

APPENDIX D.2

2016 INCINERATOR ASH TESTING RESULTS

TABLE D.2.1
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2016 QIA AND NWB ANNUAL REPORT FOR OPERATIONS
ANNUAL INVENTORY AND STATUS OF INCINERATOR ASH PRODUCED DURING 2016

Category	Mine Site Bins	Mine Site ~Volume m ³	Mine Site Status	Milne Port Bins	Milne Port ~Volume m ³	Milne Port Status
Landfill	10 + 6 barrels	30.50	Landfilled	2 + 91 barrels	29.22	Landfilled
Hazardous	0	0.00	-	1 barrel	0.257	Stored for offsite disposal
Total	10 + 6 barrels	30.50	N/A	2 + 92 barrels	29.47	N/A

ANNUAL EXCEEDANCES OF INCINERATOR ASH PRODUCED DURING 2016

Sample ID	Sample Date	Analyte	Minimum Detection Limit	Guideline	Result	Status
MP-ASH-191	2016-09-24	Cr	0.05 mg/L	5mg/L	22.3 mg/L	Stored for offsite disposal

Note: TCLP residual analysis tests were performed by ALS Laboratories and compared to Process Residuals Discharge Minimum (GN, 2011) to determine if ash was landfill compliant. 2016 produced incinerator ash volume: Bin = 3.62 m³ * 0.8 Barrel = 85 Gal * 0.8, Volumes converted to m³.



BAFFINLAND IRON MINES CORPORATION
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 19-JAN-16
Report Date: 26-JAN-16 13:56 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1726145
Project P.O. #: 4500007003
Job Reference: MINE SITE-ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
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
L1726145-1 Sampled By: MS-ASH-130 B. BOWDEN on 15-JAN-16 @ 11:00 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								
		11.16		0.10	pH units	22-JAN-16	22-JAN-16	R3382894
		6.31		0.10	pH units	22-JAN-16	22-JAN-16	R3382894
		0.79		0.10	%	22-JAN-16	23-JAN-16	R3382407
		0.120		0.050	mg/L		25-JAN-16	R3383655
		<0.50		0.50	mg/L		25-JAN-16	R3383655
		5.0		2.5	mg/L		25-JAN-16	R3383655
		<0.0050		0.0050	mg/L		25-JAN-16	R3383655
		<0.050		0.050	mg/L		25-JAN-16	R3383655
		<0.050		0.050	mg/L		25-JAN-16	R3383655
		<0.00010		0.00010	mg/L		25-JAN-16	R3383696
		<0.25		0.25	mg/L		25-JAN-16	R3383655
		<0.0050		0.0050	mg/L		25-JAN-16	R3383655
		<0.25		0.25	mg/L		25-JAN-16	R3383655
		1.4		1.0	mg/L		25-JAN-16	R3383655

* 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: L1726145

Report Date: 26-JAN-16

Page 1 of 3

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3382407							
WG2249258-3	DUP	L1726133-16						
% Moisture		5.04	5.18		%	2.6	20	23-JAN-16
WG2249258-2	LCS							
% Moisture			97.0		%		90-110	23-JAN-16
WG2249258-1	MB							
% Moisture			<0.10		%		0.1	23-JAN-16
HG-TCLP-WT		Waste						
Batch	R3383696							
WG2250237-3	DUP	L1724882-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	25-JAN-16
WG2250237-2	LCS							
Mercury (Hg)			96.0		%		70-130	25-JAN-16
WG2250237-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	25-JAN-16
WG2250237-4	MS	L1724882-1						
Mercury (Hg)			86.3		%		50-140	25-JAN-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3383655							
WG2250178-4	DUP	WG2250178-3						
Zinc (Zn)-Total		1.4	1.3		mg/L	5.6	30	25-JAN-16
WG2250178-2	LCS							
Zinc (Zn)-Total			94.5		%		70-130	25-JAN-16
WG2250178-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	25-JAN-16
WG2250178-5	MS	WG2250178-3						
Zinc (Zn)-Total			103.4		%		70-130	25-JAN-16
MET-TCLP-WT		Waste						
Batch	R3383655							
WG2250178-4	DUP	WG2250178-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	25-JAN-16
Arsenic (As)		0.120	0.113		mg/L	6.3	40	25-JAN-16
Boron (B)		5.0	4.9		mg/L	3.1	40	25-JAN-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	25-JAN-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	25-JAN-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	25-JAN-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	25-JAN-16



Quality Control Report

Workorder: L1726145

Report Date: 26-JAN-16

Page 2 of 3

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3383655							
WG2250178-4	DUP	WG2250178-3						
Selenium (Se)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	25-JAN-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	25-JAN-16
WG2250178-2	LCS							
Silver (Ag)			96.3		%		70-130	25-JAN-16
Arsenic (As)			96.3		%		70-130	25-JAN-16
Boron (B)			94.5		%		70-130	25-JAN-16
Barium (Ba)			97.2		%		70-130	25-JAN-16
Cadmium (Cd)			97.5		%		70-130	25-JAN-16
Chromium (Cr)			100.7		%		70-130	25-JAN-16
Lead (Pb)			98.4		%		70-130	25-JAN-16
Selenium (Se)			97.8		%		70-130	25-JAN-16
Uranium (U)			99.8		%		70-130	25-JAN-16
WG2250178-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	25-JAN-16
Arsenic (As)			<0.050		mg/L		0.05	25-JAN-16
Boron (B)			<2.5		mg/L		2.5	25-JAN-16
Barium (Ba)			<0.50		mg/L		0.5	25-JAN-16
Cadmium (Cd)			<0.0050		mg/L		0.005	25-JAN-16
Chromium (Cr)			<0.050		mg/L		0.05	25-JAN-16
Lead (Pb)			<0.050		mg/L		0.05	25-JAN-16
Selenium (Se)			<0.25		mg/L		0.25	25-JAN-16
Uranium (U)			<0.25		mg/L		0.25	25-JAN-16
WG2250178-5	MS	WG2250178-3						
Silver (Ag)			125.9		%		50-150	25-JAN-16
Arsenic (As)			105.3		%		50-150	25-JAN-16
Boron (B)			102.6		%		50-150	25-JAN-16
Barium (Ba)			112.4		%		50-150	25-JAN-16
Cadmium (Cd)			110.5		%		50-150	25-JAN-16
Chromium (Cr)			105.5		%		50-150	25-JAN-16
Lead (Pb)			103.7		%		50-150	25-JAN-16
Selenium (Se)			110.4		%		50-150	25-JAN-16
Uranium (U)			105.4		%		50-150	25-JAN-16

