

APPENDIX E.2
INCINERATOR ASH TESTING RESULTS

TABLE E.2.1
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2018 QIA AND NWB ANNUAL REPORT FOR OPERATIONS
ANNUAL INVENTORY AND STATUS OF GENERATED INCINERATOR BOTTOM ASH - 2018

Category	Mine Site Bins	Mine Site ~Volume m ³	Mine Site Status	Milne Port Bins	Milne Port ~Volume m ³	Milne Port Status
Landfill	14	34.03	Deposited in Landfill	10	30.05	Deposited in Landfill
Hazardous	0	N/A	N/A	0	N/A	N/A
TOTAL	14	34.03	N/A	10	30.05	N/A

ANNUAL EXCEEDANCES SUMMARY - INCINERATOR BOTTOM ASH - 2018

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



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

Date Received: 04-JAN-18
Report Date: 09-JAN-18 11:25 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L2041285
Project P.O. #: 4500027854
Job Reference: MS-ASH-155
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2041285-1	MS-ASH-155							
Sampled By:	DR on 01-JAN-18 @ 11:50							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.74		0.10	pH units		06-JAN-18	R3931468
Final pH		10.71		0.10	pH units		06-JAN-18	R3931468
Physical Tests								
% Moisture		0.42		0.10	%	05-JAN-18	06-JAN-18	R3929848
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		08-JAN-18	R3931189
Barium (Ba)		<0.50		0.50	mg/L		08-JAN-18	R3931189
Boron (B)		3.0		2.5	mg/L		08-JAN-18	R3931189
Cadmium (Cd)		<0.0050		0.0050	mg/L		08-JAN-18	R3931189
Chromium (Cr)		12.0		0.050	mg/L		08-JAN-18	R3931189
Lead (Pb)		<0.050		0.050	mg/L		08-JAN-18	R3931189
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JAN-18	R3930186
Selenium (Se)		<0.025		0.025	mg/L		08-JAN-18	R3931189
Silver (Ag)		<0.0050		0.0050	mg/L		08-JAN-18	R3931189
Uranium (U)		<0.25		0.25	mg/L		08-JAN-18	R3931189
Zinc (Zn)-Total		<1.0		1.0	mg/L		08-JAN-18	R3931189

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

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	Gravimetric: Oven Dried

** 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: L2041285

Report Date: 09-JAN-18

Page 1 of 3

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

Contact: Allan Knight

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3929848							
WG2694630-3	DUP	L2042020-21						
% Moisture		15.7	15.7		%	0.3	20	06-JAN-18
WG2694630-2	LCS							
% Moisture			100.1		%		90-110	06-JAN-18
WG2694630-1	MB							
% Moisture			<0.10		%		0.1	06-JAN-18
HG-TCLP-WT		Waste						
Batch	R3930186							
WG2695090-3	DUP	L2041676-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	08-JAN-18
WG2695090-2	LCS							
Mercury (Hg)			98.0		%		70-130	08-JAN-18
WG2695090-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	08-JAN-18
WG2695090-4	MS	L2040886-1						
Mercury (Hg)			94.2		%		50-140	08-JAN-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3931189							
WG2694982-4	DUP	WG2694982-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	08-JAN-18
WG2694982-2	LCS							
Zinc (Zn)-Total			97.2		%		70-130	08-JAN-18
WG2694982-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	08-JAN-18
WG2694982-5	MS	WG2694982-3						
Zinc (Zn)-Total			96.9		%		70-130	08-JAN-18
MET-TCLP-WT		Waste						
Batch	R3931189							
WG2694982-4	DUP	WG2694982-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	08-JAN-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JAN-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	08-JAN-18
Barium (Ba)		0.71	0.73		mg/L	2.2	40	08-JAN-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	08-JAN-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JAN-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JAN-18

Quality Control Report

Workorder: L2041285

Report Date: 09-JAN-18

Page 2 of 3

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

Contact: Allan Knight

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3931189							
WG2694982-4	DUP	WG2694982-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	08-JAN-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	08-JAN-18
WG2694982-2	LCS							
Silver (Ag)			104.4		%		70-130	08-JAN-18
Arsenic (As)			101.6		%		70-130	08-JAN-18
Boron (B)			97.2		%		70-130	08-JAN-18
Barium (Ba)			100.8		%		70-130	08-JAN-18
Cadmium (Cd)			103.3		%		70-130	08-JAN-18
Chromium (Cr)			103.0		%		70-130	08-JAN-18
Lead (Pb)			105.9		%		70-130	08-JAN-18
Selenium (Se)			100.9		%		70-130	08-JAN-18
Uranium (U)			109.6		%		70-130	08-JAN-18
WG2694982-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	08-JAN-18
Arsenic (As)			<0.050		mg/L		0.05	08-JAN-18
Boron (B)			<2.5		mg/L		2.5	08-JAN-18
Barium (Ba)			<0.50		mg/L		0.5	08-JAN-18
Cadmium (Cd)			<0.0050		mg/L		0.005	08-JAN-18
Chromium (Cr)			<0.050		mg/L		0.05	08-JAN-18
Lead (Pb)			<0.050		mg/L		0.05	08-JAN-18
Selenium (Se)			<0.025		mg/L		0.025	08-JAN-18
Uranium (U)			<0.25		mg/L		0.25	08-JAN-18
WG2694982-5	MS	WG2694982-3						
Silver (Ag)			124.4		%		50-150	08-JAN-18
Arsenic (As)			101.4		%		50-150	08-JAN-18
Boron (B)			102.9		%		50-150	08-JAN-18
Barium (Ba)			106.2		%		50-150	08-JAN-18
Cadmium (Cd)			102.2		%		50-150	08-JAN-18
Chromium (Cr)			101.8		%		50-150	08-JAN-18
Lead (Pb)			100.6		%		50-150	08-JAN-18
Selenium (Se)			103.5		%		50-150	08-JAN-18
Uranium (U)			103.9		%		50-150	08-JAN-18

Quality Control Report

Workorder: L2041285

Report Date: 09-JAN-18

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

Page 3 of 3

Contact: Allan Knight

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.

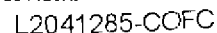
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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COC Number: 15 -

Page 1 of 1

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 EDITION



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

Date Received: 18-JAN-18
Report Date: 22-JAN-18 09:53 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L2046544
Project P.O. #: 4500027854
Job Reference: MS-ASH-155-COMP
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2046544-1 MS-ASH-155-COM1 Sampled By: SS on 13-JAN-18 @ 14:30 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests % Moisture TCLP Metals Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total								
		12.50		0.10	pH units		19-JAN-18	R3940155
		9.91		0.10	pH units		19-JAN-18	R3940155
		1.73		0.10	%	19-JAN-18	20-JAN-18	R3940389
		<0.050		0.050	mg/L		22-JAN-18	R3940814
		<0.50		0.50	mg/L		22-JAN-18	R3940814
		<2.5		2.5	mg/L		22-JAN-18	R3940814
		<0.0050		0.0050	mg/L		22-JAN-18	R3940814
		0.767		0.050	mg/L		22-JAN-18	R3940814
		<0.050		0.050	mg/L		22-JAN-18	R3940814
		<0.00010		0.00010	mg/L		19-JAN-18	R3939608
		<0.025		0.025	mg/L		22-JAN-18	R3940814
		<0.0050		0.0050	mg/L		22-JAN-18	R3940814
		<0.25		0.25	mg/L		22-JAN-18	R3940814
		<1.0		1.0	mg/L		22-JAN-18	R3940814
L2046544-2 MS-ASH-155-COM2 Sampled By: SS on 13-JAN-18 @ 14:30 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests % Moisture TCLP Metals Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total								
		12.28		0.10	pH units		19-JAN-18	R3940155
		11.22		0.10	pH units		19-JAN-18	R3940155
		1.65		0.10	%	19-JAN-18	20-JAN-18	R3940389
		<0.050		0.050	mg/L		22-JAN-18	R3940814
		1.06		0.50	mg/L		22-JAN-18	R3940814
		<2.5		2.5	mg/L		22-JAN-18	R3940814
		<0.0050		0.0050	mg/L		22-JAN-18	R3940814
		0.867		0.050	mg/L		22-JAN-18	R3940814
		<0.050		0.050	mg/L		22-JAN-18	R3940814
		<0.00010		0.00010	mg/L		19-JAN-18	R3939608
		<0.025		0.025	mg/L		22-JAN-18	R3940814
		<0.0050		0.0050	mg/L		22-JAN-18	R3940814
		<0.25		0.25	mg/L		22-JAN-18	R3940814
		<1.0		1.0	mg/L		22-JAN-18	R3940814

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

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	Gravimetric: Oven Dried

** 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: L2046544

Report Date: 22-JAN-18

Page 1 of 3

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

Contact: Allan Knight

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3940389							
WG2701244-3	DUP	L2046843-3						
% Moisture		9.82	9.85		%	0.3	20	20-JAN-18
WG2701244-2	LCS							
% Moisture			100.3		%		90-110	20-JAN-18
WG2701244-1	MB							
% Moisture			<0.10		%		0.1	20-JAN-18
HG-TCLP-WT		Waste						
Batch	R3939608							
WG2701474-3	DUP	L2046123-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	19-JAN-18
WG2701474-2	LCS							
Mercury (Hg)			98.1		%		70-130	19-JAN-18
WG2701474-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	19-JAN-18
WG2701474-4	MS	L2046123-1						
Mercury (Hg)			97.3		%		50-140	19-JAN-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3940814							
WG2702292-4	DUP	WG2702292-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	22-JAN-18
WG2702292-2	LCS							
Zinc (Zn)-Total			94.9		%		70-130	22-JAN-18
WG2702292-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	22-JAN-18
WG2702292-5	MS	WG2702292-3						
Zinc (Zn)-Total			96.1		%		70-130	22-JAN-18
MET-TCLP-WT		Waste						
Batch	R3940814							
WG2702292-4	DUP	WG2702292-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-JAN-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-JAN-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	22-JAN-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	22-JAN-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-JAN-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-JAN-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-JAN-18

Quality Control Report

Workorder: L2046544

Report Date: 22-JAN-18

Page 2 of 3

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

Contact: Allan Knight

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3940814							
WG2702292-4	DUP	WG2702292-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	22-JAN-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	22-JAN-18
WG2702292-2	LCS							
Silver (Ag)			100.1		%		70-130	22-JAN-18
Arsenic (As)			99.5		%		70-130	22-JAN-18
Boron (B)			93.9		%		70-130	22-JAN-18
Barium (Ba)			102.4		%		70-130	22-JAN-18
Cadmium (Cd)			97.5		%		70-130	22-JAN-18
Chromium (Cr)			100.6		%		70-130	22-JAN-18
Lead (Pb)			100.3		%		70-130	22-JAN-18
Selenium (Se)			98.5		%		70-130	22-JAN-18
Uranium (U)			99.9		%		70-130	22-JAN-18
WG2702292-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	22-JAN-18
Arsenic (As)			<0.050		mg/L		0.05	22-JAN-18
Boron (B)			<2.5		mg/L		2.5	22-JAN-18
Barium (Ba)			<0.50		mg/L		0.5	22-JAN-18
Cadmium (Cd)			<0.0050		mg/L		0.005	22-JAN-18
Chromium (Cr)			<0.050		mg/L		0.05	22-JAN-18
Lead (Pb)			<0.050		mg/L		0.05	22-JAN-18
Selenium (Se)			<0.025		mg/L		0.025	22-JAN-18
Uranium (U)			<0.25		mg/L		0.25	22-JAN-18
WG2702292-5	MS	WG2702292-3						
Silver (Ag)			122.8		%		50-150	22-JAN-18
Arsenic (As)			101.2		%		50-150	22-JAN-18
Boron (B)			98.9		%		50-150	22-JAN-18
Barium (Ba)			102.1		%		50-150	22-JAN-18
Cadmium (Cd)			102.4		%		50-150	22-JAN-18
Chromium (Cr)			99.4		%		50-150	22-JAN-18
Lead (Pb)			96.5		%		50-150	22-JAN-18
Selenium (Se)			100.2		%		50-150	22-JAN-18
Uranium (U)			95.5		%		50-150	22-JAN-18

Quality Control Report

Workorder: L2046544

Report Date: 22-JAN-18

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

Page 3 of 3

Contact: Allan Knight

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.

[illegible]

RETURN TO BACK PAGE FOR AFS LOCATIONS AND SAMPLING INFORMATION

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

OCTOBER 2015 FRONT



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-18
Report Date: 14-FEB-18 11:35 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2054433
Project P.O. #: 4500040417
Job Reference: MP-ASH-208
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

* 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	Gravimetric: Oven Dried

** 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: L2054433

Report Date: 14-FEB-18

Page 1 of 3

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	R3959577							
WG2713739-3	DUP	L2054267-4						
% Moisture		9.86	10.9		%	9.6	20	09-FEB-18
WG2713739-2	LCS							
% Moisture			97.1		%		90-110	09-FEB-18
WG2713739-1	MB							
% Moisture			<0.10		%		0.1	09-FEB-18
HG-TCLP-WT		Waste						
Batch	R3960937							
WG2716098-3	DUP	L2052065-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	14-FEB-18
WG2716098-2	LCS							
Mercury (Hg)			94.1		%		70-130	14-FEB-18
WG2716098-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	14-FEB-18
WG2716098-4	MS	L2052065-1						
Mercury (Hg)			94.1		%		50-140	14-FEB-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3960634							
WG2715482-4	DUP	WG2715482-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	13-FEB-18
WG2715482-2	LCS							
Zinc (Zn)-Total			95.6		%		70-130	13-FEB-18
WG2715482-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	13-FEB-18
WG2715482-5	MS	WG2715482-3						
Zinc (Zn)-Total			94.8		%		70-130	13-FEB-18
MET-TCLP-WT		Waste						
Batch	R3960634							
WG2715482-4	DUP	WG2715482-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-FEB-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-FEB-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	13-FEB-18
Barium (Ba)		0.66	0.66		mg/L	0.6	40	13-FEB-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-FEB-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-FEB-18
Lead (Pb)		0.064	0.063		mg/L	1.5	40	13-FEB-18



Quality Control Report

Workorder: L2054433

Report Date: 14-FEB-18

Page 2 of 3

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	R3960634							
WG2715482-4	DUP	WG2715482-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	13-FEB-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	13-FEB-18
WG2715482-2	LCS							
Silver (Ag)			103.9		%		70-130	13-FEB-18
Arsenic (As)			100.1		%		70-130	13-FEB-18
Boron (B)			100.7		%		70-130	13-FEB-18
Barium (Ba)			105.8		%		70-130	13-FEB-18
Cadmium (Cd)			98.3		%		70-130	13-FEB-18
Chromium (Cr)			102.7		%		70-130	13-FEB-18
Lead (Pb)			99.98		%		70-130	13-FEB-18
Selenium (Se)			99.7		%		70-130	13-FEB-18
Uranium (U)			101.6		%		70-130	13-FEB-18
WG2715482-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	13-FEB-18
Arsenic (As)			<0.050		mg/L		0.05	13-FEB-18
Boron (B)			<2.5		mg/L		2.5	13-FEB-18
Barium (Ba)			<0.50		mg/L		0.5	13-FEB-18
Cadmium (Cd)			<0.0050		mg/L		0.005	13-FEB-18
Chromium (Cr)			<0.050		mg/L		0.05	13-FEB-18
Lead (Pb)			<0.050		mg/L		0.05	13-FEB-18
Selenium (Se)			<0.025		mg/L		0.025	13-FEB-18
Uranium (U)			<0.25		mg/L		0.25	13-FEB-18
WG2715482-5	MS	WG2715482-3						
Silver (Ag)			121.3		%		50-150	13-FEB-18
Arsenic (As)			99.5		%		50-150	13-FEB-18
Boron (B)			93.7		%		50-150	13-FEB-18
Barium (Ba)			99.3		%		50-150	13-FEB-18
Cadmium (Cd)			99.5		%		50-150	13-FEB-18
Chromium (Cr)			99.97		%		50-150	13-FEB-18
Lead (Pb)			96.3		%		50-150	13-FEB-18
Selenium (Se)			99.5		%		50-150	13-FEB-18
Uranium (U)			98.3		%		50-150	13-FEB-18

Quality Control Report

Workorder: L2054433

Report Date: 14-FEB-18

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

Page 3 of 3

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.



