365592-1 MP-ASH-226 Sampled By: EA/LC on 11-OCT-19 @ 09:15 Matrix: SOIL							
Sample Preparation							
Initial pH	12.17		0.10	pH units		17-OCT-19	R4873107
Final pH	7.78		0.10	pH units		17-OCT-19	R4873107
Physical Tests							
% Moisture	31.9		0.25	%	16-OCT-19	16-OCT-19	R4871796
TCLP Metals							
Arsenic (As)	<0.050		0.050	mg/L		17-OCT-19	R4873293
Barium (Ba)	<0.50		0.50	mg/L		17-OCT-19	R4873293
Boron (B)	2.8		2.5	mg/L		17-OCT-19	R4873293
Cadmium (Cd)	<0.0050		0.0050	mg/L		17-OCT-19	R4873293
Chromium (Cr)	0.833		0.050	mg/L		17-OCT-19	R4873293
Lead (Pb)	<0.050		0.050	mg/L		17-OCT-19	R4873293
Mercury (Hg)	<0.00010		0.00010	mg/L		17-OCT-19	R4872753
Selenium (Se)	<0.025		0.025	mg/L		17-OCT-19	R4873293
Silver (Ag)	<0.0050		0.0050	mg/L		17-OCT-19	R4873293
Uranium (U)	<0.25		0.25	mg/L		17-OCT-19	R4873293
Zinc (Zn)-Total	<1.0		1.0	mg/L		17-OCT-19	R4873293

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311

Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020B).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

** 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

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: L2365592 Report Date: 17-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R4871796								
WG3192041-3 DUP		**L2365199-3**						
% Moisture		14.2	13.7		%	3.8	20	16-OCT-19
WG3192041-2 LCS								
% Moisture			100.3		%		90-110	16-OCT-19
WG3192041-1 MB								
% Moisture			<0.25		%		0.25	16-OCT-19
HG-TCLP-WT	**Waste**							
Batch R4872753								
WG3193423-3 DUP		**L2362291-1**						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	17-OCT-19
WG3193423-2 LCS								
Mercury (Hg)			99.2		%		70-130	17-OCT-19
WG3193423-1 MB								
Mercury (Hg)			<0.00010		mg/L		0.0001	17-OCT-19
WG3193423-4 MS		**L2362291-1**						
Mercury (Hg)			89.6		%		50-140	17-OCT-19
MET-TCLP-EXTRA-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	17-OCT-19
WG3193449-2 LCS								
Zinc (Zn)-Total			94.4		%		70-130	17-OCT-19
WG3193449-1 MB								
Zinc (Zn)-Total			<1.0		mg/L		1	17-OCT-19
WG3193449-5 MS		**WG3193449-3**						
Zinc (Zn)-Total			95.1		%		70-130	17-OCT-19
MET-TCLP-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	17-OCT-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	17-OCT-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	17-OCT-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	17-OCT-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	17-OCT-19

Quality Control Report

Workorder: L2365592 Report Date: 17-OCT-19

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	**Waste**							
Batch R4873293								
WG3193449-4 DUP		**WG3193449-3**						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	17-OCT-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	17-OCT-19
WG3193449-2 LCS								
Silver (Ag)			96.8		%		70-130	17-OCT-19
Arsenic (As)			95.5		%		70-130	17-OCT-19
Boron (B)			91.3		%		70-130	17-OCT-19
Barium (Ba)			98.0		%		70-130	17-OCT-19
Cadmium (Cd)			96.3		%		70-130	17-OCT-19
Chromium (Cr)			98.1		%		70-130	17-OCT-19
Lead (Pb)			98.2		%		70-130	17-OCT-19
Selenium (Se)			95.6		%		70-130	17-OCT-19
Uranium (U)			98.6		%		70-130	17-OCT-19
WG3193449-1 MB								
Silver (Ag)			<0.0050		mg/L		0.005	17-OCT-19
Arsenic (As)			<0.050		mg/L		0.05	17-OCT-19
Boron (B)			<2.5		mg/L		2.5	17-OCT-19
Barium (Ba)			<0.50		mg/L		0.5	17-OCT-19
Cadmium (Cd)			<0.0050		mg/L		0.005	17-OCT-19
Chromium (Cr)			<0.050		mg/L		0.05	17-OCT-19
Lead (Pb)			<0.050		mg/L		0.05	17-OCT-19
Selenium (Se)			<0.025		mg/L		0.025	17-OCT-19
Uranium (U)			<0.25		mg/L		0.25	17-OCT-19
WG3193449-5 MS		**WG3193449-3**						
Silver (Ag)			105.2		%		50-140	17-OCT-19
Arsenic (As)			96.4		%		50-140	17-OCT-19
Boron (B)			94.3		%		50-140	17-OCT-19
Barium (Ba)			97.2		%		50-140	17-OCT-19
Cadmium (Cd)			96.9		%		50-140	17-OCT-19
Chromium (Cr)			97.8		%		50-140	17-OCT-19
Lead (Pb)			99.2		%		50-140	17-OCT-19
Selenium (Se)			97.6		%		50-140	17-OCT-19
Uranium (U)			98.2		%		50-140	17-OCT-19

Quality Control Report

Workorder: L2365592 Report Date: 17-OCT-19

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

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
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.

Chain of Custody (COC) / Analytical Request Form

COC Number: 15 -

Page 1 of 1

Canada Toll Free: 1 800 668 9878

L2365592-COFC

www.alsglobal.com

Report To	Contact and company name below will appear on the final report
Company:	Baffinland Iron Mines Corp.
Contact:	Wiliam Bowden and Connor Devereaux
Phone:	647-253-0596 EXT 6016
	Company address below will appear on the final report
Street:	2275 Upper Middle Rd. E., Suite #300
City/Province:	Oakville, ON
Postal Code:	L6H 0C3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report For	
Select Report Format:	☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	bimcore@alsglobal.com
Email 2	
Email 3	

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	ap@baffinland.com
Email 2	commercial@baffinland.com

Project Information	
ALS Account # / Quote #:	23642 /Q42455
Job #:	MP-ASH-226
PO / AFE:	4500057496
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): L2365592 AD

ALS Contact:

Sampler: EA/LC

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BIM-TCLP-MET1-WT (TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn) -	Number of Containers
	MP-ASH-226	11-Oct-19	9:15	Soil	E1	2

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human drinking water use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
			10.9		

SHIPMENT RELEASE (client use)		
Released By : Sten Sundin	Date : 14-Oct-19	Time: 15:15

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: 16-10-19	Time: 945

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT

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**.