Quality Control Report

Workorder: L1726145

Report Date: 26-JAN-16

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3
Contact: Jim Millard

Page 3 of 3

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

[illegible]

L1726145-COFC

Page 1 of 1

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-14-0376a v02 Filed 04 January 2011

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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 MINES CORPORATION
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 04-MAR-16
Report Date: 10-MAR-16 13:15 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1741841
Project P.O. #: 4500007003
Job Reference: MINE SITE-ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
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 A Campbell Brothers Limited Company

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

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Zinc (Zn)-Total	MS-B	L1741841-1

Sample Parameter Qualifier key listed:

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

Test Method References:

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

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mg/kg lwt - milligrams per kilogram based on lipid weight of sample

mg/L - unit of concentration based on volume, parts per million.

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D.L. - The reporting limit.

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Quality Control Report

Workorder: L1741841

Report Date: 10-MAR-16

Page 1 of 3

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3416100							
WG2271968-3	DUP	L1741604-2						
% Moisture		27.0	26.7		%	1.0	20	09-MAR-16
WG2271968-2	LCS							
% Moisture			95.7		%		90-110	09-MAR-16
WG2271968-1	MB							
% Moisture			<0.10		%		0.1	09-MAR-16
HG-TCLP-WT		Waste						
Batch	R3416836							
WG2273223-3	DUP	L1741841-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	10-MAR-16
WG2273223-2	LCS							
Mercury (Hg)			106.0		%		70-130	10-MAR-16
WG2273223-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	10-MAR-16
WG2273223-4	MS	L1741841-1						
Mercury (Hg)			95.7		%		50-140	10-MAR-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3416937							
WG2273101-4	DUP	WG2273101-3						
Zinc (Zn)-Total		34.3	34.2		mg/L	0.5	30	10-MAR-16
WG2273101-2	LCS							
Zinc (Zn)-Total			91.1		%		70-130	10-MAR-16
WG2273101-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	10-MAR-16
WG2273101-5	MS	WG2273101-3						
Zinc (Zn)-Total			N/A	MS-B	%		-	10-MAR-16
MET-TCLP-WT		Waste						
Batch	R3416937							
WG2273101-4	DUP	WG2273101-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-MAR-16
Arsenic (As)		0.054	0.052		mg/L	3.9	40	10-MAR-16
Boron (B)		3.6	3.6		mg/L	0.2	40	10-MAR-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	10-MAR-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-MAR-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-MAR-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	10-MAR-16



Quality Control Report

Workorder: L1741841

Report Date: 10-MAR-16

Page 2 of 3

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3416937							
WG2273101-4	DUP	WG2273101-3						
Selenium (Se)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	10-MAR-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	10-MAR-16
WG2273101-2	LCS							
Silver (Ag)			98.2		%		70-130	10-MAR-16
Arsenic (As)			95.8		%		70-130	10-MAR-16
Boron (B)			87.9		%		70-130	10-MAR-16
Barium (Ba)			94.1		%		70-130	10-MAR-16
Cadmium (Cd)			95.1		%		70-130	10-MAR-16
Chromium (Cr)			96.3		%		70-130	10-MAR-16
Lead (Pb)			95.0		%		70-130	10-MAR-16
Selenium (Se)			94.7		%		70-130	10-MAR-16
Uranium (U)			96.5		%		70-130	10-MAR-16
WG2273101-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	10-MAR-16
Arsenic (As)			<0.050		mg/L		0.05	10-MAR-16
Boron (B)			<2.5		mg/L		2.5	10-MAR-16
Barium (Ba)			<0.50		mg/L		0.5	10-MAR-16
Cadmium (Cd)			<0.0050		mg/L		0.005	10-MAR-16
Chromium (Cr)			<0.050		mg/L		0.05	10-MAR-16
Lead (Pb)			<0.050		mg/L		0.05	10-MAR-16
Selenium (Se)			<0.25		mg/L		0.25	10-MAR-16
Uranium (U)			<0.25		mg/L		0.25	10-MAR-16
WG2273101-5	MS	WG2273101-3						
Silver (Ag)			118.8		%		50-150	10-MAR-16
Arsenic (As)			101.6		%		50-150	10-MAR-16
Boron (B)			96.0		%		50-150	10-MAR-16
Barium (Ba)			103.2		%		50-150	10-MAR-16
Cadmium (Cd)			103.8		%		50-150	10-MAR-16
Chromium (Cr)			99.7		%		50-150	10-MAR-16
Lead (Pb)			98.0		%		50-150	10-MAR-16
Selenium (Se)			101.4		%		50-150	10-MAR-16
Uranium (U)			105.3		%		50-150	10-MAR-16

Quality Control Report

Workorder: L1741841

Report Date: 10-MAR-16

Client: BAFFINLAND IRON MINES CORPORATION
2275 Upper Middle Rd. E. Suite #300
Oakville ON L6H 0C3
Contact: Jim Millard

Page 3 of 3

Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

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

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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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Page 1 of 4

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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**.