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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: Allan Knight					
Phone: 647-253-0598 EXT 6010					
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:					
Project Information					
ALS Account # / Quote #: 23642/Q42455					
Job #: MP-ASH-208					
PO / AFE: 4500027854					
LSD:					
ALS Lab Work Order # (lab use only) L2854433					
Sample Identification and/or Coordinates (This description will appear on the report)					
MP-ASH-208					
ALS Contact:					
Date (dd-mm-yy) 28-Jan-18					
Time (hh:mm) 18:00					
Sampler: SS					
Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)					
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					
SHIPMENT RELEASE (client use) Released by: Ezra Arreak Date: January 28, 2018 Time: 18:30					
INITIAL SHIPMENT RECEPTION (lab use only) Received by: Date: Time:					
FINAL SHIPMENT RECEPTION (lab use only) Received by: Date: Time:					

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

WHITE - LABORATORY COPY
YELLOW - CLIENT COPY

100

—

UNIVERSITY OF CALIFORNIA



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

Date Received: 16-FEB-18
Report Date: 22-FEB-18 11:53 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2057814
Project P.O. #: 4500040417
Job Reference: MS-ASH-156
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2057814-1	MS-ASH-156							
Sampled By:	BW on 11-FEB-18 @ 14:00							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.87		0.10	pH units		21-FEB-18	R3966910
Final pH		11.70		0.10	pH units		21-FEB-18	R3966910
Physical Tests								
% Moisture		0.13		0.10	%	21-FEB-18	21-FEB-18	R3967360
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		21-FEB-18	R3967274
Barium (Ba)		0.88		0.50	mg/L		21-FEB-18	R3967274
Boron (B)		<2.5		2.5	mg/L		21-FEB-18	R3967274
Cadmium (Cd)		<0.0050		0.0050	mg/L		21-FEB-18	R3967274
Chromium (Cr)		2.22		0.050	mg/L		21-FEB-18	R3967274
Lead (Pb)		<0.050		0.050	mg/L		21-FEB-18	R3967274
Mercury (Hg)		<0.00010		0.00010	mg/L		22-FEB-18	R3967550
Selenium (Se)		<0.025		0.025	mg/L		21-FEB-18	R3967274
Silver (Ag)		<0.0050		0.0050	mg/L		21-FEB-18	R3967274
Uranium (U)		<0.25		0.25	mg/L		21-FEB-18	R3967274
Zinc (Zn)-Total		<1.0		1.0	mg/L		21-FEB-18	R3967274

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

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	Gravimetric: Oven Dried

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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: L2057814

Report Date: 22-FEB-18

Page 1 of 3

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	R3967360							
WG2719546-3	DUP	L2057563-14						
% Moisture		3.47	3.54		%	2.2	20	21-FEB-18
WG2719546-2	LCS							
% Moisture			100.2		%		90-110	21-FEB-18
WG2719546-1	MB							
% Moisture			<0.10		%		0.1	21-FEB-18
HG-TCLP-WT		Waste						
Batch	R3967550							
WG2719883-3	DUP	L2057557-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	22-FEB-18
WG2719883-2	LCS							
Mercury (Hg)			99.0		%		70-130	22-FEB-18
WG2719883-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	22-FEB-18
WG2719883-4	MS	L2057557-1						
Mercury (Hg)			97.2		%		50-140	22-FEB-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3967274							
WG2719860-4	DUP	WG2719860-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	21-FEB-18
WG2719860-2	LCS							
Zinc (Zn)-Total			88.7		%		70-130	21-FEB-18
WG2719860-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	21-FEB-18
WG2719860-5	MS	WG2719860-3						
Zinc (Zn)-Total			91.9		%		70-130	21-FEB-18
MET-TCLP-WT		Waste						
Batch	R3967274							
WG2719860-4	DUP	WG2719860-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	21-FEB-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	21-FEB-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	21-FEB-18
Barium (Ba)		0.95	0.89		mg/L	7.0	40	21-FEB-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	21-FEB-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	21-FEB-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	21-FEB-18

Quality Control Report

Workorder: L2057814

Report Date: 22-FEB-18

Page 2 of 3

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	R3967274							
WG2719860-4	DUP	WG2719860-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	21-FEB-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	21-FEB-18
WG2719860-2	LCS							
Silver (Ag)			93.2		%		70-130	21-FEB-18
Arsenic (As)			94.7		%		70-130	21-FEB-18
Boron (B)			95.3		%		70-130	21-FEB-18
Barium (Ba)			98.0		%		70-130	21-FEB-18
Cadmium (Cd)			95.1		%		70-130	21-FEB-18
Chromium (Cr)			95.4		%		70-130	21-FEB-18
Lead (Pb)			94.4		%		70-130	21-FEB-18
Selenium (Se)			91.9		%		70-130	21-FEB-18
Uranium (U)			95.6		%		70-130	21-FEB-18
WG2719860-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	21-FEB-18
Arsenic (As)			<0.050		mg/L		0.05	21-FEB-18
Boron (B)			<2.5		mg/L		2.5	21-FEB-18
Barium (Ba)			<0.50		mg/L		0.5	21-FEB-18
Cadmium (Cd)			<0.0050		mg/L		0.005	21-FEB-18
Chromium (Cr)			<0.050		mg/L		0.05	21-FEB-18
Lead (Pb)			<0.050		mg/L		0.05	21-FEB-18
Selenium (Se)			<0.025		mg/L		0.025	21-FEB-18
Uranium (U)			<0.25		mg/L		0.25	21-FEB-18
WG2719860-5	MS	WG2719860-3						
Silver (Ag)			113.4		%		50-150	21-FEB-18
Arsenic (As)			96.9		%		50-150	21-FEB-18
Boron (B)			91.2		%		50-150	21-FEB-18
Barium (Ba)			95.7		%		50-150	21-FEB-18
Cadmium (Cd)			97.9		%		50-150	21-FEB-18
Chromium (Cr)			96.3		%		50-150	21-FEB-18
Lead (Pb)			94.0		%		50-150	21-FEB-18
Selenium (Se)			95.8		%		50-150	21-FEB-18
Uranium (U)			96.4		%		50-150	21-FEB-18

Quality Control Report

Workorder: L2057814

Report Date: 22-FEB-18

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

Page 3 of 3

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.

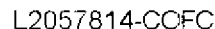
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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Page 1 of 1

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Report To						Contact and company name below will appear on the final report						Report Format / Distribution						Select Service Level Below - 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						4 day [P4] ☐									1 Business day [E1] ☐								
Phone:						647-253-0596 EXT 6016						☐ Compare Results to Criteria on Report - provide details below if box checked						3 day [P3] ☐									Same Day, Weekend or Statutory holiday [E0] ☐								
						Company address below will appear on the final report						Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX						2 day [P2] ☐																	
Street:						2275 Upper Middle Rd. E., Suite #300						Email 1 or Fax bimcore@alsglobal.com						Date and Time Required for all E&P TATs:									do-mmm-yy hh:mm								
City/Province:						Oakville, ON						Email 2 birmww@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						Analysis Request																	
Invoice To						Same as Report To ☒ YES ☐ NO						Invoice Distribution						Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																	
						Copy of Invoice with Report ☐ YES ☒ NO						Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX																							
Company:												Email 1 or Fax ap@baffinland.com						Number of Containers																	
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 #: MS-ASH-156						Major/Minor Code: Routing Code:						BIM-TCLP-MET1-WT TCLP Hg,Ag,As,Ba,Cd,Cr,Pb,Se,Zn																							
PO / AFE: 4500040417						Requisitioner:																													
LSD:						Location:																													
ALS Lab Work Order # (lab use only) L2057814						ALS Contact:																								Sampler: BW					
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)				Date (dd-mm-yy)		Time (hh:mm)		Sample Type		2																							
1		MS-ASH-156				18-Feb-11		14:00		Soil																									
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)						SAMPLE CONDITION AS RECEIVED (lab use only)																							
Are samples taken from a Regulated DW System? ☐ YES ☐ NO												Frozen ☐ SIF Observations Yes ☐ No ☐																							
Are samples for human drinking water use? ☐ YES ☒ NO												Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐																							
												Cooling Initiated ☐																							
												INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C																							
												20.6																							
SHIPMENT RELEASE (client use)						INITIAL SHIPMENT RECEPTION (lab use only)						FINAL SHIPMENT RECEPTION (lab use only)																							
Released by: Ben Widdowson		Date: February 11, 2018		Time: 14:28		Received by:		Date:		Time:		Received by: DJ		Date: 16/02/18		Time: 14:00																			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 EDITION

Failure to complete all portions of this form may delay analysis. Please fill in this form I EGRL Y. 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-MAR-18
Report Date: 12-MAR-18 13:22 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2065174
Project P.O. #: 4500040417
Job Reference: MS-ASH-157
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2065174-1	MS-ASH-157							
Sampled By:	SS on 05-MAR-18 @ 15:30							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.79		0.10	pH units		10-MAR-18	R3982380
Final pH		6.40		0.10	pH units		10-MAR-18	R3982380
Physical Tests								
% Moisture		0.30		0.10	%	08-MAR-18	08-MAR-18	R3979591
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		12-MAR-18	R3983187
Barium (Ba)		<0.50		0.50	mg/L		12-MAR-18	R3983187
Boron (B)		4.2		2.5	mg/L		12-MAR-18	R3983187
Cadmium (Cd)		<0.0050		0.0050	mg/L		12-MAR-18	R3983187
Chromium (Cr)		<0.050		0.050	mg/L		12-MAR-18	R3983187
Lead (Pb)		<0.050		0.050	mg/L		12-MAR-18	R3983187
Mercury (Hg)		<0.00010		0.00010	mg/L		12-MAR-18	R3983439
Selenium (Se)		0.033		0.025	mg/L		12-MAR-18	R3983187
Silver (Ag)		<0.0050		0.0050	mg/L		12-MAR-18	R3983187
Uranium (U)		<0.25		0.25	mg/L		12-MAR-18	R3983187
Zinc (Zn)-Total		24.9		1.0	mg/L		12-MAR-18	R3983187

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

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	Gravimetric: Oven Dried

** 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: L2065174

Report Date: 12-MAR-18

Page 1 of 3

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	R3979591							
WG2729098-3	DUP	L2064969-9						
% Moisture		18.4	17.6		%	4.4	20	08-MAR-18
WG2729098-2	LCS							
% Moisture			100.1		%		90-110	08-MAR-18
WG2729098-1	MB							
% Moisture			<0.10		%		0.1	08-MAR-18
HG-TCLP-WT		Waste						
Batch	R3983439							
WG2730734-3	DUP	L2064874-6						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-MAR-18
WG2730734-2	LCS							
Mercury (Hg)			102.0		%		70-130	12-MAR-18
WG2730734-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	12-MAR-18
WG2730734-4	MS	L2064874-6						
Mercury (Hg)			107.7		%		50-140	12-MAR-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3983187							
WG2730602-4	DUP	WG2730602-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	12-MAR-18
WG2730602-2	LCS							
Zinc (Zn)-Total			95.2		%		70-130	12-MAR-18
WG2730602-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	12-MAR-18
WG2730602-5	MS	WG2730602-3						
Zinc (Zn)-Total			94.1		%		70-130	12-MAR-18
MET-TCLP-WT		Waste						
Batch	R3983187							
WG2730602-4	DUP	WG2730602-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-MAR-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	12-MAR-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	12-MAR-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-MAR-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18

Quality Control Report

Workorder: L2065174

Report Date: 12-MAR-18

Page 2 of 3

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	R3983187							
WG2730602-4	DUP	WG2730602-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	12-MAR-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	12-MAR-18
WG2730602-2	LCS							
Silver (Ag)			99.6		%		70-130	12-MAR-18
Arsenic (As)			98.0		%		70-130	12-MAR-18
Boron (B)			96.2		%		70-130	12-MAR-18
Barium (Ba)			100.4		%		70-130	12-MAR-18
Cadmium (Cd)			98.7		%		70-130	12-MAR-18
Chromium (Cr)			97.6		%		70-130	12-MAR-18
Lead (Pb)			98.7		%		70-130	12-MAR-18
Selenium (Se)			97.7		%		70-130	12-MAR-18
Uranium (U)			95.7		%		70-130	12-MAR-18
WG2730602-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	12-MAR-18
Arsenic (As)			<0.050		mg/L		0.05	12-MAR-18
Boron (B)			<2.5		mg/L		2.5	12-MAR-18
Barium (Ba)			<0.50		mg/L		0.5	12-MAR-18
Cadmium (Cd)			<0.0050		mg/L		0.005	12-MAR-18
Chromium (Cr)			<0.050		mg/L		0.05	12-MAR-18
Lead (Pb)			<0.050		mg/L		0.05	12-MAR-18
Selenium (Se)			<0.025		mg/L		0.025	12-MAR-18
Uranium (U)			<0.25		mg/L		0.25	12-MAR-18
WG2730602-5	MS	WG2730602-3						
Silver (Ag)			114.3		%		50-150	12-MAR-18
Arsenic (As)			97.3		%		50-150	12-MAR-18
Boron (B)			94.5		%		50-150	12-MAR-18
Barium (Ba)			111.2		%		50-150	12-MAR-18
Cadmium (Cd)			98.3		%		50-150	12-MAR-18
Chromium (Cr)			94.8		%		50-150	12-MAR-18
Lead (Pb)			93.4		%		50-150	12-MAR-18
Selenium (Se)			98.7		%		50-150	12-MAR-18
Uranium (U)			93.8		%		50-150	12-MAR-18

Quality Control Report

Workorder: L2065174

Report Date: 12-MAR-18

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

Page 3 of 3

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.

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Canada Toll Free: 1 800 668 9878

L2065174-COFC

Page 1 of 1

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OCTOBER 2014 EPO

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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: William Bowden/Connor Devereaux
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 08-MAR-18
Report Date: 12-MAR-18 13:23 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2065178
Project P.O. #: 4500040417
Job Reference: MP-ASH-209
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2065178-1	MP-ASH-209							
Sampled By:	EA on 02-MAR-18 @ 08:45							
Matrix:	SOIL							
Sample Preparation								
Initial pH		12.34		0.10	pH units		10-MAR-18	R3982380
Final pH		11.62		0.10	pH units		10-MAR-18	R3982380
Physical Tests								
% Moisture		<0.10		0.10	%	08-MAR-18	08-MAR-18	R3979591
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		12-MAR-18	R3983187
Barium (Ba)		0.58		0.50	mg/L		12-MAR-18	R3983187
Boron (B)		<2.5		2.5	mg/L		12-MAR-18	R3983187
Cadmium (Cd)		<0.0050		0.0050	mg/L		12-MAR-18	R3983187
Chromium (Cr)		3.96		0.050	mg/L		12-MAR-18	R3983187
Lead (Pb)		<0.050		0.050	mg/L		12-MAR-18	R3983187
Mercury (Hg)		<0.00010		0.00010	mg/L		12-MAR-18	R3983439
Selenium (Se)		<0.025		0.025	mg/L		12-MAR-18	R3983187
Silver (Ag)		<0.0050		0.0050	mg/L		12-MAR-18	R3983187
Uranium (U)		<0.25		0.25	mg/L		12-MAR-18	R3983187
Zinc (Zn)-Total		<1.0		1.0	mg/L		12-MAR-18	R3983187

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

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	Gravimetric: Oven Dried

** 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: L2065178

Report Date: 12-MAR-18

Page 1 of 3

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	R3979591							
WG2729098-3	DUP	L2064969-9						
% Moisture		18.4	17.6		%	4.4	20	08-MAR-18
WG2729098-2	LCS							
% Moisture			100.1		%		90-110	08-MAR-18
WG2729098-1	MB							
% Moisture			<0.10		%		0.1	08-MAR-18
HG-TCLP-WT		Waste						
Batch	R3983439							
WG2730734-3	DUP	L2064874-6						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-MAR-18
WG2730734-2	LCS							
Mercury (Hg)			102.0		%		70-130	12-MAR-18
WG2730734-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	12-MAR-18
WG2730734-4	MS	L2064874-6						
Mercury (Hg)			107.7		%		50-140	12-MAR-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R3983187							
WG2730602-4	DUP	WG2730602-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	12-MAR-18
WG2730602-2	LCS							
Zinc (Zn)-Total			95.2		%		70-130	12-MAR-18
WG2730602-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	12-MAR-18
WG2730602-5	MS	WG2730602-3						
Zinc (Zn)-Total			94.1		%		70-130	12-MAR-18
MET-TCLP-WT		Waste						
Batch	R3983187							
WG2730602-4	DUP	WG2730602-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-MAR-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	12-MAR-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	12-MAR-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-MAR-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-MAR-18

Quality Control Report

Workorder: L2065178

Report Date: 12-MAR-18

Page 2 of 3

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	R3983187							
WG2730602-4	DUP	WG2730602-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	12-MAR-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	12-MAR-18
WG2730602-2	LCS							
Silver (Ag)			99.6		%		70-130	12-MAR-18
Arsenic (As)			98.0		%		70-130	12-MAR-18
Boron (B)			96.2		%		70-130	12-MAR-18
Barium (Ba)			100.4		%		70-130	12-MAR-18
Cadmium (Cd)			98.7		%		70-130	12-MAR-18
Chromium (Cr)			97.6		%		70-130	12-MAR-18
Lead (Pb)			98.7		%		70-130	12-MAR-18
Selenium (Se)			97.7		%		70-130	12-MAR-18
Uranium (U)			95.7		%		70-130	12-MAR-18
WG2730602-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	12-MAR-18
Arsenic (As)			<0.050		mg/L		0.05	12-MAR-18
Boron (B)			<2.5		mg/L		2.5	12-MAR-18
Barium (Ba)			<0.50		mg/L		0.5	12-MAR-18
Cadmium (Cd)			<0.0050		mg/L		0.005	12-MAR-18
Chromium (Cr)			<0.050		mg/L		0.05	12-MAR-18
Lead (Pb)			<0.050		mg/L		0.05	12-MAR-18
Selenium (Se)			<0.025		mg/L		0.025	12-MAR-18
Uranium (U)			<0.25		mg/L		0.25	12-MAR-18
WG2730602-5	MS	WG2730602-3						
Silver (Ag)			114.3		%		50-150	12-MAR-18
Arsenic (As)			97.3		%		50-150	12-MAR-18
Boron (B)			94.5		%		50-150	12-MAR-18
Barium (Ba)			111.2		%		50-150	12-MAR-18
Cadmium (Cd)			98.3		%		50-150	12-MAR-18
Chromium (Cr)			94.8		%		50-150	12-MAR-18
Lead (Pb)			93.4		%		50-150	12-MAR-18
Selenium (Se)			98.7		%		50-150	12-MAR-18
Uranium (U)			93.8		%		50-150	12-MAR-18

Quality Control Report

Workorder: L2065178

Report Date: 12-MAR-18

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

Page 3 of 3

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.

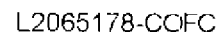
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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COC Number: 15 -

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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YELLOW - CLIENT COPY

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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.

OCTOBER 2016 FRONT



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

Date Received: 05-APR-18
Report Date: 10-APR-18 11:41 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2076106
Project P.O. #: 4500040417
Job Reference: MS-ASH-158
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2076106-1 Sampled By: MS-ASH-158 BW/RB on 03-APR-18 @ 12:00 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests % Moisture TCLP Metals Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total								

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

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	Gravimetric: Oven Dried

** 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: L2076106

Report Date: 10-APR-18

Page 1 of 3

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	R4006735							
WG2746447-3	DUP	L2076359-3						
% Moisture		6.29	6.23		%	1.0	20	06-APR-18
WG2746447-2	LCS							
% Moisture			99.6		%		90-110	06-APR-18
WG2746447-1	MB							
% Moisture			<0.10		%		0.1	06-APR-18
HG-TCLP-WT		Waste						
Batch	R4007523							
WG2747950-3	DUP	L2076426-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	10-APR-18
WG2747950-2	LCS							
Mercury (Hg)			93.5		%		70-130	10-APR-18
WG2747950-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	10-APR-18
WG2747950-4	MS	L2076426-1						
Mercury (Hg)			95.3		%		50-140	10-APR-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4007209							
WG2747450-4	DUP	WG2747450-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	09-APR-18
WG2747450-2	LCS							
Zinc (Zn)-Total			93.8		%		70-130	09-APR-18
WG2747450-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	09-APR-18
WG2747450-5	MS	WG2747450-3						
Zinc (Zn)-Total			99.3		%		70-130	09-APR-18
MET-TCLP-WT		Waste						
Batch	R4007209							
WG2747450-4	DUP	WG2747450-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	09-APR-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	09-APR-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	09-APR-18
Barium (Ba)		0.94	0.95		mg/L	1.4	40	09-APR-18
Cadmium (Cd)		0.0145	0.0146		mg/L	0.3	40	09-APR-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	09-APR-18
Lead (Pb)		0.070	0.072		mg/L	2.5	40	09-APR-18



Quality Control Report

Workorder: L2076106

Report Date: 10-APR-18

Page 2 of 3

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	R4007209							
WG2747450-4	DUP	WG2747450-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	09-APR-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	09-APR-18
WG2747450-2	LCS							
Silver (Ag)			99.2		%		70-130	09-APR-18
Arsenic (As)			98.1		%		70-130	09-APR-18
Boron (B)			95.3		%		70-130	09-APR-18
Barium (Ba)			96.9		%		70-130	09-APR-18
Cadmium (Cd)			101.1		%		70-130	09-APR-18
Chromium (Cr)			96.9		%		70-130	09-APR-18
Lead (Pb)			100.7		%		70-130	09-APR-18
Selenium (Se)			95.5		%		70-130	09-APR-18
Uranium (U)			96.5		%		70-130	09-APR-18
WG2747450-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	09-APR-18
Arsenic (As)			<0.050		mg/L		0.05	09-APR-18
Boron (B)			<2.5		mg/L		2.5	09-APR-18
Barium (Ba)			<0.50		mg/L		0.5	09-APR-18
Cadmium (Cd)			<0.0050		mg/L		0.005	09-APR-18
Chromium (Cr)			<0.050		mg/L		0.05	09-APR-18
Lead (Pb)			<0.050		mg/L		0.05	09-APR-18
Selenium (Se)			<0.025		mg/L		0.025	09-APR-18
Uranium (U)			<0.25		mg/L		0.25	09-APR-18
WG2747450-5	MS	WG2747450-3						
Silver (Ag)			127.0		%		50-150	09-APR-18
Arsenic (As)			102.5		%		50-150	09-APR-18
Boron (B)			102.5		%		50-150	09-APR-18
Barium (Ba)			101.5		%		50-150	09-APR-18
Cadmium (Cd)			107.0		%		50-150	09-APR-18
Chromium (Cr)			100.6		%		50-150	09-APR-18
Lead (Pb)			103.2		%		50-150	09-APR-18
Selenium (Se)			102.1		%		50-150	09-APR-18
Uranium (U)			99.99		%		50-150	09-APR-18

Quality Control Report

Workorder: L2076106

Report Date: 10-APR-18

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

Page 3 of 3

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.



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Page 1 of 1



L2076106-COFC

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 EBC

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-MAY-18
Report Date: 07-MAY-18 13:08 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2087299
Project P.O. #: 4500040417
Job Reference: MP-ASH-210
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2087299-1	MP-ASH-210							
Sampled By:	KB on 23-APR-18 @ 19:00							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.97		0.10	pH units		04-MAY-18	R4033253
Final pH		9.34		0.10	pH units		04-MAY-18	R4033253
Physical Tests								
% Moisture		4.08		0.10	%	02-MAY-18	02-MAY-18	R4030791
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-MAY-18	R4034908
Barium (Ba)		<0.50		0.50	mg/L		07-MAY-18	R4034908
Boron (B)		4.0		2.5	mg/L		07-MAY-18	R4034908
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-MAY-18	R4034908
Chromium (Cr)		0.683		0.050	mg/L		07-MAY-18	R4034908
Lead (Pb)		<0.050		0.050	mg/L		07-MAY-18	R4034908
Mercury (Hg)		<0.00010		0.00010	mg/L		07-MAY-18	R4035094
Selenium (Se)		<0.025		0.025	mg/L		07-MAY-18	R4034908
Silver (Ag)		<0.0050		0.0050	mg/L		07-MAY-18	R4034908
Uranium (U)		<0.25		0.25	mg/L		07-MAY-18	R4034908
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-MAY-18	R4034908

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

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	Gravimetric: Oven Dried

** 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: L2087299

Report Date: 07-MAY-18

Page 1 of 3

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	R4030791							
WG2762938-3	DUP	L2087239-1						
% Moisture		6.35	6.33		%	0.3	20	02-MAY-18
WG2762938-2	LCS							
% Moisture			99.8		%		90-110	02-MAY-18
WG2762938-1	MB							
% Moisture			<0.10		%		0.1	02-MAY-18
HG-TCLP-WT		Waste						
Batch	R4035094							
WG2765980-3	DUP	L2086817-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	07-MAY-18
WG2765980-2	LCS							
Mercury (Hg)			99.3		%		70-130	07-MAY-18
WG2765980-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	07-MAY-18
WG2765980-4	MS	L2086817-1						
Mercury (Hg)			86.2		%		50-140	07-MAY-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4034908							
WG2765916-4	DUP	WG2765916-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	07-MAY-18
WG2765916-2	LCS							
Zinc (Zn)-Total			99.9		%		70-130	07-MAY-18
WG2765916-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	07-MAY-18
WG2765916-5	MS	WG2765916-3						
Zinc (Zn)-Total			100.1		%		70-130	07-MAY-18
MET-TCLP-WT		Waste						
Batch	R4034908							
WG2765916-4	DUP	WG2765916-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-MAY-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-MAY-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	07-MAY-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	07-MAY-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-MAY-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-MAY-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-MAY-18

Quality Control Report

Workorder: L2087299

Report Date: 07-MAY-18

Page 2 of 3

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	R4034908							
WG2765916-4	DUP	WG2765916-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	07-MAY-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	07-MAY-18
WG2765916-2	LCS							
Silver (Ag)			100.7		%		70-130	07-MAY-18
Arsenic (As)			100.3		%		70-130	07-MAY-18
Boron (B)			96.0		%		70-130	07-MAY-18
Barium (Ba)			103.2		%		70-130	07-MAY-18
Cadmium (Cd)			101.4		%		70-130	07-MAY-18
Chromium (Cr)			102.0		%		70-130	07-MAY-18
Lead (Pb)			97.1		%		70-130	07-MAY-18
Selenium (Se)			101.2		%		70-130	07-MAY-18
Uranium (U)			100.6		%		70-130	07-MAY-18
WG2765916-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	07-MAY-18
Arsenic (As)			<0.050		mg/L		0.05	07-MAY-18
Boron (B)			<2.5		mg/L		2.5	07-MAY-18
Barium (Ba)			<0.50		mg/L		0.5	07-MAY-18
Cadmium (Cd)			<0.0050		mg/L		0.005	07-MAY-18
Chromium (Cr)			<0.050		mg/L		0.05	07-MAY-18
Lead (Pb)			<0.050		mg/L		0.05	07-MAY-18
Selenium (Se)			<0.025		mg/L		0.025	07-MAY-18
Uranium (U)			<0.25		mg/L		0.25	07-MAY-18
WG2765916-5	MS	WG2765916-3						
Silver (Ag)			121.7		%		50-150	07-MAY-18
Arsenic (As)			103.5		%		50-150	07-MAY-18
Boron (B)			93.5		%		50-150	07-MAY-18
Barium (Ba)			92.0		%		50-150	07-MAY-18
Cadmium (Cd)			102.3		%		50-150	07-MAY-18
Chromium (Cr)			104.8		%		50-150	07-MAY-18
Lead (Pb)			93.8		%		50-150	07-MAY-18
Selenium (Se)			105.6		%		50-150	07-MAY-18
Uranium (U)			98.1		%		50-150	07-MAY-18

Quality Control Report

Workorder: L2087299

Report Date: 07-MAY-18

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

Page 3 of 3

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.



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L2087299-COFC

COC Number: 15 -

Page 1 of 1

Report To Contact and company name below will appear on the final report		Report Format / Distr.		Service Level below - 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		EMERGENCY											
Phone:	647-253-0596 EXT 6016	☐ Compare Results to Criteria on Report - provide details below if box checked		4 day [P4] ☐ 3 day [P3] ☐ 2 day [P2] ☐											
Company address below will appear on the final report		Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX		1 Business day [E1] ☐ Same Day, Weekend or Statutory holiday [E0] ☐											
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-mm-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		Analysis Request											
Invoice To	Same as Report To ☒ YES ☐ NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											
	Copy of Invoice with Report ☐ YES ☒ NO	Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX													
Company:		Email 1 or Fax ap@baffinland.com		Number of Containers											
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-210	Major/Minor Code: Routing Code:		BIM-TCCLP-MET1-WT (TCCLP Hg, Ag, As, Ba, Cd, Cr, Pb, Se, Zn)											
PO / AFE:	4500040417	Requisitioner:													
LSD:		Location:													
ALS Lab Work Order # (lab use only) L208729981		ALS Contact:													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type											
	MP-ASH-210	23-Apr-18	19:00	Soil	R										
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)			SAMPLE CONDITION AS RECEIVED (lab use only)										
Are samples taken from a Regulated DW System? ☐ YES ☒ NO					Frozen ☐ SIF Observations Yes ☐ No ☐										
Are samples for human drinking water use? ☐ YES ☒ NO					Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐										
					Cooling Initiated ☐										
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)										
Released By: Ben Widdowson	Date: April 24, 2018	Time: 6:25	Received by:	Date:	Time:	Received by:	Date:	Time:							

REFER TO BACK PAGE FOR AIS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

VOLUME 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: 17-MAY-18
Report Date: 23-MAY-18 07:54 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2096177
Project P.O. #: 4500040417
Job Reference: MS-ASH-159
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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	Gravimetric: Oven Dried

** 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: L2096177

Report Date: 23-MAY-18

Page 1 of 3

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	R4051829							
WG2777423-3	DUP	L2096109-2						
% Moisture		12.3	11.6		%	6.1	20	22-MAY-18
WG2777423-2	LCS							
% Moisture			100.5		%		90-110	22-MAY-18
WG2777423-1	MB							
% Moisture			<0.10		%		0.1	22-MAY-18
HG-TCLP-WT		Waste						
Batch	R4050160							
WG2777283-3	DUP	L2094121-12						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	22-MAY-18
WG2777283-2	LCS							
Mercury (Hg)			103.0		%		70-130	22-MAY-18
WG2777283-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	22-MAY-18
WG2777283-4	MS	L2094121-12						
Mercury (Hg)			95.5		%		50-140	22-MAY-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4050111							
WG2777133-4	DUP	WG2777133-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	22-MAY-18
WG2777133-2	LCS							
Zinc (Zn)-Total			94.0		%		70-130	22-MAY-18
WG2777133-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	22-MAY-18
WG2777133-5	MS	WG2777133-3						
Zinc (Zn)-Total			91.2		%		70-130	22-MAY-18
MET-TCLP-WT		Waste						
Batch	R4050111							
WG2777133-4	DUP	WG2777133-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-MAY-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	22-MAY-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	22-MAY-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-MAY-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18