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NA-EM-0326a v03 Front/04 January 2014



Baffinland Iron Mine's Corporation
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 05-APR-16
Report Date: 12-APR-16 06:58 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1753093
Project P.O. #: 4500017476
Job Reference: MINE SITE-ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
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 A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1753093-1	MS-ASH-132							
Sampled By:	BB on 03-APR-16 @ 17:00							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.66		0.10	pH units	07-APR-16	07-APR-16	R3435117
Final pH		6.99		0.10	pH units	07-APR-16	07-APR-16	R3435117
Physical Tests								
% Moisture		0.34		0.10	%	07-APR-16	08-APR-16	R3434205
TCLP Metals								
Arsenic (As)		0.057		0.050	mg/L		11-APR-16	R3435834
Barium (Ba)		<0.50		0.50	mg/L		11-APR-16	R3435834
Boron (B)		4.6		2.5	mg/L		11-APR-16	R3435834
Cadmium (Cd)		0.0330		0.0050	mg/L		11-APR-16	R3435834
Chromium (Cr)		<0.050		0.050	mg/L		11-APR-16	R3435834
Lead (Pb)		<0.050		0.050	mg/L		11-APR-16	R3435834
Mercury (Hg)		<0.00010		0.00010	mg/L		11-APR-16	R3435994
Selenium (Se)		<0.25		0.25	mg/L		11-APR-16	R3435834
Silver (Ag)		<0.0050		0.0050	mg/L		11-APR-16	R3435834
Uranium (U)		<0.25		0.25	mg/L		11-APR-16	R3435834
Zinc (Zn)-Total		<1.0		1.0	mg/L		11-APR-16	R3435834

* 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: L1753093

Report Date: 12-APR-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3434205							
WG2287383-3	DUP	L1752075-1						
% Moisture		15.5	15.4		%	0.2	20	08-APR-16
WG2287383-2	LCS							
% Moisture			97.3		%		90-110	08-APR-16
WG2287383-1	MB							
% Moisture			<0.10		%		0.1	08-APR-16
HG-TCLP-WT		Waste						
Batch	R3435994							
WG2288989-3	DUP	L1753093-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	11-APR-16
WG2288989-2	LCS							
Mercury (Hg)			96.2		%		70-130	11-APR-16
WG2288989-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	11-APR-16
WG2288989-4	MS	L1753093-1						
Mercury (Hg)			90.7		%		50-140	11-APR-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3435834							
WG2288880-4	DUP	WG2288880-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	11-APR-16
WG2288880-2	LCS							
Zinc (Zn)-Total			90.4		%		70-130	11-APR-16
WG2288880-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	11-APR-16
WG2288880-5	MS	WG2288880-3						
Zinc (Zn)-Total			101.1		%		70-130	11-APR-16
MET-TCLP-WT		Waste						
Batch	R3435834							
WG2288880-4	DUP	WG2288880-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	11-APR-16
Arsenic (As)		0.057	0.053		mg/L	6.2	40	11-APR-16
Boron (B)		4.6	4.4		mg/L	3.4	40	11-APR-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	11-APR-16
Cadmium (Cd)		0.0330	0.0311		mg/L	6.0	40	11-APR-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	11-APR-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	11-APR-16



Quality Control Report

Workorder: L1753093

Report Date: 12-APR-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3435834							
WG2288880-4	DUP	WG2288880-3						
Selenium (Se)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	11-APR-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	11-APR-16
WG2288880-2	LCS							
Silver (Ag)			97.0		%		70-130	11-APR-16
Arsenic (As)			95.4		%		70-130	11-APR-16
Boron (B)			90.9		%		70-130	11-APR-16
Barium (Ba)			98.8		%		70-130	11-APR-16
Cadmium (Cd)			96.1		%		70-130	11-APR-16
Chromium (Cr)			91.9		%		70-130	11-APR-16
Lead (Pb)			96.0		%		70-130	11-APR-16
Selenium (Se)			95.1		%		70-130	11-APR-16
Uranium (U)			91.9		%		70-130	11-APR-16
WG2288880-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	11-APR-16
Arsenic (As)			<0.050		mg/L		0.05	11-APR-16
Boron (B)			<2.5		mg/L		2.5	11-APR-16
Barium (Ba)			<0.50		mg/L		0.5	11-APR-16
Cadmium (Cd)			<0.0050		mg/L		0.005	11-APR-16
Chromium (Cr)			<0.050		mg/L		0.05	11-APR-16
Lead (Pb)			<0.050		mg/L		0.05	11-APR-16
Selenium (Se)			<0.25		mg/L		0.25	11-APR-16
Uranium (U)			<0.25		mg/L		0.25	11-APR-16
WG2288880-5	MS	WG2288880-3						
Silver (Ag)			133.8		%		50-150	11-APR-16
Arsenic (As)			102.9		%		50-150	11-APR-16
Boron (B)			92.0		%		50-150	11-APR-16
Barium (Ba)			102.1		%		50-150	11-APR-16
Cadmium (Cd)			101.9		%		50-150	11-APR-16
Chromium (Cr)			98.8		%		50-150	11-APR-16
Lead (Pb)			99.0		%		50-150	11-APR-16
Selenium (Se)			103.3		%		50-150	11-APR-16
Uranium (U)			106.8		%		50-150	11-APR-16

Quality Control Report

Workorder: L1753093

Report Date: 12-APR-16

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

Page 3 of 3

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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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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Baffinland Iron Mine's Corporation
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 12-MAY-16
Report Date: 17-MAY-16 10:34 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1766942
Project P.O. #: 4500017476
Job Reference: MINE SITE - ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
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 A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1766942-1	MS-ASH-133							
Sampled By:	BB/KB on 03-APR-16 @ 17:00							
Matrix:	SOIL							
Sample Preparation								
Initial pH		11.65		0.10	pH units	12-MAY-16	12-MAY-16	R3457727
Final pH		7.52		0.10	pH units	12-MAY-16	12-MAY-16	R3457727
Physical Tests								
% Moisture		0.44		0.10	%	12-MAY-16	13-MAY-16	R3456707
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		16-MAY-16	R3458823
Barium (Ba)		<0.50		0.50	mg/L		16-MAY-16	R3458823
Boron (B)		4.3		2.5	mg/L		16-MAY-16	R3458823
Cadmium (Cd)		<0.0050		0.0050	mg/L		16-MAY-16	R3458823
Chromium (Cr)		<0.050		0.050	mg/L		16-MAY-16	R3458823
Lead (Pb)		<0.050		0.050	mg/L		16-MAY-16	R3458823
Mercury (Hg)		<0.00010		0.00010	mg/L		16-MAY-16	R3459218
Selenium (Se)		<0.25		0.25	mg/L		16-MAY-16	R3458823
Silver (Ag)		<0.0050		0.0050	mg/L		16-MAY-16	R3458823
Uranium (U)		<0.25		0.25	mg/L		16-MAY-16	R3458823
Zinc (Zn)-Total		<1.0		1.0	mg/L		16-MAY-16	R3458823

* 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: L1766942

Report Date: 17-MAY-16

Page 1 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3456707							
WG2306868-3	DUP	L1767219-2						
% Moisture		11.0	10.8		%	1.8	20	13-MAY-16
WG2306868-2	LCS							
% Moisture			100.0		%		90-110	13-MAY-16
WG2306868-1	MB							
% Moisture			<0.10		%		0.1	13-MAY-16
HG-TCLP-WT		Waste						
Batch	R3459218							
WG2308920-3	DUP	L1766912-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	16-MAY-16
WG2308920-2	LCS							
Mercury (Hg)			105.0		%		70-130	16-MAY-16
WG2308920-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	16-MAY-16
WG2308920-4	MS	L1768586-1						
Mercury (Hg)			94.3		%		50-140	16-MAY-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3458823							
WG2308790-4	DUP	WG2308790-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	16-MAY-16
WG2308790-2	LCS							
Zinc (Zn)-Total			92.7		%		70-130	16-MAY-16
WG2308790-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	16-MAY-16
WG2308790-5	MS	WG2308790-3						
Zinc (Zn)-Total			106.5		%		70-130	16-MAY-16
MET-TCLP-WT		Waste						
Batch	R3458823							
WG2308790-4	DUP	WG2308790-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	16-MAY-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	16-MAY-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	16-MAY-16
Barium (Ba)		0.80	0.78		mg/L	3.4	40	16-MAY-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	16-MAY-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	16-MAY-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	16-MAY-16



Quality Control Report

Workorder: L1766942

Report Date: 17-MAY-16

Page 2 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3458823							
WG2308790-4	DUP	WG2308790-3						
Selenium (Se)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	16-MAY-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	16-MAY-16
WG2308790-2	LCS							
Silver (Ag)			98.9		%		70-130	16-MAY-16
Arsenic (As)			99.7		%		70-130	16-MAY-16
Boron (B)			93.4		%		70-130	16-MAY-16
Barium (Ba)			102.4		%		70-130	16-MAY-16
Cadmium (Cd)			100.2		%		70-130	16-MAY-16
Chromium (Cr)			98.4		%		70-130	16-MAY-16
Lead (Pb)			101.9		%		70-130	16-MAY-16
Selenium (Se)			98.8		%		70-130	16-MAY-16
Uranium (U)			99.1		%		70-130	16-MAY-16
WG2308790-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	16-MAY-16
Arsenic (As)			<0.050		mg/L		0.05	16-MAY-16
Boron (B)			<2.5		mg/L		2.5	16-MAY-16
Barium (Ba)			<0.50		mg/L		0.5	16-MAY-16
Cadmium (Cd)			<0.0050		mg/L		0.005	16-MAY-16
Chromium (Cr)			<0.050		mg/L		0.05	16-MAY-16
Lead (Pb)			<0.050		mg/L		0.05	16-MAY-16
Selenium (Se)			<0.25		mg/L		0.25	16-MAY-16
Uranium (U)			<0.25		mg/L		0.25	16-MAY-16
WG2308790-5	MS	WG2308790-3						
Silver (Ag)			138.2		%		50-150	16-MAY-16
Arsenic (As)			111.0		%		50-150	16-MAY-16
Boron (B)			108.2		%		50-150	16-MAY-16
Barium (Ba)			113.6		%		50-150	16-MAY-16
Cadmium (Cd)			114.6		%		50-150	16-MAY-16
Chromium (Cr)			110.8		%		50-150	16-MAY-16
Lead (Pb)			110.7		%		50-150	16-MAY-16
Selenium (Se)			113.4		%		50-150	16-MAY-16
Uranium (U)			114.4		%		50-150	16-MAY-16

Quality Control Report

Workorder: L1766942

Report Date: 17-MAY-16

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

Page 3 of 4

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: L1766942

Report Date: 17-MAY-16

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

Page 4 of 4

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
% Moisture	1	03-APR-16 17:00	13-MAY-16 14:49	14	40	days	EHTR
TCLP Metals							
Mercury (CVAA) for O.Reg 347	1	03-APR-16 17:00	16-MAY-16 00:00	28	42	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 L1766942 were received on 12-MAY-16 10:00.