Quality Control Report

Workorder: L2096177

Report Date: 23-MAY-18

Page 2 of 3

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	R4050111							
WG2777133-4	DUP	WG2777133-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	22-MAY-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	22-MAY-18
WG2777133-2	LCS							
Silver (Ag)			101.2		%		70-130	22-MAY-18
Arsenic (As)			98.3		%		70-130	22-MAY-18
Boron (B)			94.7		%		70-130	22-MAY-18
Barium (Ba)			101.7		%		70-130	22-MAY-18
Cadmium (Cd)			102.6		%		70-130	22-MAY-18
Chromium (Cr)			98.7		%		70-130	22-MAY-18
Lead (Pb)			106.3		%		70-130	22-MAY-18
Selenium (Se)			96.6		%		70-130	22-MAY-18
Uranium (U)			104.1		%		70-130	22-MAY-18
WG2777133-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	22-MAY-18
Arsenic (As)			<0.050		mg/L		0.05	22-MAY-18
Boron (B)			<2.5		mg/L		2.5	22-MAY-18
Barium (Ba)			<0.50		mg/L		0.5	22-MAY-18
Cadmium (Cd)			<0.0050		mg/L		0.005	22-MAY-18
Chromium (Cr)			<0.050		mg/L		0.05	22-MAY-18
Lead (Pb)			<0.050		mg/L		0.05	22-MAY-18
Selenium (Se)			<0.025		mg/L		0.025	22-MAY-18
Uranium (U)			<0.25		mg/L		0.25	22-MAY-18
WG2777133-5	MS	WG2777133-3						
Silver (Ag)			112.8		%		50-150	22-MAY-18
Arsenic (As)			95.3		%		50-150	22-MAY-18
Boron (B)			90.7		%		50-150	22-MAY-18
Barium (Ba)			101.5		%		50-150	22-MAY-18
Cadmium (Cd)			97.4		%		50-150	22-MAY-18
Chromium (Cr)			93.5		%		50-150	22-MAY-18
Lead (Pb)			93.6		%		50-150	22-MAY-18
Selenium (Se)			94.8		%		50-150	22-MAY-18
Uranium (U)			96.8		%		50-150	22-MAY-18

Quality Control Report

Workorder: L2096177

Report Date: 23-MAY-18

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

Page 3 of 3

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.



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2096177-COFC

COC Number: 15 -

Page 1 of 1

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - 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] ☐		EMERGENCY		1 Business day [E1] ☐																																																																																																																																																																																																																																																																																																															
Phone:	647-253-0596 EXT 6016	☐ Compare Results to Criteria on Report - provide details below if box checked			3 day [P3] ☐		2 day [P2] ☐		Same Day, Weekend or Statutory holiday [E0] ☐																																																																																																																																																																																																																																																																																																																	
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Street:	2275 Upper Middle Rd. E., Suite #300	Email 1 or Fax bimcore@alsglobal.com			For tests that can not be performed according to the service level selected, you will be contacted.																																																																																																																																																																																																																																																																																																																					
City/Province:	Oakville, ON	Email 2 bimww@alsglobal.com			Analysis Request																																																																																																																																																																																																																																																																																																																					
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Drinking Water (DW) Samples¹ (client use)		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)																																																																																																																																																																																																																																																																																																																					
Are samples taken from a Regulated DW System?					Frozen ☐ SIF Observations Yes ☐ No ☐																																																																																																																																																																																																																																																																																																																					
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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.

OCTOBER 2015 FRONT



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

Date Received: 17-MAY-18
Report Date: 23-MAY-18 07:55 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2096191
Project P.O. #: 4500040417
Job Reference: MP-ASH-211
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

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

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	Gravimetric: Oven Dried

** 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: L2096191

Report Date: 23-MAY-18

Page 1 of 3

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	R4051827							
WG2777409-3	DUP	L2096263-25						
% Moisture		15.6	14.3		%	8.6	20	22-MAY-18
WG2777409-2	LCS							
% Moisture			99.9		%		90-110	22-MAY-18
WG2777409-1	MB							
% Moisture			<0.10		%		0.1	22-MAY-18
HG-TCLP-WT		Waste						
Batch	R4050160							
WG2777283-3	DUP	L2094121-12						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	22-MAY-18
WG2777283-2	LCS							
Mercury (Hg)			103.0		%		70-130	22-MAY-18
WG2777283-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	22-MAY-18
WG2777283-4	MS	L2094121-12						
Mercury (Hg)			95.5		%		50-140	22-MAY-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4050111							
WG2777133-4	DUP	WG2777133-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	22-MAY-18
WG2777133-2	LCS							
Zinc (Zn)-Total			94.0		%		70-130	22-MAY-18
WG2777133-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	22-MAY-18
WG2777133-5	MS	WG2777133-3						
Zinc (Zn)-Total			91.2		%		70-130	22-MAY-18
MET-TCLP-WT		Waste						
Batch	R4050111							
WG2777133-4	DUP	WG2777133-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-MAY-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	22-MAY-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	22-MAY-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	22-MAY-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	22-MAY-18

Quality Control Report

Workorder: L2096191

Report Date: 23-MAY-18

Page 2 of 3

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	R4050111							
WG2777133-4	DUP	WG2777133-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	22-MAY-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	22-MAY-18
WG2777133-2	LCS							
Silver (Ag)			101.2		%		70-130	22-MAY-18
Arsenic (As)			98.3		%		70-130	22-MAY-18
Boron (B)			94.7		%		70-130	22-MAY-18
Barium (Ba)			101.7		%		70-130	22-MAY-18
Cadmium (Cd)			102.6		%		70-130	22-MAY-18
Chromium (Cr)			98.7		%		70-130	22-MAY-18
Lead (Pb)			106.3		%		70-130	22-MAY-18
Selenium (Se)			96.6		%		70-130	22-MAY-18
Uranium (U)			104.1		%		70-130	22-MAY-18
WG2777133-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	22-MAY-18
Arsenic (As)			<0.050		mg/L		0.05	22-MAY-18
Boron (B)			<2.5		mg/L		2.5	22-MAY-18
Barium (Ba)			<0.50		mg/L		0.5	22-MAY-18
Cadmium (Cd)			<0.0050		mg/L		0.005	22-MAY-18
Chromium (Cr)			<0.050		mg/L		0.05	22-MAY-18
Lead (Pb)			<0.050		mg/L		0.05	22-MAY-18
Selenium (Se)			<0.025		mg/L		0.025	22-MAY-18
Uranium (U)			<0.25		mg/L		0.25	22-MAY-18
WG2777133-5	MS	WG2777133-3						
Silver (Ag)			112.8		%		50-150	22-MAY-18
Arsenic (As)			95.3		%		50-150	22-MAY-18
Boron (B)			90.7		%		50-150	22-MAY-18
Barium (Ba)			101.5		%		50-150	22-MAY-18
Cadmium (Cd)			97.4		%		50-150	22-MAY-18
Chromium (Cr)			93.5		%		50-150	22-MAY-18
Lead (Pb)			93.6		%		50-150	22-MAY-18
Selenium (Se)			94.8		%		50-150	22-MAY-18
Uranium (U)			96.8		%		50-150	22-MAY-18

Quality Control Report

Workorder: L2096191

Report Date: 23-MAY-18

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

Page 3 of 3

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.

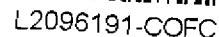
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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COC Number: 15 -

Page 1 of 1

[illegible]

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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**.

OCTOBER 2015 EBC



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

Date Received: 31-MAY-18
Report Date: 06-JUN-18 09:56 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2103411
Project P.O. #: 4500040417
Job Reference: 4500040417
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2103411-1	MS-ASH-160							
Sampled By:	DZ/SS on 28-MAY-18 @ 15:15							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.87		0.10	pH units		04-JUN-18	R4067601
Final pH		8.99		0.10	pH units		04-JUN-18	R4067601
Physical Tests								
% Moisture		<0.10		0.10	%	05-JUN-18	05-JUN-18	R4071533
TCLP Metals								
Arsenic (As)		0.090		0.050	mg/L		04-JUN-18	R4068267
Barium (Ba)		<0.50		0.50	mg/L		04-JUN-18	R4068267
Boron (B)		<2.5		2.5	mg/L		04-JUN-18	R4068267
Cadmium (Cd)		<0.0050		0.0050	mg/L		04-JUN-18	R4068267
Chromium (Cr)		<0.050		0.050	mg/L		04-JUN-18	R4068267
Lead (Pb)		<0.050		0.050	mg/L		04-JUN-18	R4068267
Mercury (Hg)		<0.00010		0.00010	mg/L		05-JUN-18	R4069608
Selenium (Se)		<0.025		0.025	mg/L		04-JUN-18	R4068267
Silver (Ag)		<0.0050		0.0050	mg/L		04-JUN-18	R4068267
Uranium (U)		<0.25		0.25	mg/L		04-JUN-18	R4068267
Zinc (Zn)-Total		<1.0		1.0	mg/L		04-JUN-18	R4068267

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

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	Gravimetric: Oven Dried

** 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:

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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.

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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: L2103411

Report Date: 06-JUN-18

Page 1 of 3

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	R4071533							
WG2788854-3	DUP	L2104587-3						
% Moisture		15.6	15.7		%	0.4	20	05-JUN-18
WG2788854-2	LCS							
% Moisture			99.8		%		90-110	05-JUN-18
WG2788854-1	MB							
% Moisture			<0.10		%		0.1	05-JUN-18
HG-TCLP-WT		Waste						
Batch	R4069608							
WG2788724-3	DUP	L2103273-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	05-JUN-18
WG2788724-2	LCS							
Mercury (Hg)			97.0		%		70-130	05-JUN-18
WG2788724-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	05-JUN-18
WG2788724-4	MS	L2103273-1						
Mercury (Hg)			89.7		%		50-140	05-JUN-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4068267							
WG2788077-4	DUP	WG2788077-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	04-JUN-18
WG2788077-2	LCS							
Zinc (Zn)-Total			93.6		%		70-130	04-JUN-18
WG2788077-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	04-JUN-18
WG2788077-5	MS	WG2788077-3						
Zinc (Zn)-Total			98.3		%		70-130	04-JUN-18
MET-TCLP-WT		Waste						
Batch	R4068267							
WG2788077-4	DUP	WG2788077-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	04-JUN-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUN-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	04-JUN-18
Barium (Ba)		0.63	0.67		mg/L	5.8	40	04-JUN-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	04-JUN-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUN-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUN-18

Quality Control Report

Workorder: L2103411

Report Date: 06-JUN-18

Page 2 of 3

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	R4068267							
WG2788077-4	DUP	WG2788077-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	04-JUN-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	04-JUN-18
WG2788077-2	LCS							
Silver (Ag)			101.7		%		70-130	04-JUN-18
Arsenic (As)			96.9		%		70-130	04-JUN-18
Boron (B)			97.5		%		70-130	04-JUN-18
Barium (Ba)			95.9		%		70-130	04-JUN-18
Cadmium (Cd)			95.2		%		70-130	04-JUN-18
Chromium (Cr)			96.4		%		70-130	04-JUN-18
Lead (Pb)			95.4		%		70-130	04-JUN-18
Selenium (Se)			102.4		%		70-130	04-JUN-18
Uranium (U)			92.0		%		70-130	04-JUN-18
WG2788077-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	04-JUN-18
Arsenic (As)			<0.050		mg/L		0.05	04-JUN-18
Boron (B)			<2.5		mg/L		2.5	04-JUN-18
Barium (Ba)			<0.50		mg/L		0.5	04-JUN-18
Cadmium (Cd)			<0.0050		mg/L		0.005	04-JUN-18
Chromium (Cr)			<0.050		mg/L		0.05	04-JUN-18
Lead (Pb)			<0.050		mg/L		0.05	04-JUN-18
Selenium (Se)			<0.025		mg/L		0.025	04-JUN-18
Uranium (U)			<0.25		mg/L		0.25	04-JUN-18
WG2788077-5	MS	WG2788077-3						
Silver (Ag)			121.2		%		50-150	04-JUN-18
Arsenic (As)			99.6		%		50-150	04-JUN-18
Boron (B)			96.6		%		50-150	04-JUN-18
Barium (Ba)			102.8		%		50-150	04-JUN-18
Cadmium (Cd)			98.1		%		50-150	04-JUN-18
Chromium (Cr)			97.2		%		50-150	04-JUN-18
Lead (Pb)			93.3		%		50-150	04-JUN-18
Selenium (Se)			106.8		%		50-150	04-JUN-18
Uranium (U)			89.7		%		50-150	04-JUN-18

Quality Control Report

Workorder: L2103411

Report Date: 06-JUN-18

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

Page 3 of 3

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.

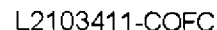
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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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-JUN-18
Report Date: 13-JUN-18 14:32 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2107728
Project P.O. #: 4500040417
Job Reference: MP-ASH-212
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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	Gravimetric: Oven Dried

** 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: L2107728

Report Date: 13-JUN-18

Page 1 of 3

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	R4081659							
WG2795105-3	DUP	L2107203-11						
% Moisture		13.1	12.4		%	5.5	20	12-JUN-18
WG2795105-2	LCS							
% Moisture			100.2		%		90-110	12-JUN-18
WG2795105-1	MB							
% Moisture			<0.10		%		0.1	12-JUN-18
HG-TCLP-WT		Waste						
Batch	R4082051							
WG2795062-3	DUP	L2107642-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	13-JUN-18
WG2795062-2	LCS							
Mercury (Hg)			97.5		%		70-130	13-JUN-18
WG2795062-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	13-JUN-18
WG2795062-4	MS	L2107642-1						
Mercury (Hg)			97.6		%		50-140	13-JUN-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4081537							
WG2795002-4	DUP	WG2795002-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	12-JUN-18
WG2795002-2	LCS							
Zinc (Zn)-Total			97.2		%		70-130	12-JUN-18
WG2795002-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	12-JUN-18
WG2795002-5	MS	WG2795002-3						
Zinc (Zn)-Total			103.5		%		70-130	12-JUN-18
MET-TCLP-WT		Waste						
Batch	R4081537							
WG2795002-4	DUP	WG2795002-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-JUN-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-JUN-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	12-JUN-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	12-JUN-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-JUN-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-JUN-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-JUN-18

Quality Control Report

Workorder: L2107728

Report Date: 13-JUN-18

Page 2 of 3

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	R4081537							
WG2795002-4	DUP	WG2795002-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	12-JUN-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	12-JUN-18
WG2795002-2	LCS							
Silver (Ag)			96.1		%		70-130	12-JUN-18
Arsenic (As)			99.5		%		70-130	12-JUN-18
Boron (B)			98.9		%		70-130	12-JUN-18
Barium (Ba)			107.2		%		70-130	12-JUN-18
Cadmium (Cd)			99.2		%		70-130	12-JUN-18
Chromium (Cr)			98.1		%		70-130	12-JUN-18
Lead (Pb)			109.7		%		70-130	12-JUN-18
Selenium (Se)			98.2		%		70-130	12-JUN-18
Uranium (U)			109.5		%		70-130	12-JUN-18
WG2795002-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	12-JUN-18
Arsenic (As)			<0.050		mg/L		0.05	12-JUN-18
Boron (B)			<2.5		mg/L		2.5	12-JUN-18
Barium (Ba)			<0.50		mg/L		0.5	12-JUN-18
Cadmium (Cd)			<0.0050		mg/L		0.005	12-JUN-18
Chromium (Cr)			<0.050		mg/L		0.05	12-JUN-18
Lead (Pb)			<0.050		mg/L		0.05	12-JUN-18
Selenium (Se)			<0.025		mg/L		0.025	12-JUN-18
Uranium (U)			<0.25		mg/L		0.25	12-JUN-18
WG2795002-5	MS	WG2795002-3						
Silver (Ag)			125.9		%		50-150	12-JUN-18
Arsenic (As)			113.7		%		50-150	12-JUN-18
Boron (B)			112.2		%		50-150	12-JUN-18
Barium (Ba)			113.6		%		50-150	12-JUN-18
Cadmium (Cd)			112.3		%		50-150	12-JUN-18
Chromium (Cr)			110.9		%		50-150	12-JUN-18
Lead (Pb)			106.3		%		50-150	12-JUN-18
Selenium (Se)			109.4		%		50-150	12-JUN-18
Uranium (U)			105.9		%		50-150	12-JUN-18

Quality Control Report

Workorder: L2107728

Report Date: 13-JUN-18

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

Page 3 of 3

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.