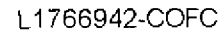
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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

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



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NA-FM-03260 v09 Front/34 January 2014

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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
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 16-JUN-16
Report Date: 24-JUN-16 13:34 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1786191
Project P.O. #: 4500017476
Job Reference: MINE SITE -ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers 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: L1786191

Report Date: 24-JUN-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3486487							
WG2331967-3	DUP	L1785882-21						
% Moisture		8.84	8.89		%	0.6	20	22-JUN-16
WG2331967-2	LCS							
% Moisture			99.5		%		90-110	22-JUN-16
WG2331967-1	MB							
% Moisture			<0.10		%		0.1	22-JUN-16
HG-TCLP-WT		Waste						
Batch	R3486799							
WG2332859-3	DUP	L1786028-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	22-JUN-16
WG2332859-2	LCS							
Mercury (Hg)			103.0		%		70-130	22-JUN-16
WG2332859-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	22-JUN-16
WG2332859-4	MS	L1785449-1						
Mercury (Hg)			94.7		%		50-140	22-JUN-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3488385							
WG2333157-4	DUP	WG2333157-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	23-JUN-16
WG2333157-2	LCS							
Zinc (Zn)-Total			83.3		%		70-130	23-JUN-16
WG2333157-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	23-JUN-16
WG2333157-5	MS	WG2333157-3						
Zinc (Zn)-Total			79.4		%		70-130	23-JUN-16
MET-TCLP-WT		Waste						
Batch	R3488385							
WG2333157-4	DUP	WG2333157-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	23-JUN-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-JUN-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	23-JUN-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	23-JUN-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	23-JUN-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-JUN-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	23-JUN-16



Quality Control Report

Workorder: L1786191

Report Date: 24-JUN-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3488385							
WG2333157-4	DUP	WG2333157-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	23-JUN-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	23-JUN-16
WG2333157-2	LCS							
Silver (Ag)			90.5		%		70-130	23-JUN-16
Arsenic (As)			89.6		%		70-130	23-JUN-16
Boron (B)			92.4		%		70-130	23-JUN-16
Barium (Ba)			93.8		%		70-130	23-JUN-16
Cadmium (Cd)			89.2		%		70-130	23-JUN-16
Chromium (Cr)			89.1		%		70-130	23-JUN-16
Lead (Pb)			91.0		%		70-130	23-JUN-16
Selenium (Se)			87.6		%		70-130	23-JUN-16
Uranium (U)			92.4		%		70-130	23-JUN-16
WG2333157-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	23-JUN-16
Arsenic (As)			<0.050		mg/L		0.05	23-JUN-16
Boron (B)			<2.5		mg/L		2.5	23-JUN-16
Barium (Ba)			<0.50		mg/L		0.5	23-JUN-16
Cadmium (Cd)			<0.0050		mg/L		0.005	23-JUN-16
Chromium (Cr)			<0.050		mg/L		0.05	23-JUN-16
Lead (Pb)			<0.050		mg/L		0.05	23-JUN-16
Selenium (Se)			<0.025		mg/L		0.025	23-JUN-16
Uranium (U)			<0.25		mg/L		0.25	23-JUN-16
WG2333157-5	MS	WG2333157-3						
Silver (Ag)			96.8		%		50-150	23-JUN-16
Arsenic (As)			83.4		%		50-150	23-JUN-16
Boron (B)			82.3		%		50-150	23-JUN-16
Barium (Ba)			89.6		%		50-150	23-JUN-16
Cadmium (Cd)			85.9		%		50-150	23-JUN-16
Chromium (Cr)			82.0		%		50-150	23-JUN-16
Lead (Pb)			80.4		%		50-150	23-JUN-16
Selenium (Se)			81.7		%		50-150	23-JUN-16
Uranium (U)			81.8		%		50-150	23-JUN-16

Quality Control Report

Workorder: L1786191

Report Date: 24-JUN-16

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

Page 3 of 3

Legend:

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

Sample Parameter Qualifier Definitions:

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

Hold Time Exceedances:

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

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

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

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

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L1786191-COFC

COC Number: 14 -

Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-F14-0325e v02 From: 04 January 2014

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

Date Received: 07-JUL-16
Report Date: 13-JUL-16 13:06 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1793580
Project P.O. #: 4500017476
Job Reference: MINE SITE - ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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
L1793580-1 MS-COMP-6 Sampled By: KM/NF on 04-JUL-16 @ 23:11 Matrix: SOIL								
Sample Preparation								
Initial pH		11.99		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Final pH		7.51		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Physical Tests								
% Moisture		0.93		0.10	%	07-JUL-16	08-JUL-16	R3498335
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Barium (Ba)		<0.50		0.50	mg/L		11-JUL-16	R3500260
Boron (B)		3.8		2.5	mg/L		11-JUL-16	R3500260
Cadmium (Cd)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Chromium (Cr)		0.698		0.050	mg/L		11-JUL-16	R3500260
Lead (Pb)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Mercury (Hg)		<0.00010		0.00010	mg/L		11-JUL-16	R3500959
Selenium (Se)		<0.025		0.025	mg/L		11-JUL-16	R3500260
Silver (Ag)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Uranium (U)		<0.25		0.25	mg/L		11-JUL-16	R3500260
Zinc (Zn)-Total		<1.0		1.0	mg/L		11-JUL-16	R3500260
L1793580-2 MS-COMP-7 Sampled By: KM/NF on 04-JUL-16 @ 23:11 Matrix: SOIL								
Sample Preparation								
Initial pH		12.40		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Final pH		10.43		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Physical Tests								
% Moisture		0.26		0.10	%	07-JUL-16	08-JUL-16	R3498335
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Barium (Ba)		0.65		0.50	mg/L		11-JUL-16	R3500260
Boron (B)		4.3		2.5	mg/L		11-JUL-16	R3500260
Cadmium (Cd)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Chromium (Cr)		0.830		0.050	mg/L		11-JUL-16	R3500260
Lead (Pb)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Mercury (Hg)		<0.00010		0.00010	mg/L		11-JUL-16	R3500959
Selenium (Se)		<0.025		0.025	mg/L		11-JUL-16	R3500260
Silver (Ag)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Uranium (U)		<0.25		0.25	mg/L		11-JUL-16	R3500260
Zinc (Zn)-Total		<1.0		1.0	mg/L		11-JUL-16	R3500260
L1793580-3 MS-ASH-141 Sampled By: KM/NF on 04-JUL-16 @ 23:17 Matrix: SOIL								
Sample Preparation								
Initial pH		11.70		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Final pH		11.40		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Physical Tests								

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1793580-3 MS-ASH-141 Sampled By: KM/NF on 04-JUL-16 @ 23:17 Matrix: SOIL								
Physical Tests								
% Moisture		<0.10		0.10	%	07-JUL-16	08-JUL-16	R3498335
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Barium (Ba)		<0.50		0.50	mg/L		11-JUL-16	R3500260
Boron (B)		<2.5		2.5	mg/L		11-JUL-16	R3500260
Cadmium (Cd)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Chromium (Cr)		0.164		0.050	mg/L		11-JUL-16	R3500260
Lead (Pb)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Mercury (Hg)		<0.00010		0.00010	mg/L		11-JUL-16	R3500959
Selenium (Se)		<0.025		0.025	mg/L		11-JUL-16	R3500260
Silver (Ag)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Uranium (U)		<0.25		0.25	mg/L		11-JUL-16	R3500260
Zinc (Zn)-Total		<1.0		1.0	mg/L		11-JUL-16	R3500260
L1793580-4 MS-HA-193 Sampled By: KM/NF on 04-JUL-16 @ 23:11 Matrix: SOIL								
Sample Preparation								
Initial pH		9.63		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Final pH		4.93		0.10	pH units	07-JUL-16	07-JUL-16	R3498475
Physical Tests								
% Moisture		46.7		0.10	%	07-JUL-16	08-JUL-16	R3498335
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Barium (Ba)		<0.50		0.50	mg/L		11-JUL-16	R3500260
Boron (B)		<2.5		2.5	mg/L		11-JUL-16	R3500260
Cadmium (Cd)		0.0102		0.0050	mg/L		11-JUL-16	R3500260
Chromium (Cr)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Lead (Pb)		<0.050		0.050	mg/L		11-JUL-16	R3500260
Mercury (Hg)		<0.00010		0.00010	mg/L		11-JUL-16	R3500959
Selenium (Se)		<0.025		0.025	mg/L		11-JUL-16	R3500260
Silver (Ag)		<0.0050		0.0050	mg/L		11-JUL-16	R3500260
Uranium (U)		<0.25		0.25	mg/L		11-JUL-16	R3500260
Zinc (Zn)-Total		57	DLHC	10	mg/L		11-JUL-16	R3500260

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

Sample Parameter Qualifier key listed:

Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

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: L1793580

Report Date: 13-JUL-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3498335							
WG2342784-3	DUP	L1794767-7						
% Moisture		11.9	11.5		%	2.7	20	08-JUL-16
WG2342784-2	LCS							
% Moisture			100.0		%		90-110	08-JUL-16
WG2342784-1	MB							
% Moisture			<0.10		%		0.1	08-JUL-16
HG-TCLP-WT		Waste						
Batch	R3500959							
WG2344720-3	DUP	L1794334-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	11-JUL-16
WG2344720-2	LCS							
Mercury (Hg)			99.4		%		70-130	11-JUL-16
WG2344720-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	11-JUL-16
WG2344720-4	MS	L1794762-1						
Mercury (Hg)			87.3		%		50-140	11-JUL-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3500260							
WG2343890-4	DUP	WG2343890-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	11-JUL-16
WG2343890-2	LCS							
Zinc (Zn)-Total			93.0		%		70-130	08-JUL-16
WG2343890-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	11-JUL-16
WG2343890-5	MS	WG2343890-3						
Zinc (Zn)-Total			89.8		%		70-130	11-JUL-16
MET-TCLP-WT		Waste						
Batch	R3500260							
WG2343890-4	DUP	WG2343890-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	08-JUL-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JUL-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	08-JUL-16
Barium (Ba)		<0.50	0.59	RPD-NA	mg/L	N/A	40	08-JUL-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	08-JUL-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JUL-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	08-JUL-16



Quality Control Report

Workorder: L1793580

Report Date: 13-JUL-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3500260							
WG2343890-4	DUP	WG2343890-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	08-JUL-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	08-JUL-16
WG2343890-2	LCS							
Silver (Ag)			98.6		%		70-130	08-JUL-16
Arsenic (As)			97.1		%		70-130	08-JUL-16
Boron (B)			102.6		%		70-130	08-JUL-16
Barium (Ba)			99.8		%		70-130	08-JUL-16
Cadmium (Cd)			102.0		%		70-130	08-JUL-16
Chromium (Cr)			98.2		%		70-130	08-JUL-16
Lead (Pb)			100.7		%		70-130	08-JUL-16
Selenium (Se)			96.5		%		70-130	08-JUL-16
Uranium (U)			101.2		%		70-130	08-JUL-16
WG2343890-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	11-JUL-16
Arsenic (As)			<0.050		mg/L		0.05	11-JUL-16
Boron (B)			<2.5		mg/L		2.5	11-JUL-16
Barium (Ba)			<0.50		mg/L		0.5	11-JUL-16
Cadmium (Cd)			<0.0050		mg/L		0.005	11-JUL-16
Chromium (Cr)			<0.050		mg/L		0.05	11-JUL-16
Lead (Pb)			<0.050		mg/L		0.05	11-JUL-16
Selenium (Se)			<0.025		mg/L		0.025	11-JUL-16
Uranium (U)			<0.25		mg/L		0.25	11-JUL-16
WG2343890-5	MS	WG2343890-3						
Silver (Ag)			113.9		%		50-150	11-JUL-16
Arsenic (As)			95.2		%		50-150	11-JUL-16
Boron (B)			98.4		%		50-150	11-JUL-16
Barium (Ba)			101.7		%		50-150	11-JUL-16
Cadmium (Cd)			93.1		%		50-150	11-JUL-16
Chromium (Cr)			90.1		%		50-150	11-JUL-16
Lead (Pb)			88.0		%		50-150	11-JUL-16
Selenium (Se)			89.7		%		50-150	11-JUL-16
Uranium (U)			88.8		%		50-150	11-JUL-16