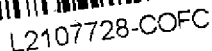
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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Page 1 of 1

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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FROM



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-JUN-18
Report Date: 05-JUL-18 12:14 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2120355
Project P.O. #: 4500040417
Job Reference: MS-ASH-161
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2120355-1 MS-ASH-161 Sampled By: RB, KRR on 22-JUN-18 @ 13:50 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests % Moisture TCLP Metals Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total	MS-ASH-161 Sampled By: RB, KRR on 22-JUN-18 @ 13:50 Matrix: SOIL							

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

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	Gravimetric: Oven Dried

** 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: L2120355

Report Date: 05-JUL-18

Page 1 of 3

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	R4108988							
WG2810794-3	DUP	L2120249-4						
% Moisture		18.8	17.9		%	4.8	20	30-JUN-18
WG2810794-2	LCS							
% Moisture			100.2		%		90-110	30-JUN-18
WG2810794-1	MB							
% Moisture			<0.10		%		0.1	30-JUN-18
HG-TCLP-WT		Waste						
Batch	R4113208							
WG2814494-3	DUP	L2121133-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	05-JUL-18
WG2814494-2	LCS							
Mercury (Hg)			104.0		%		70-130	05-JUL-18
WG2814494-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	05-JUL-18
WG2814494-4	MS	L2121133-1						
Mercury (Hg)			98.7		%		50-140	05-JUL-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4112550							
WG2813440-4	DUP	WG2813440-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	04-JUL-18
WG2813440-2	LCS							
Zinc (Zn)-Total			96.6		%		70-130	04-JUL-18
WG2813440-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	04-JUL-18
WG2813440-5	MS	WG2813440-3						
Zinc (Zn)-Total			102.5		%		70-130	04-JUL-18
MET-TCLP-WT		Waste						
Batch	R4112550							
WG2813440-4	DUP	WG2813440-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	04-JUL-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUL-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	04-JUL-18
Barium (Ba)		0.60	0.57		mg/L	5.1	40	04-JUL-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	04-JUL-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUL-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	04-JUL-18

Quality Control Report

Workorder: L2120355

Report Date: 05-JUL-18

Page 2 of 3

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	R4112550							
WG2813440-4	DUP	WG2813440-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	04-JUL-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	04-JUL-18
WG2813440-2	LCS							
Silver (Ag)			99.8		%		70-130	04-JUL-18
Arsenic (As)			99.4		%		70-130	04-JUL-18
Boron (B)			98.9		%		70-130	04-JUL-18
Barium (Ba)			97.3		%		70-130	04-JUL-18
Cadmium (Cd)			97.5		%		70-130	04-JUL-18
Chromium (Cr)			98.6		%		70-130	04-JUL-18
Lead (Pb)			106.2		%		70-130	04-JUL-18
Selenium (Se)			98.8		%		70-130	04-JUL-18
Uranium (U)			112.2		%		70-130	04-JUL-18
WG2813440-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	04-JUL-18
Arsenic (As)			<0.050		mg/L		0.05	04-JUL-18
Boron (B)			<2.5		mg/L		2.5	04-JUL-18
Barium (Ba)			<0.50		mg/L		0.5	04-JUL-18
Cadmium (Cd)			<0.0050		mg/L		0.005	04-JUL-18
Chromium (Cr)			<0.050		mg/L		0.05	04-JUL-18
Lead (Pb)			<0.050		mg/L		0.05	04-JUL-18
Selenium (Se)			<0.025		mg/L		0.025	04-JUL-18
Uranium (U)			<0.25		mg/L		0.25	04-JUL-18
WG2813440-5	MS	WG2813440-3						
Silver (Ag)			121.8		%		50-150	04-JUL-18
Arsenic (As)			108.4		%		50-150	04-JUL-18
Boron (B)			104.9		%		50-150	04-JUL-18
Barium (Ba)			108.1		%		50-150	04-JUL-18
Cadmium (Cd)			105.9		%		50-150	04-JUL-18
Chromium (Cr)			105.5		%		50-150	04-JUL-18
Lead (Pb)			105.7		%		50-150	04-JUL-18
Selenium (Se)			106.6		%		50-150	04-JUL-18
Uranium (U)			115.0		%		50-150	04-JUL-18

Quality Control Report

Workorder: L2120355

Report Date: 05-JUL-18

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

Page 3 of 3

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.

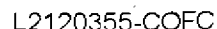
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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COC Number: 15 -

Page 1 of 1

Report To		Report Format / Distribution		Delivery	
Company:	Baffinland Iron Mines Corp.	Select Report Format:	☒ PDF ☒ EXCEL ☒ EDD (DIGITAL)	all E&P TATs with your AM - surcharges will apply	
Contact:	William Bowden and Connor Devereaux	Quality Control (QC) Report with Report	☒ YES ☐ NO	Regular [R] ☒ Standard TAT if received by 3 pm - business days - no surcharges apply	
Phone:	647-253-0596 EXT 6016	☐ Compare Results to Criteria on Report - provide details below if box checked		EMERGENCY	
Company address below will appear on the final report		Select Distribution:	☒ EMAIL ☐ MAIL ☐ FAX	4 day [P4] ☐ 3 day [P3] ☐ 2 day [P2] ☐	
Street:	2275 Upper Middle Rd. E., Suite #300	Email 1 or Fax	bimcore@alsglobal.com	1 Business day [E1] ☐ Same Day, Weekend or Statutory holiday [E0] ☐	
City/Province:	Oakville, ON	Email 2	bimww@alsglobal.com	Date and Time Required for all E&P TATs:	
Postal Code:	L6H 0C3	Email 3		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	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 #:	MS-ASH-161	Major/Minor Code:	Routing Code:		
PO / AFE:	4500040417	Requisitioner:			
LSD:		Location:			
ALS Lab Work Order # (lab use only)		ALS Contact:	Sampler:	Number of Containers	
L2120355			RB, KRR		
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	
	MS-ASH-161	22-JUN018	13:50	Soil	2
Drinking Water (DW) Samples (client use)		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)	
Are samples taken from a Regulated DW System?				Frozen ☐ SIF Observations Yes ☐ No ☐	
☐ YES ☒ NO				Ice Packs ☐ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐	
Are samples for human drinking water use?				Cooling Initiated ☐	
☐ YES ☒ NO				INITIAL COOLER TEMPERATURES °C	
				FINAL COOLER TEMPERATURES °C	
				13.8	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)	
Released by: Ben Widdowson	Date: 22-Jun-18	Time: 16:15	Received by:	Date:	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015, FRO

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: 05-JUL-18
Report Date: 09-JUL-18 17:37 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2123845
Project P.O. #: 4500040417
Job Reference: MP-ASH-213
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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	Gravimetric: Oven Dried

** 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: L2123845

Report Date: 09-JUL-18

Page 1 of 3

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	R4114696							
WG2815462-3	DUP	L2124655-14						
% Moisture		10.7	10.3		%	4.0	20	07-JUL-18
WG2815462-2	LCS							
% Moisture			102.6		%		90-110	07-JUL-18
WG2815462-1	MB							
% Moisture			<0.10		%		0.1	07-JUL-18
HG-TCLP-WT		Waste						
Batch	R4116556							
WG2817183-3	DUP	L2123764-5						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	09-JUL-18
WG2817183-2	LCS							
Mercury (Hg)			102.0		%		70-130	09-JUL-18
WG2817183-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	09-JUL-18
WG2817183-4	MS	L2123764-5						
Mercury (Hg)			97.0		%		50-140	09-JUL-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4116568							
WG2816970-4	DUP	WG2816970-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	09-JUL-18
WG2816970-2	LCS							
Zinc (Zn)-Total			96.3		%		70-130	09-JUL-18
WG2816970-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	09-JUL-18
WG2816970-5	MS	WG2816970-3						
Zinc (Zn)-Total			93.7		%		70-130	09-JUL-18
MET-TCLP-WT		Waste						
Batch	R4116568							
WG2816970-4	DUP	WG2816970-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	09-JUL-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	09-JUL-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	09-JUL-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	09-JUL-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	09-JUL-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	09-JUL-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	09-JUL-18

Quality Control Report

Workorder: L2123845

Report Date: 09-JUL-18

Page 2 of 3

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	R4116568							
WG2816970-4	DUP	WG2816970-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	09-JUL-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	09-JUL-18
WG2816970-2	LCS							
Silver (Ag)			90.5		%		70-130	09-JUL-18
Arsenic (As)			97.5		%		70-130	09-JUL-18
Boron (B)			95.1		%		70-130	09-JUL-18
Barium (Ba)			96.4		%		70-130	09-JUL-18
Cadmium (Cd)			97.8		%		70-130	09-JUL-18
Chromium (Cr)			98.2		%		70-130	09-JUL-18
Lead (Pb)			97.8		%		70-130	09-JUL-18
Selenium (Se)			97.6		%		70-130	09-JUL-18
Uranium (U)			96.2		%		70-130	09-JUL-18
WG2816970-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	09-JUL-18
Arsenic (As)			<0.050		mg/L		0.05	09-JUL-18
Boron (B)			<2.5		mg/L		2.5	09-JUL-18
Barium (Ba)			<0.50		mg/L		0.5	09-JUL-18
Cadmium (Cd)			<0.0050		mg/L		0.005	09-JUL-18
Chromium (Cr)			<0.050		mg/L		0.05	09-JUL-18
Lead (Pb)			<0.050		mg/L		0.05	09-JUL-18
Selenium (Se)			<0.025		mg/L		0.025	09-JUL-18
Uranium (U)			<0.25		mg/L		0.25	09-JUL-18
WG2816970-5	MS	WG2816970-3						
Silver (Ag)			107.2		%		50-150	09-JUL-18
Arsenic (As)			97.1		%		50-150	09-JUL-18
Boron (B)			96.2		%		50-150	09-JUL-18
Barium (Ba)			94.6		%		50-150	09-JUL-18
Cadmium (Cd)			102.2		%		50-150	09-JUL-18
Chromium (Cr)			96.5		%		50-150	09-JUL-18
Lead (Pb)			92.0		%		50-150	09-JUL-18
Selenium (Se)			98.7		%		50-150	09-JUL-18
Uranium (U)			88.6		%		50-150	09-JUL-18

Quality Control Report

Workorder: L2123845

Report Date: 09-JUL-18

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

Page 3 of 3

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.

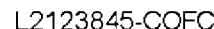
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 FROM

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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: William Bowden/Connor Devereaux
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 02-AUG-18
Report Date: 09-AUG-18 10:26 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2140387
Project P.O. #: 4500040417
Job Reference: MS-ASH-162
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140387-1	MS-ASH-162							
Sampled By:	TB/SS on 31-JUL-18 @ 08:30							
Matrix:	SOIL							
Sample Preparation								
Initial pH		12.26		0.10	pH units		04-AUG-18	R4160573
Final pH		9.53		0.10	pH units		04-AUG-18	R4160573
Physical Tests								
% Moisture		0.30		0.10	%	08-AUG-18	09-AUG-18	R4161717
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-AUG-18	R4160193
Barium (Ba)		<0.50		0.50	mg/L		07-AUG-18	R4160193
Boron (B)		3.2		2.5	mg/L		07-AUG-18	R4160193
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-AUG-18	R4160193
Chromium (Cr)		0.923		0.050	mg/L		07-AUG-18	R4160193
Lead (Pb)		<0.050		0.050	mg/L		07-AUG-18	R4160193
Mercury (Hg)		<0.00010		0.00010	mg/L		07-AUG-18	R4160065
Selenium (Se)		<0.025		0.025	mg/L		07-AUG-18	R4160193
Silver (Ag)		<0.0050		0.0050	mg/L		07-AUG-18	R4160193
Uranium (U)		<0.25		0.25	mg/L		07-AUG-18	R4160193
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-AUG-18	R4160193

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

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	Gravimetric: Oven Dried

** 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.

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Quality Control Report

Workorder: L2140387

Report Date: 09-AUG-18

Page 1 of 3

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	R4161717							
WG2843270-3	DUP	L2140812-2						
% Moisture		11.8	11.3		%	3.8	20	09-AUG-18
WG2843270-2	LCS							
% Moisture			99.8		%		90-110	09-AUG-18
WG2843270-1	MB							
% Moisture			<0.10		%		0.1	09-AUG-18
HG-TCLP-WT		Waste						
Batch	R4160065							
WG2842205-3	DUP	L2138741-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	07-AUG-18
WG2842205-2	LCS							
Mercury (Hg)			100.0		%		70-130	07-AUG-18
WG2842205-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	07-AUG-18
WG2842205-4	MS	L2138741-1						
Mercury (Hg)			91.6		%		50-140	07-AUG-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4160193							
WG2842144-4	DUP	WG2842144-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	07-AUG-18
WG2842144-2	LCS							
Zinc (Zn)-Total			97.7		%		70-130	07-AUG-18
WG2842144-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	07-AUG-18
WG2842144-5	MS	WG2842144-3						
Zinc (Zn)-Total			94.1		%		70-130	07-AUG-18
MET-TCLP-WT		Waste						
Batch	R4160193							
WG2842144-4	DUP	WG2842144-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-AUG-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-AUG-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	07-AUG-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	07-AUG-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-AUG-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-AUG-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-AUG-18

Quality Control Report

Workorder: L2140387

Report Date: 09-AUG-18

Page 2 of 3

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	R4160193							
WG2842144-4	DUP	WG2842144-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	07-AUG-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	07-AUG-18
WG2842144-2	LCS							
Silver (Ag)			96.3		%		70-130	07-AUG-18
Arsenic (As)			103.6		%		70-130	07-AUG-18
Boron (B)			96.2		%		70-130	07-AUG-18
Barium (Ba)			109.9		%		70-130	07-AUG-18
Cadmium (Cd)			104.0		%		70-130	07-AUG-18
Chromium (Cr)			101.3		%		70-130	07-AUG-18
Lead (Pb)			102.0		%		70-130	07-AUG-18
Selenium (Se)			100.6		%		70-130	07-AUG-18
Uranium (U)			102.1		%		70-130	07-AUG-18
WG2842144-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	07-AUG-18
Arsenic (As)			<0.050		mg/L		0.05	07-AUG-18
Boron (B)			<2.5		mg/L		2.5	07-AUG-18
Barium (Ba)			<0.50		mg/L		0.5	07-AUG-18
Cadmium (Cd)			<0.0050		mg/L		0.005	07-AUG-18
Chromium (Cr)			<0.050		mg/L		0.05	07-AUG-18
Lead (Pb)			<0.050		mg/L		0.05	07-AUG-18
Selenium (Se)			<0.025		mg/L		0.025	07-AUG-18
Uranium (U)			<0.25		mg/L		0.25	07-AUG-18
WG2842144-5	MS	WG2842144-3						
Silver (Ag)			109.4		%		50-150	07-AUG-18
Arsenic (As)			100.3		%		50-150	07-AUG-18
Boron (B)			92.2		%		50-150	07-AUG-18
Barium (Ba)			102.8		%		50-150	07-AUG-18
Cadmium (Cd)			98.4		%		50-150	07-AUG-18
Chromium (Cr)			94.8		%		50-150	07-AUG-18
Lead (Pb)			97.9		%		50-150	07-AUG-18
Selenium (Se)			98.3		%		50-150	07-AUG-18
Uranium (U)			97.1		%		50-150	07-AUG-18

Quality Control Report

Workorder: L2140387

Report Date: 09-AUG-18

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

Page 3 of 3

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.



Canada Toll Free: 1 800 668 9878



L2140387-COFC

Page 1 of 1

[illegible]

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FROM



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

Date Received: 16-AUG-18
Report Date: 20-AUG-18 13:37 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2145785
Project P.O. #: 4500040417
Job Reference: MS-ASH-163
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2145785-1	MS-ASH-163							
Sampled By:	LM/CW on 11-AUG-18 @ 14:30							
Matrix:	SOIL							
Sample Preparation								
Initial pH		12.40		0.10	pH units		18-AUG-18	R4176060
Final pH		8.26		0.10	pH units		18-AUG-18	R4176060
Physical Tests								
% Moisture		0.57		0.10	%	16-AUG-18	17-AUG-18	R4174418
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		20-AUG-18	R4177247
Barium (Ba)		1.19		0.50	mg/L		20-AUG-18	R4177247
Boron (B)		3.3		2.5	mg/L		20-AUG-18	R4177247
Cadmium (Cd)		<0.0050		0.0050	mg/L		20-AUG-18	R4177247
Chromium (Cr)		1.99		0.050	mg/L		20-AUG-18	R4177247
Lead (Pb)		<0.050		0.050	mg/L		20-AUG-18	R4177247
Mercury (Hg)		<0.00010		0.00010	mg/L		20-AUG-18	R4177983
Selenium (Se)		<0.025		0.025	mg/L		20-AUG-18	R4177247
Silver (Ag)		<0.0050		0.0050	mg/L		20-AUG-18	R4177247
Uranium (U)		<0.25		0.25	mg/L		20-AUG-18	R4177247
Zinc (Zn)-Total		<1.0		1.0	mg/L		20-AUG-18	R4177247

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

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	Gravimetric: Oven Dried

** 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: L2145785

Report Date: 20-AUG-18

Page 1 of 3

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	R4174418							
WG2851358-3	DUP	L2147490-8						
% Moisture		19.8	19.0		%	3.8	20	17-AUG-18
WG2851358-2	LCS							
% Moisture			100.3		%		90-110	17-AUG-18
WG2851358-1	MB							
% Moisture			<0.10		%		0.1	17-AUG-18
HG-TCLP-WT		Waste						
Batch	R4177983							
WG2853760-3	DUP	L2147602-2						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	20-AUG-18
WG2853760-2	LCS							
Mercury (Hg)			100.0		%		70-130	20-AUG-18
WG2853760-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	20-AUG-18
WG2853760-4	MS	L2147602-2						
Mercury (Hg)			99.8		%		50-140	20-AUG-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4177247							
WG2853928-4	DUP	WG2853928-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	20-AUG-18
WG2853928-2	LCS							
Zinc (Zn)-Total			92.2		%		70-130	20-AUG-18
WG2853928-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	20-AUG-18
WG2853928-5	MS	WG2853928-3						
Zinc (Zn)-Total			91.3		%		70-130	20-AUG-18
MET-TCLP-WT		Waste						
Batch	R4177247							
WG2853928-4	DUP	WG2853928-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	20-AUG-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	20-AUG-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	20-AUG-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	20-AUG-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	20-AUG-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	20-AUG-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	20-AUG-18



Quality Control Report

Workorder: L2145785

Report Date: 20-AUG-18

Page 2 of 3

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	R4177247							
WG2853928-4	DUP	WG2853928-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	20-AUG-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	20-AUG-18
WG2853928-2	LCS							
Silver (Ag)			100.2		%		70-130	20-AUG-18
Arsenic (As)			99.9		%		70-130	20-AUG-18
Boron (B)			86.2		%		70-130	20-AUG-18
Barium (Ba)			100.3		%		70-130	20-AUG-18
Cadmium (Cd)			102.8		%		70-130	20-AUG-18
Chromium (Cr)			99.4		%		70-130	20-AUG-18
Lead (Pb)			99.8		%		70-130	20-AUG-18
Selenium (Se)			98.1		%		70-130	20-AUG-18
Uranium (U)			96.8		%		70-130	20-AUG-18
WG2853928-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	20-AUG-18
Arsenic (As)			<0.050		mg/L		0.05	20-AUG-18
Boron (B)			<2.5		mg/L		2.5	20-AUG-18
Barium (Ba)			<0.50		mg/L		0.5	20-AUG-18
Cadmium (Cd)			<0.0050		mg/L		0.005	20-AUG-18
Chromium (Cr)			<0.050		mg/L		0.05	20-AUG-18
Lead (Pb)			<0.050		mg/L		0.05	20-AUG-18
Selenium (Se)			<0.025		mg/L		0.025	20-AUG-18
Uranium (U)			<0.25		mg/L		0.25	20-AUG-18
WG2853928-5	MS	WG2853928-3						
Silver (Ag)			114.1		%		50-150	20-AUG-18
Arsenic (As)			98.6		%		50-150	20-AUG-18
Boron (B)			88.0		%		50-150	20-AUG-18
Barium (Ba)			93.4		%		50-150	20-AUG-18
Cadmium (Cd)			99.4		%		50-150	20-AUG-18
Chromium (Cr)			94.2		%		50-150	20-AUG-18
Lead (Pb)			90.8		%		50-150	20-AUG-18
Selenium (Se)			95.5		%		50-150	20-AUG-18
Uranium (U)			93.7		%		50-150	20-AUG-18

Quality Control Report

Workorder: L2145785

Report Date: 20-AUG-18

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

Page 3 of 3

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.

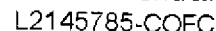
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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Page 1 of 1

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REFER TO BACK PAGE FOR ALL LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2016 EPOCH

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-AUG-18
Report Date: 29-AUG-18 08:43 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2152804
Project P.O. #: 4500040417
Job Reference: MP-ASH-214
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

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

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	Gravimetric: Oven Dried

** 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 wwwt - 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: L2152804

Report Date: 29-AUG-18

Page 1 of 3

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	R4182928							
WG2859434-3	DUP	L2147619-5						
% Moisture		13.6	13.4		%	1.5	20	25-AUG-18
WG2859434-2	LCS							
% Moisture			100.1		%		90-110	25-AUG-18
WG2859434-1	MB							
% Moisture			<0.10		%		0.1	25-AUG-18
HG-TCLP-WT		Waste						
Batch	R4188125							
WG2861822-3	DUP	L2152804-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	28-AUG-18
WG2861822-2	LCS							
Mercury (Hg)			102.0		%		70-130	28-AUG-18
WG2861822-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	28-AUG-18
WG2861822-4	MS	L2152804-1						
Mercury (Hg)			101.3		%		50-140	28-AUG-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4190229							
WG2862135-4	DUP	WG2862135-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	28-AUG-18
WG2862135-2	LCS							
Zinc (Zn)-Total			92.1		%		70-130	28-AUG-18
WG2862135-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	28-AUG-18
WG2862135-5	MS	WG2862135-3						
Zinc (Zn)-Total			89.2		%		70-130	28-AUG-18
MET-TCLP-WT		Waste						
Batch	R4190229							
WG2862135-4	DUP	WG2862135-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	28-AUG-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	28-AUG-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	28-AUG-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	28-AUG-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	28-AUG-18
Chromium (Cr)		0.271	0.276		mg/L	1.7	40	28-AUG-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	28-AUG-18

Quality Control Report

Workorder: L2152804

Report Date: 29-AUG-18

Page 2 of 3

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	R4190229							
WG2862135-4	DUP	WG2862135-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	28-AUG-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	28-AUG-18
WG2862135-2	LCS							
Silver (Ag)			95.7		%		70-130	28-AUG-18
Arsenic (As)			99.8		%		70-130	28-AUG-18
Boron (B)			87.5		%		70-130	28-AUG-18
Barium (Ba)			96.2		%		70-130	28-AUG-18
Cadmium (Cd)			97.4		%		70-130	28-AUG-18
Chromium (Cr)			99.6		%		70-130	28-AUG-18
Lead (Pb)			97.7		%		70-130	28-AUG-18
Selenium (Se)			101.7		%		70-130	28-AUG-18
Uranium (U)			95.6		%		70-130	28-AUG-18
WG2862135-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	28-AUG-18
Arsenic (As)			<0.050		mg/L		0.05	28-AUG-18
Boron (B)			<2.5		mg/L		2.5	28-AUG-18
Barium (Ba)			<0.50		mg/L		0.5	28-AUG-18
Cadmium (Cd)			<0.0050		mg/L		0.005	28-AUG-18
Chromium (Cr)			<0.050		mg/L		0.05	28-AUG-18
Lead (Pb)			<0.050		mg/L		0.05	28-AUG-18
Selenium (Se)			<0.025		mg/L		0.025	28-AUG-18
Uranium (U)			<0.25		mg/L		0.25	28-AUG-18
WG2862135-5	MS	WG2862135-3						
Silver (Ag)			109.8		%		50-150	28-AUG-18
Arsenic (As)			97.3		%		50-150	28-AUG-18
Boron (B)			86.6		%		50-150	28-AUG-18
Barium (Ba)			94.5		%		50-150	28-AUG-18
Cadmium (Cd)			98.6		%		50-150	28-AUG-18
Chromium (Cr)			94.4		%		50-150	28-AUG-18
Lead (Pb)			93.0		%		50-150	28-AUG-18
Selenium (Se)			98.6		%		50-150	28-AUG-18
Uranium (U)			93.5		%		50-150	28-AUG-18

Quality Control Report

Workorder: L2152804

Report Date: 29-AUG-18

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

Page 3 of 3

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.

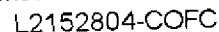
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FROM



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

Date Received: 20-SEP-18
Report Date: 25-SEP-18 15:18 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2167888
Project P.O. #: 4500040417
Job Reference: MP-ASH-215
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2167888-1 Sampled By: SS on 14-SEP-18 @ 16:05 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests % Moisture TCLP Metals Arsenic (As) Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total	MP-ASH-215							

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

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	Gravimetric: Oven Dried

** 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: L2167888

Report Date: 25-SEP-18

Page 1 of 3

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	R4234959							
WG2884376-3	DUP	L2167904-1						
% Moisture		11.3	11.0		%	2.5	20	24-SEP-18
WG2884376-2	LCS							
% Moisture			100.1		%		90-110	24-SEP-18
WG2884376-1	MB							
% Moisture			<0.10		%		0.1	24-SEP-18
HG-TCLP-WT		Waste						
Batch	R4236210							
WG2884666-3	DUP	L2167618-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	24-SEP-18
WG2884666-2	LCS							
Mercury (Hg)			97.4		%		70-130	24-SEP-18
WG2884666-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	24-SEP-18
WG2884666-4	MS	L2167618-1						
Mercury (Hg)			95.3		%		50-140	24-SEP-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4234908							
WG2884384-4	DUP	WG2884384-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	23-SEP-18
WG2884384-2	LCS							
Zinc (Zn)-Total			94.1		%		70-130	23-SEP-18
WG2884384-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	23-SEP-18
WG2884384-5	MS	WG2884384-3						
Zinc (Zn)-Total			91.9		%		70-130	23-SEP-18
MET-TCLP-WT		Waste						
Batch	R4234908							
WG2884384-4	DUP	WG2884384-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	23-SEP-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-SEP-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	23-SEP-18
Barium (Ba)		1.87	1.84		mg/L	1.8	40	23-SEP-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	23-SEP-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-SEP-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-SEP-18

Quality Control Report

Workorder: L2167888

Report Date: 25-SEP-18

Page 2 of 3

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	R4234908							
WG2884384-4	DUP	WG2884384-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	23-SEP-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	23-SEP-18
WG2884384-2	LCS							
Silver (Ag)			100.3		%		70-130	23-SEP-18
Arsenic (As)			97.1		%		70-130	23-SEP-18
Boron (B)			94.5		%		70-130	23-SEP-18
Barium (Ba)			99.8		%		70-130	23-SEP-18
Cadmium (Cd)			96.6		%		70-130	23-SEP-18
Chromium (Cr)			94.6		%		70-130	23-SEP-18
Lead (Pb)			98.4		%		70-130	23-SEP-18
Selenium (Se)			98.2		%		70-130	23-SEP-18
Uranium (U)			100.3		%		70-130	23-SEP-18
WG2884384-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	23-SEP-18
Arsenic (As)			<0.050		mg/L		0.05	23-SEP-18
Boron (B)			<2.5		mg/L		2.5	23-SEP-18
Barium (Ba)			<0.50		mg/L		0.5	23-SEP-18
Cadmium (Cd)			<0.0050		mg/L		0.005	23-SEP-18
Chromium (Cr)			<0.050		mg/L		0.05	23-SEP-18
Lead (Pb)			<0.050		mg/L		0.05	23-SEP-18
Selenium (Se)			<0.025		mg/L		0.025	23-SEP-18
Uranium (U)			<0.25		mg/L		0.25	23-SEP-18
WG2884384-5	MS	WG2884384-3						
Silver (Ag)			115.9		%		50-150	23-SEP-18
Arsenic (As)			97.4		%		50-150	23-SEP-18
Boron (B)			96.6		%		50-150	23-SEP-18
Barium (Ba)			100.8		%		50-150	23-SEP-18
Cadmium (Cd)			95.7		%		50-150	23-SEP-18
Chromium (Cr)			95.7		%		50-150	23-SEP-18
Lead (Pb)			99.9		%		50-150	23-SEP-18
Selenium (Se)			94.6		%		50-150	23-SEP-18
Uranium (U)			99.1		%		50-150	23-SEP-18

Quality Control Report

Workorder: L2167888

Report Date: 25-SEP-18

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

Page 3 of 3

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.