Quality Control Report

Workorder: L1793580

Report Date: 13-JUL-16

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

Page 3 of 3

Contact: Jim Millard

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.

Mine Site- ASH COC Released on 16-07-05

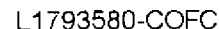
Samples taken on 5-Jul-16

Ash Sample Composite Reference	
MS-ASH-135	MS-COMP-6
MS-ASH-136	MS-COMP-6
MS-ASH-137	MS-COMP-6
MS-ASH-138	MS-COMP-6
MS-ASH-139	MS-COMP-7
MS-ASH-140	MS-COMP-7
MS-ASH-141	No composite
MS-HA-193	No composite

L1793580



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Page 1 of 1

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

NA-FM-0328-008 FRTM04 January 2014

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

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



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

Date Received: 20-AUG-16
Report Date: 31-AUG-16 12:28 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1819610
Project P.O. #: 4500017476
Job Reference: MINE SITE-ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers Limited Company

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1819610-1	MS-ASH-142							
Sampled By:	KM/NF on 19-AUG-16 @ 12:21							
Matrix:	SOIL							
Sample Preparation								
Initial pH		12.19		0.10	pH units	28-AUG-16	28-AUG-16	R3537781
Final pH		6.98		0.10	pH units	28-AUG-16	28-AUG-16	R3537781
Physical Tests								
% Moisture		<0.10		0.10	%	26-AUG-16	27-AUG-16	R3535012
TCLP Metals								
Arsenic (As)		0.050		0.050	mg/L		30-AUG-16	R3536551
Barium (Ba)		<0.50		0.50	mg/L		30-AUG-16	R3536551
Boron (B)		3.1		2.5	mg/L		30-AUG-16	R3536551
Cadmium (Cd)		<0.0050		0.0050	mg/L		30-AUG-16	R3536551
Chromium (Cr)		<0.050		0.050	mg/L		30-AUG-16	R3536551
Lead (Pb)		<0.050		0.050	mg/L		30-AUG-16	R3536551
Mercury (Hg)		<0.00010		0.00010	mg/L		30-AUG-16	R3536939
Selenium (Se)		<0.025		0.025	mg/L		30-AUG-16	R3536551
Silver (Ag)		<0.0050		0.0050	mg/L		30-AUG-16	R3536551
Uranium (U)		<0.25		0.25	mg/L		30-AUG-16	R3536551
Zinc (Zn)-Total		<1.0		1.0	mg/L		30-AUG-16	R3536551

* 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: L1819610

Report Date: 31-AUG-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3535012							
WG2376215-3	DUP	L1819543-6						
% Moisture		7.67	7.69		%	0.3	20	27-AUG-16
WG2376215-2	LCS							
% Moisture			99.6		%		90-110	27-AUG-16
WG2376215-1	MB							
% Moisture			<0.10		%		0.1	27-AUG-16
HG-TCLP-WT		Waste						
Batch	R3536939							
WG2378115-3	DUP	L1818295-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	30-AUG-16
WG2378115-2	LCS							
Mercury (Hg)			105.0		%		70-130	30-AUG-16
WG2378115-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	30-AUG-16
WG2378115-4	MS	L1819610-1						
Mercury (Hg)			90.0		%		50-140	30-AUG-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3536551							
WG2377873-4	DUP	WG2377873-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	30-AUG-16
WG2377873-2	LCS							
Zinc (Zn)-Total			90.3		%		70-130	30-AUG-16
WG2377873-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	30-AUG-16
WG2377873-5	MS	WG2377873-3						
Zinc (Zn)-Total			97.6		%		70-130	30-AUG-16
MET-TCLP-WT		Waste						
Batch	R3536551							
WG2377873-4	DUP	WG2377873-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	30-AUG-16
Arsenic (As)		0.050	<0.050	RPD-NA	mg/L	N/A	40	30-AUG-16
Boron (B)		3.1	3.0		mg/L	3.4	40	30-AUG-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	30-AUG-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	30-AUG-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	30-AUG-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	30-AUG-16