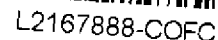
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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COC Number: 15 -

Page 1 of 1

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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OCTOBER 2015 EDITION

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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: William Bowden/Connor Devereaux
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 27-SEP-18
Report Date: 03-OCT-18 13:19 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2171922
Project P.O. #: 4500040417
Job Reference: MS-ASH-164
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2171922-1	MS-ASH-164							
Sampled By:	RB/DZ on 25-SEP-18 @ 08:30							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.95		0.10	pH units		03-OCT-18	R4258156
Final pH		7.15		0.10	pH units		03-OCT-18	R4258156
Physical Tests								
% Moisture		10.7		0.10	%	01-OCT-18	02-OCT-18	R4255829
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		02-OCT-18	R4257683
Barium (Ba)		<0.50		0.50	mg/L		02-OCT-18	R4257683
Boron (B)		4.2		2.5	mg/L		02-OCT-18	R4257683
Cadmium (Cd)		<0.0050		0.0050	mg/L		02-OCT-18	R4257683
Chromium (Cr)		0.303		0.050	mg/L		02-OCT-18	R4257683
Lead (Pb)		<0.050		0.050	mg/L		02-OCT-18	R4257683
Mercury (Hg)		<0.00010		0.00010	mg/L		02-OCT-18	R4257151
Selenium (Se)		<0.025		0.025	mg/L		02-OCT-18	R4257683
Silver (Ag)		<0.0050		0.0050	mg/L		02-OCT-18	R4257683
Uranium (U)		<0.25		0.25	mg/L		02-OCT-18	R4257683
Zinc (Zn)-Total		<1.0		1.0	mg/L		02-OCT-18	R4257683

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

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	Gravimetric: Oven Dried

** 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: L2171922

Report Date: 03-OCT-18

Page 1 of 3

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	R4255829							
WG2891296-3	DUP	L2171823-1						
% Moisture		15.2	15.7		%	3.1	20	02-OCT-18
WG2891296-2	LCS							
% Moisture			99.9		%		90-110	02-OCT-18
WG2891296-1	MB							
% Moisture			<0.10		%		0.1	02-OCT-18
HG-TCLP-WT		Waste						
Batch	R4257151							
WG2892659-3	DUP	L2171922-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	02-OCT-18
WG2892659-2	LCS							
Mercury (Hg)			95.8		%		70-130	02-OCT-18
WG2892659-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	02-OCT-18
WG2892659-4	MS	L2171922-1						
Mercury (Hg)			93.0		%		50-140	02-OCT-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4257683							
WG2892712-4	DUP	WG2892712-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	02-OCT-18
WG2892712-2	LCS							
Zinc (Zn)-Total			90.4		%		70-130	02-OCT-18
WG2892712-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	02-OCT-18
WG2892712-5	MS	WG2892712-3						
Zinc (Zn)-Total			95.2		%		70-130	02-OCT-18
MET-TCLP-WT		Waste						
Batch	R4257683							
WG2892712-4	DUP	WG2892712-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	02-OCT-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	02-OCT-18
Boron (B)		4.2	4.3		mg/L	2.9	40	02-OCT-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	02-OCT-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	02-OCT-18
Chromium (Cr)		0.303	0.297		mg/L	2.3	40	02-OCT-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	02-OCT-18

Quality Control Report

Workorder: L2171922

Report Date: 03-OCT-18

Page 2 of 3

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	R4257683							
WG2892712-4	DUP	WG2892712-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	02-OCT-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	02-OCT-18
WG2892712-2	LCS							
Silver (Ag)			95.2		%		70-130	02-OCT-18
Arsenic (As)			97.1		%		70-130	02-OCT-18
Boron (B)			91.6		%		70-130	02-OCT-18
Barium (Ba)			97.5		%		70-130	02-OCT-18
Cadmium (Cd)			97.7		%		70-130	02-OCT-18
Chromium (Cr)			94.6		%		70-130	02-OCT-18
Lead (Pb)			101.2		%		70-130	02-OCT-18
Selenium (Se)			96.3		%		70-130	02-OCT-18
Uranium (U)			98.8		%		70-130	02-OCT-18
WG2892712-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	02-OCT-18
Arsenic (As)			<0.050		mg/L		0.05	02-OCT-18
Boron (B)			<2.5		mg/L		2.5	02-OCT-18
Barium (Ba)			<0.50		mg/L		0.5	02-OCT-18
Cadmium (Cd)			<0.0050		mg/L		0.005	02-OCT-18
Chromium (Cr)			<0.050		mg/L		0.05	02-OCT-18
Lead (Pb)			<0.050		mg/L		0.05	02-OCT-18
Selenium (Se)			<0.025		mg/L		0.025	02-OCT-18
Uranium (U)			<0.25		mg/L		0.25	02-OCT-18
WG2892712-5	MS	WG2892712-3						
Silver (Ag)			111.0		%		50-150	02-OCT-18
Arsenic (As)			102.4		%		50-150	02-OCT-18
Boron (B)			91.2		%		50-150	02-OCT-18
Barium (Ba)			99.6		%		50-150	02-OCT-18
Cadmium (Cd)			99.0		%		50-150	02-OCT-18
Chromium (Cr)			95.8		%		50-150	02-OCT-18
Lead (Pb)			98.4		%		50-150	02-OCT-18
Selenium (Se)			100.2		%		50-150	02-OCT-18
Uranium (U)			101.2		%		50-150	02-OCT-18

Quality Control Report

Workorder: L2171922

Report Date: 03-OCT-18

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

Page 3 of 3

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.

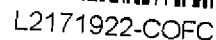
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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



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Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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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**.

OCTOBER 2015 EBC



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

Date Received: 16-OCT-18
Report Date: 19-OCT-18 15:54 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2181817
Project P.O. #: 4500040417
Job Reference: MP-ASH-216
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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* 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	Gravimetric: Oven Dried

** 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: L2181817

Report Date: 19-OCT-18

Page 1 of 3

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	R4283909							
WG2905695-3	DUP	L2181912-1						
% Moisture		9.38	9.23		%	1.6	20	18-OCT-18
WG2905695-2	LCS							
% Moisture			100.1		%		90-110	18-OCT-18
WG2905695-1	MB							
% Moisture			<0.10		%		0.1	18-OCT-18
HG-TCLP-WT		Waste						
Batch	R4284728							
WG2907060-3	DUP	L2181541-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	18-OCT-18
WG2907060-2	LCS							
Mercury (Hg)			99.2		%		70-130	18-OCT-18
WG2907060-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	18-OCT-18
WG2907060-4	MS	L2181541-1						
Mercury (Hg)			94.6		%		50-140	18-OCT-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4289207							
WG2908026-4	DUP	WG2908026-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	19-OCT-18
WG2908026-2	LCS							
Zinc (Zn)-Total			92.5		%		70-130	19-OCT-18
WG2908026-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	19-OCT-18
WG2908026-5	MS	WG2908026-3						
Zinc (Zn)-Total			93.8		%		70-130	19-OCT-18
MET-TCLP-WT		Waste						
Batch	R4289207							
WG2908026-4	DUP	WG2908026-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	19-OCT-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	19-OCT-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	19-OCT-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	19-OCT-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	19-OCT-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	19-OCT-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	19-OCT-18

Quality Control Report

Workorder: L2181817

Report Date: 19-OCT-18

Page 2 of 3

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	R4289207							
WG2908026-4	DUP	WG2908026-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	19-OCT-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	19-OCT-18
WG2908026-2	LCS							
Silver (Ag)			102.6		%		70-130	19-OCT-18
Arsenic (As)			99.8		%		70-130	19-OCT-18
Boron (B)			99.3		%		70-130	19-OCT-18
Barium (Ba)			97.0		%		70-130	19-OCT-18
Cadmium (Cd)			101.1		%		70-130	19-OCT-18
Chromium (Cr)			100.1		%		70-130	19-OCT-18
Lead (Pb)			100.6		%		70-130	19-OCT-18
Selenium (Se)			101.1		%		70-130	19-OCT-18
Uranium (U)			102.0		%		70-130	19-OCT-18
WG2908026-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	19-OCT-18
Arsenic (As)			<0.050		mg/L		0.05	19-OCT-18
Boron (B)			<2.5		mg/L		2.5	19-OCT-18
Barium (Ba)			<0.50		mg/L		0.5	19-OCT-18
Cadmium (Cd)			<0.0050		mg/L		0.005	19-OCT-18
Chromium (Cr)			<0.050		mg/L		0.05	19-OCT-18
Lead (Pb)			<0.050		mg/L		0.05	19-OCT-18
Selenium (Se)			<0.025		mg/L		0.025	19-OCT-18
Uranium (U)			<0.25		mg/L		0.25	19-OCT-18
WG2908026-5	MS	WG2908026-3						
Silver (Ag)			116.8		%		50-150	19-OCT-18
Arsenic (As)			98.9		%		50-150	19-OCT-18
Boron (B)			97.5		%		50-150	19-OCT-18
Barium (Ba)			95.1		%		50-150	19-OCT-18
Cadmium (Cd)			96.8		%		50-150	19-OCT-18
Chromium (Cr)			100.1		%		50-150	19-OCT-18
Lead (Pb)			95.0		%		50-150	19-OCT-18
Selenium (Se)			100.3		%		50-150	19-OCT-18
Uranium (U)			98.4		%		50-150	19-OCT-18

Quality Control Report

Workorder: L2181817

Report Date: 19-OCT-18

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

Page 3 of 3

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.



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Page 1 of 1

L2181817-COFC

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REFER TO BACK PAGE FOR AIS 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**.

OCTOBER 2014 EBC



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

Date Received: 26-OCT-18
Report Date: 31-OCT-18 14:01 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2187678
Project P.O. #: 4500040417
Job Reference: MS-ASH-165
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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* Refer to Referenced Information for Qualifiers (if any) and Methodology.

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	Gravimetric: Oven Dried

** 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: L2187678

Report Date: 31-OCT-18

Page 1 of 3

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	R4305863							
WG2916607-3	DUP	L2188091-7						
% Moisture		7.46	7.67		%	2.7	20	30-OCT-18
WG2916607-2	LCS							
% Moisture			99.9		%		90-110	30-OCT-18
WG2916607-1	MB							
% Moisture			<0.10		%		0.1	30-OCT-18
HG-TCLP-WT		Waste						
Batch	R4306449							
WG2917774-3	DUP	L2187074-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	30-OCT-18
WG2917774-2	LCS							
Mercury (Hg)			93.9		%		70-130	30-OCT-18
WG2917774-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	30-OCT-18
WG2917774-4	MS	L2187074-1						
Mercury (Hg)			93.6		%		50-140	30-OCT-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4308229							
WG2917651-4	DUP	WG2917651-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	30-OCT-18
WG2917651-2	LCS							
Zinc (Zn)-Total			112.4		%		70-130	30-OCT-18
WG2917651-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	30-OCT-18
WG2917651-5	MS	WG2917651-3						
Zinc (Zn)-Total			116.1		%		70-130	30-OCT-18
MET-TCLP-WT		Waste						
Batch	R4308229							
WG2917651-4	DUP	WG2917651-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	30-OCT-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	30-OCT-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	30-OCT-18
Barium (Ba)		<0.50	0.52	RPD-NA	mg/L	N/A	40	30-OCT-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	30-OCT-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	30-OCT-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	30-OCT-18

Quality Control Report

Workorder: L2187678

Report Date: 31-OCT-18

Page 2 of 3

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	R4308229							
WG2917651-4	DUP	WG2917651-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	30-OCT-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	30-OCT-18
WG2917651-2	LCS							
Silver (Ag)			112.9		%		70-130	30-OCT-18
Arsenic (As)			109.0		%		70-130	30-OCT-18
Boron (B)			102.0		%		70-130	30-OCT-18
Barium (Ba)			111.7		%		70-130	30-OCT-18
Cadmium (Cd)			108.9		%		70-130	30-OCT-18
Chromium (Cr)			108.6		%		70-130	30-OCT-18
Lead (Pb)			111.0		%		70-130	30-OCT-18
Selenium (Se)			107.7		%		70-130	30-OCT-18
Uranium (U)			109.7		%		70-130	30-OCT-18
WG2917651-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	30-OCT-18
Arsenic (As)			<0.050		mg/L		0.05	30-OCT-18
Boron (B)			<2.5		mg/L		2.5	30-OCT-18
Barium (Ba)			<0.50		mg/L		0.5	30-OCT-18
Cadmium (Cd)			<0.0050		mg/L		0.005	30-OCT-18
Chromium (Cr)			<0.050		mg/L		0.05	30-OCT-18
Lead (Pb)			<0.050		mg/L		0.05	30-OCT-18
Selenium (Se)			<0.025		mg/L		0.025	30-OCT-18
Uranium (U)			<0.25		mg/L		0.25	30-OCT-18
WG2917651-5	MS	WG2917651-3						
Silver (Ag)			140.3		%		50-150	30-OCT-18
Arsenic (As)			122.5		%		50-150	30-OCT-18
Boron (B)			111.8		%		50-150	30-OCT-18
Barium (Ba)			118.1		%		50-150	30-OCT-18
Cadmium (Cd)			118.6		%		50-150	30-OCT-18
Chromium (Cr)			119.0		%		50-150	30-OCT-18
Lead (Pb)			119.4		%		50-150	30-OCT-18
Selenium (Se)			119.3		%		50-150	30-OCT-18
Uranium (U)			122.3		%		50-150	30-OCT-18

Quality Control Report

Workorder: L2187678

Report Date: 31-OCT-18

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

Page 3 of 3

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.

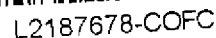
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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



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OCTOBER 2015 FROM

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-NOV-18
Report Date: 13-NOV-18 11:08 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2194138
Project P.O. #: 4500040417
Job Reference: MS-ASH-166
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2194138-1	MS-ASH-166							
Sampled By:	RB on 05-NOV-18 @ 15:40							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.92		0.10	pH units		10-NOV-18	R4329465
Final pH		12.46		0.10	pH units		10-NOV-18	R4329465
Physical Tests								
% Moisture		<0.10		0.10	%	09-NOV-18	10-NOV-18	R4328081
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		12-NOV-18	R4329156
Barium (Ba)		0.79		0.50	mg/L		12-NOV-18	R4329156
Boron (B)		<2.5		2.5	mg/L		12-NOV-18	R4329156
Cadmium (Cd)		<0.0050		0.0050	mg/L		12-NOV-18	R4329156
Chromium (Cr)		0.102		0.050	mg/L		12-NOV-18	R4329156
Lead (Pb)		<0.050		0.050	mg/L		12-NOV-18	R4329156
Mercury (Hg)		<0.00010		0.00010	mg/L		12-NOV-18	R4329147
Selenium (Se)		<0.025		0.025	mg/L		12-NOV-18	R4329156
Silver (Ag)		<0.0050		0.0050	mg/L		12-NOV-18	R4329156
Uranium (U)		<0.25		0.25	mg/L		12-NOV-18	R4329156
Zinc (Zn)-Total		<1.0		1.0	mg/L		12-NOV-18	R4329156

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

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	Gravimetric: Oven Dried

** 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: L2194138

Report Date: 13-NOV-18

Page 1 of 3

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	R4328081							
WG2926994-3	DUP	L2194267-1						
% Moisture		68.0	67.8		%	0.4	20	10-NOV-18
WG2926994-2	LCS							
% Moisture			100.4		%		90-110	10-NOV-18
WG2926994-1	MB							
% Moisture			<0.10		%		0.1	10-NOV-18
HG-TCLP-WT		Waste						
Batch	R4329147							
WG2928628-3	DUP	L2193915-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	12-NOV-18
WG2928628-2	LCS							
Mercury (Hg)			103.0		%		70-130	12-NOV-18
WG2928628-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	12-NOV-18
WG2928628-4	MS	L2193915-1						
Mercury (Hg)			94.8		%		50-140	12-NOV-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4329156							
WG2928508-4	DUP	WG2928508-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	12-NOV-18
WG2928508-2	LCS							
Zinc (Zn)-Total			110.2		%		70-130	12-NOV-18
WG2928508-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	12-NOV-18
WG2928508-5	MS	WG2928508-3						
Zinc (Zn)-Total			92.7		%		70-130	12-NOV-18
MET-TCLP-WT		Waste						
Batch	R4329156							
WG2928508-4	DUP	WG2928508-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-NOV-18
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-NOV-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	12-NOV-18
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	12-NOV-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	12-NOV-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-NOV-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	12-NOV-18

Quality Control Report

Workorder: L2194138

Report Date: 13-NOV-18

Page 2 of 3

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	R4329156							
WG2928508-4	DUP	WG2928508-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	12-NOV-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	12-NOV-18
WG2928508-2	LCS							
Silver (Ag)			98.1		%		70-130	12-NOV-18
Arsenic (As)			97.0		%		70-130	12-NOV-18
Boron (B)			95.4		%		70-130	12-NOV-18
Barium (Ba)			97.1		%		70-130	12-NOV-18
Cadmium (Cd)			95.2		%		70-130	12-NOV-18
Chromium (Cr)			95.7		%		70-130	12-NOV-18
Lead (Pb)			96.6		%		70-130	12-NOV-18
Selenium (Se)			99.4		%		70-130	12-NOV-18
Uranium (U)			94.4		%		70-130	12-NOV-18
WG2928508-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	12-NOV-18
Arsenic (As)			<0.050		mg/L		0.05	12-NOV-18
Boron (B)			<2.5		mg/L		2.5	12-NOV-18
Barium (Ba)			<0.50		mg/L		0.5	12-NOV-18
Cadmium (Cd)			<0.0050		mg/L		0.005	12-NOV-18
Chromium (Cr)			<0.050		mg/L		0.05	12-NOV-18
Lead (Pb)			<0.050		mg/L		0.05	12-NOV-18
Selenium (Se)			<0.025		mg/L		0.025	12-NOV-18
Uranium (U)			<0.25		mg/L		0.25	12-NOV-18
WG2928508-5	MS	WG2928508-3						
Silver (Ag)			111.2		%		50-150	12-NOV-18
Arsenic (As)			97.5		%		50-150	12-NOV-18
Boron (B)			93.7		%		50-150	12-NOV-18
Barium (Ba)			96.4		%		50-150	12-NOV-18
Cadmium (Cd)			94.5		%		50-150	12-NOV-18
Chromium (Cr)			96.4		%		50-150	12-NOV-18
Lead (Pb)			95.2		%		50-150	12-NOV-18
Selenium (Se)			98.6		%		50-150	12-NOV-18
Uranium (U)			98.4		%		50-150	12-NOV-18

Quality Control Report

Workorder: L2194138

Report Date: 13-NOV-18

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

Page 3 of 3

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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OCTOBER 2015 FROM

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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: William Bowden/Connor Devereaux
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 06-DEC-18
Report Date: 11-DEC-18 09:45 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2206955
Project P.O. #: 4500040417
Job Reference: MS-ASH-167
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2206955-1	MS-ASH-167							
Sampled By:	CP on 28-NOV-18 @ 14:20							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.87		0.10	pH units		08-DEC-18	R4385291
Final pH		11.58		0.10	pH units		08-DEC-18	R4385291
Physical Tests								
% Moisture		<0.10		0.10	%	07-DEC-18	08-DEC-18	R4384748
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		10-DEC-18	R4385869
Barium (Ba)		<0.50		0.50	mg/L		10-DEC-18	R4385869
Boron (B)		<2.5		2.5	mg/L		10-DEC-18	R4385869
Cadmium (Cd)		<0.0050		0.0050	mg/L		10-DEC-18	R4385869
Chromium (Cr)		0.182		0.050	mg/L		10-DEC-18	R4385869
Lead (Pb)		<0.050		0.050	mg/L		10-DEC-18	R4385869
Mercury (Hg)		<0.00010		0.00010	mg/L		10-DEC-18	R4385520
Selenium (Se)		<0.025		0.025	mg/L		10-DEC-18	R4385869
Silver (Ag)		<0.0050		0.0050	mg/L		10-DEC-18	R4385869
Uranium (U)		<0.25		0.25	mg/L		10-DEC-18	R4385869
Zinc (Zn)-Total		<1.0		1.0	mg/L		10-DEC-18	R4385869

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

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.

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Quality Control Report

Workorder: L2206955

Report Date: 11-DEC-18

Page 1 of 3

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	R4384748							
WG2948581-3	DUP	L2207278-1						
% Moisture		40.8	47.2		%	15	20	08-DEC-18
WG2948581-2	LCS							
% Moisture			100.1		%		90-110	08-DEC-18
WG2948581-1	MB							
% Moisture			<0.10		%		0.1	08-DEC-18
HG-TCLP-WT		Waste						
Batch	R4385520							
WG2950083-3	DUP	L2206604-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	10-DEC-18
WG2950083-2	LCS							
Mercury (Hg)			105.0		%		70-130	10-DEC-18
WG2950083-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	10-DEC-18
WG2950083-4	MS	L2206604-1						
Mercury (Hg)			99.2		%		50-140	10-DEC-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4385869							
WG2949980-4	DUP	WG2949980-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	10-DEC-18
WG2949980-2	LCS							
Zinc (Zn)-Total			99.6		%		70-130	10-DEC-18
WG2949980-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	10-DEC-18
WG2949980-5	MS	WG2949980-3						
Zinc (Zn)-Total			92.6		%		70-130	10-DEC-18
MET-TCLP-WT		Waste						
Batch	R4385869							
WG2949980-4	DUP	WG2949980-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-DEC-18
Arsenic (As)		0.056	0.055		mg/L	1.9	40	10-DEC-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	10-DEC-18
Barium (Ba)		0.75	0.74		mg/L	0.7	40	10-DEC-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-DEC-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-DEC-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-DEC-18

Quality Control Report

Workorder: L2206955

Report Date: 11-DEC-18

Page 2 of 3

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	R4385869							
WG2949980-4	DUP	WG2949980-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	10-DEC-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	10-DEC-18
WG2949980-2	LCS							
Silver (Ag)			102.3		%		70-130	10-DEC-18
Arsenic (As)			101.5		%		70-130	10-DEC-18
Boron (B)			101.8		%		70-130	10-DEC-18
Barium (Ba)			103.3		%		70-130	10-DEC-18
Cadmium (Cd)			101.9		%		70-130	10-DEC-18
Chromium (Cr)			99.9		%		70-130	10-DEC-18
Lead (Pb)			106.3		%		70-130	10-DEC-18
Selenium (Se)			100.0		%		70-130	10-DEC-18
Uranium (U)			102.3		%		70-130	10-DEC-18
WG2949980-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	10-DEC-18
Arsenic (As)			<0.050		mg/L		0.05	10-DEC-18
Boron (B)			<2.5		mg/L		2.5	10-DEC-18
Barium (Ba)			<0.50		mg/L		0.5	10-DEC-18
Cadmium (Cd)			<0.0050		mg/L		0.005	10-DEC-18
Chromium (Cr)			<0.050		mg/L		0.05	10-DEC-18
Lead (Pb)			<0.050		mg/L		0.05	10-DEC-18
Selenium (Se)			<0.025		mg/L		0.025	10-DEC-18
Uranium (U)			<0.25		mg/L		0.25	10-DEC-18
WG2949980-5	MS	WG2949980-3						
Silver (Ag)			116.9		%		50-150	10-DEC-18
Arsenic (As)			97.7		%		50-150	10-DEC-18
Boron (B)			88.8		%		50-150	10-DEC-18
Barium (Ba)			97.3		%		50-150	10-DEC-18
Cadmium (Cd)			94.9		%		50-150	10-DEC-18
Chromium (Cr)			95.0		%		50-150	10-DEC-18
Lead (Pb)			95.0		%		50-150	10-DEC-18
Selenium (Se)			95.4		%		50-150	10-DEC-18
Uranium (U)			97.7		%		50-150	10-DEC-18

Quality Control Report

Workorder: L2206955

Report Date: 11-DEC-18

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

Page 3 of 3

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.

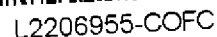
Hold Time Exceedances:

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.





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

Date Received: 06-DEC-18
Report Date: 11-DEC-18 09:46 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2206964
Project P.O. #: 4500040417
Job Reference: MP-ASH-217
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

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: L2206964

Report Date: 11-DEC-18

Page 1 of 3

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	R4384748							
WG2948581-3	DUP	L2207278-1						
% Moisture		40.8	47.2		%	15	20	08-DEC-18
WG2948581-2	LCS							
% Moisture			100.1		%		90-110	08-DEC-18
WG2948581-1	MB							
% Moisture			<0.10		%		0.1	08-DEC-18
HG-TCLP-WT		Waste						
Batch	R4385520							
WG2950083-3	DUP	L2206604-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	10-DEC-18
WG2950083-2	LCS							
Mercury (Hg)			105.0		%		70-130	10-DEC-18
WG2950083-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	10-DEC-18
WG2950083-4	MS	L2206604-1						
Mercury (Hg)			99.2		%		50-140	10-DEC-18
MET-TCLP-EXTRA-WT		Waste						
Batch	R4385869							
WG2949980-4	DUP	WG2949980-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	10-DEC-18
WG2949980-2	LCS							
Zinc (Zn)-Total			99.6		%		70-130	10-DEC-18
WG2949980-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	10-DEC-18
WG2949980-5	MS	WG2949980-3						
Zinc (Zn)-Total			92.6		%		70-130	10-DEC-18
MET-TCLP-WT		Waste						
Batch	R4385869							
WG2949980-4	DUP	WG2949980-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-DEC-18
Arsenic (As)		0.056	0.055		mg/L	1.9	40	10-DEC-18
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	10-DEC-18
Barium (Ba)		0.75	0.74		mg/L	0.7	40	10-DEC-18
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-DEC-18
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-DEC-18
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-DEC-18

Quality Control Report

Workorder: L2206964

Report Date: 11-DEC-18

Page 2 of 3

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	R4385869							
WG2949980-4	DUP	WG2949980-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	10-DEC-18
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	10-DEC-18
WG2949980-2	LCS							
Silver (Ag)			102.3		%		70-130	10-DEC-18
Arsenic (As)			101.5		%		70-130	10-DEC-18
Boron (B)			101.8		%		70-130	10-DEC-18
Barium (Ba)			103.3		%		70-130	10-DEC-18
Cadmium (Cd)			101.9		%		70-130	10-DEC-18
Chromium (Cr)			99.9		%		70-130	10-DEC-18
Lead (Pb)			106.3		%		70-130	10-DEC-18
Selenium (Se)			100.0		%		70-130	10-DEC-18
Uranium (U)			102.3		%		70-130	10-DEC-18
WG2949980-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	10-DEC-18
Arsenic (As)			<0.050		mg/L		0.05	10-DEC-18
Boron (B)			<2.5		mg/L		2.5	10-DEC-18
Barium (Ba)			<0.50		mg/L		0.5	10-DEC-18
Cadmium (Cd)			<0.0050		mg/L		0.005	10-DEC-18
Chromium (Cr)			<0.050		mg/L		0.05	10-DEC-18
Lead (Pb)			<0.050		mg/L		0.05	10-DEC-18
Selenium (Se)			<0.025		mg/L		0.025	10-DEC-18
Uranium (U)			<0.25		mg/L		0.25	10-DEC-18
WG2949980-5	MS	WG2949980-3						
Silver (Ag)			116.9		%		50-150	10-DEC-18
Arsenic (As)			97.7		%		50-150	10-DEC-18
Boron (B)			88.8		%		50-150	10-DEC-18
Barium (Ba)			97.3		%		50-150	10-DEC-18
Cadmium (Cd)			94.9		%		50-150	10-DEC-18
Chromium (Cr)			95.0		%		50-150	10-DEC-18
Lead (Pb)			95.0		%		50-150	10-DEC-18
Selenium (Se)			95.4		%		50-150	10-DEC-18
Uranium (U)			97.7		%		50-150	10-DEC-18

Quality Control Report

Workorder: L2206964

Report Date: 11-DEC-18

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

Page 3 of 3

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.



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-JAN-19
Report Date: 07-JAN-19 12:06 (MT)
Version: FINAL

Client Phone: 647-253-0596

Certificate of Analysis

Lab Work Order #: L2216563
Project P.O. #: 4500040417
Job Reference: MS-ASH-168
C of C Numbers:
Legal Site Desc:

Rick Hawthorne
Account Manager

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

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.

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Quality Control Report

Workorder: L2216563

Report Date: 07-JAN-19

Page 1 of 4

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	R4429827							
WG2964371-3	DUP	L2216732-1						
% Moisture		10.4	10.5		%	0.7	20	05-JAN-19
WG2964371-2	LCS							
% Moisture			100.2		%		90-110	05-JAN-19
WG2964371-1	MB							
% Moisture			<0.10		%		0.1	05-JAN-19
HG-TCLP-WT		Waste						
Batch	R4430573							
WG2965020-3	DUP	L2216563-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	07-JAN-19
WG2965020-2	LCS							
Mercury (Hg)			106.0		%		70-130	07-JAN-19
WG2965020-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	07-JAN-19
WG2965020-4	MS	L2216563-1						
Mercury (Hg)			89.8		%		50-140	07-JAN-19
MET-TCLP-EXTRA-WT		Waste						
Batch	R4430268							
WG2964894-4	DUP	WG2964894-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	07-JAN-19
WG2964894-2	LCS							
Zinc (Zn)-Total			95.3		%		70-130	07-JAN-19
WG2964894-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	07-JAN-19
WG2964894-5	MS	WG2964894-3						
Zinc (Zn)-Total			91.2		%		70-130	07-JAN-19
MET-TCLP-WT		Waste						
Batch	R4430268							
WG2964894-4	DUP	WG2964894-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	07-JAN-19
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	07-JAN-19
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	07-JAN-19
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	50	07-JAN-19
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	07-JAN-19
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	07-JAN-19
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	07-JAN-19

Quality Control Report

Workorder: L2216563

Report Date: 07-JAN-19

Page 2 of 4

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	R4430268							
WG2964894-4	DUP	WG2964894-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	07-JAN-19
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	07-JAN-19
WG2964894-2	LCS							
Silver (Ag)			101.2		%		70-130	07-JAN-19
Arsenic (As)			97.1		%		70-130	07-JAN-19
Boron (B)			98.8		%		70-130	07-JAN-19
Barium (Ba)			100.4		%		70-130	07-JAN-19
Cadmium (Cd)			96.9		%		70-130	07-JAN-19
Chromium (Cr)			96.6		%		70-130	07-JAN-19
Lead (Pb)			102.0		%		70-130	07-JAN-19
Selenium (Se)			95.7		%		70-130	07-JAN-19
Uranium (U)			100.8		%		70-130	07-JAN-19
WG2964894-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	07-JAN-19
Arsenic (As)			<0.050		mg/L		0.05	07-JAN-19
Boron (B)			<2.5		mg/L		2.5	07-JAN-19
Barium (Ba)			<0.50		mg/L		0.5	07-JAN-19
Cadmium (Cd)			<0.0050		mg/L		0.005	07-JAN-19
Chromium (Cr)			<0.050		mg/L		0.05	07-JAN-19
Lead (Pb)			<0.050		mg/L		0.05	07-JAN-19
Selenium (Se)			<0.025		mg/L		0.025	07-JAN-19
Uranium (U)			<0.25		mg/L		0.25	07-JAN-19
WG2964894-5	MS	WG2964894-3						
Silver (Ag)			120.4		%		50-140	07-JAN-19
Arsenic (As)			98.4		%		50-140	07-JAN-19
Boron (B)			87.6		%		50-140	07-JAN-19
Barium (Ba)			92.1		%		50-140	07-JAN-19
Cadmium (Cd)			96.7		%		50-140	07-JAN-19
Chromium (Cr)			93.7		%		50-140	07-JAN-19
Lead (Pb)			99.2		%		50-140	07-JAN-19
Selenium (Se)			96.6		%		50-140	07-JAN-19
Uranium (U)			99.2		%		50-140	07-JAN-19

Quality Control Report

Workorder: L2216563

Report Date: 07-JAN-19

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

Page 3 of 4

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: L2216563

Report Date: 07-JAN-19

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

Page 4 of 4

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	14-DEC-18 12:35	05-JAN-19 16:55	14	22	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 L2216563 were received on 04-JAN-19 08:45.

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.