Quality Control Report

Workorder: L1819610

Report Date: 31-AUG-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3536551							
WG2377873-4	DUP	WG2377873-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	30-AUG-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	30-AUG-16
WG2377873-2	LCS							
Silver (Ag)			100.3		%		70-130	30-AUG-16
Arsenic (As)			99.6		%		70-130	30-AUG-16
Boron (B)			96.0		%		70-130	30-AUG-16
Barium (Ba)			95.5		%		70-130	30-AUG-16
Cadmium (Cd)			98.0		%		70-130	30-AUG-16
Chromium (Cr)			97.8		%		70-130	30-AUG-16
Lead (Pb)			98.7		%		70-130	30-AUG-16
Selenium (Se)			99.0		%		70-130	30-AUG-16
Uranium (U)			99.7		%		70-130	30-AUG-16
WG2377873-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	30-AUG-16
Arsenic (As)			<0.050		mg/L		0.05	30-AUG-16
Boron (B)			<2.5		mg/L		2.5	30-AUG-16
Barium (Ba)			<0.50		mg/L		0.5	30-AUG-16
Cadmium (Cd)			<0.0050		mg/L		0.005	30-AUG-16
Chromium (Cr)			<0.050		mg/L		0.05	30-AUG-16
Lead (Pb)			<0.050		mg/L		0.05	30-AUG-16
Selenium (Se)			<0.025		mg/L		0.025	30-AUG-16
Uranium (U)			<0.25		mg/L		0.25	30-AUG-16
WG2377873-5	MS	WG2377873-3						
Silver (Ag)			120.3		%		50-150	30-AUG-16
Arsenic (As)			107.8		%		50-150	30-AUG-16
Boron (B)			100.6		%		50-150	30-AUG-16
Barium (Ba)			103.3		%		50-150	30-AUG-16
Cadmium (Cd)			109.6		%		50-150	30-AUG-16
Chromium (Cr)			106.1		%		50-150	30-AUG-16
Lead (Pb)			103.5		%		50-150	30-AUG-16
Selenium (Se)			105.6		%		50-150	30-AUG-16
Uranium (U)			112.1		%		50-150	30-AUG-16

Quality Control Report

Workorder: L1819610

Report Date: 31-AUG-16

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

Page 3 of 3

Contact: Jim Millard

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.

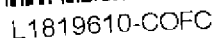
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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared 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: 14 -

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 COC form**.

NA-EM-0326-09 Exec/TM January 20



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

Date Received: 06-OCT-16
Report Date: 13-OCT-16 12:18 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1839612
Project P.O. #: 4500017476
Job Reference: MS-ASH-143
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers 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	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: L1839612

Report Date: 13-OCT-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3565980							
WG2405005-3	DUP	L1838934-13						
% Moisture		5.67	5.54		%	2.3	20	07-OCT-16
WG2405005-2	LCS							
% Moisture			103.8		%		90-110	07-OCT-16
WG2405005-1	MB							
% Moisture			<0.10		%		0.1	07-OCT-16
HG-TCLP-WT		Waste						
Batch	R3570054							
WG2409503-3	DUP	L1839605-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	13-OCT-16
WG2409503-2	LCS							
Mercury (Hg)			104.0		%		70-130	13-OCT-16
WG2409503-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	13-OCT-16
WG2409503-4	MS	L1839612-1						
Mercury (Hg)			96.3		%		50-140	13-OCT-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3569831							
WG2408843-4	DUP	WG2408843-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	13-OCT-16
WG2408843-2	LCS							
Zinc (Zn)-Total			91.8		%		70-130	13-OCT-16
WG2408843-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	13-OCT-16
WG2408843-5	MS	WG2408843-3						
Zinc (Zn)-Total			93.6		%		70-130	13-OCT-16
MET-TCLP-WT		Waste						
Batch	R3569831							
WG2408843-4	DUP	WG2408843-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-OCT-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	13-OCT-16
Barium (Ba)		0.51	0.53		mg/L	2.7	40	13-OCT-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-OCT-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16



Quality Control Report

Workorder: L1839612

Report Date: 13-OCT-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3569831							
WG2408843-4	DUP	WG2408843-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	13-OCT-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	13-OCT-16
WG2408843-2	LCS							
Silver (Ag)			95.1		%		70-130	13-OCT-16
Arsenic (As)			96.0		%		70-130	13-OCT-16
Boron (B)			97.7		%		70-130	13-OCT-16
Barium (Ba)			99.4		%		70-130	13-OCT-16
Cadmium (Cd)			97.1		%		70-130	13-OCT-16
Chromium (Cr)			96.0		%		70-130	13-OCT-16
Lead (Pb)			97.7		%		70-130	13-OCT-16
Selenium (Se)			93.0		%		70-130	13-OCT-16
Uranium (U)			95.7		%		70-130	13-OCT-16
WG2408843-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	13-OCT-16
Arsenic (As)			<0.050		mg/L		0.05	13-OCT-16
Boron (B)			<2.5		mg/L		2.5	13-OCT-16
Barium (Ba)			<0.50		mg/L		0.5	13-OCT-16
Cadmium (Cd)			<0.0050		mg/L		0.005	13-OCT-16
Chromium (Cr)			<0.050		mg/L		0.05	13-OCT-16
Lead (Pb)			<0.050		mg/L		0.05	13-OCT-16
Selenium (Se)			<0.025		mg/L		0.025	13-OCT-16
Uranium (U)			<0.25		mg/L		0.25	13-OCT-16
WG2408843-5	MS	WG2408843-3						
Silver (Ag)			109.2		%		50-150	13-OCT-16
Arsenic (As)			99.3		%		50-150	13-OCT-16
Boron (B)			132.3		%		50-150	13-OCT-16
Barium (Ba)			110.5		%		50-150	13-OCT-16
Cadmium (Cd)			101.2		%		50-150	13-OCT-16
Chromium (Cr)			140.0		%		50-150	13-OCT-16
Lead (Pb)			92.8		%		50-150	13-OCT-16
Selenium (Se)			96.3		%		50-150	13-OCT-16
Uranium (U)			91.6		%		50-150	13-OCT-16

Quality Control Report

Workorder: L1839612

Report Date: 13-OCT-16

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

Page 3 of 3

Contact: Jim Millard

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.

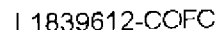
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-EM-0325a m02 Final/04 January 2014

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

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



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

Date Received: 01-DEC-16
Report Date: 05-DEC-16 13:58 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1864851
Project P.O. #: 4500017476
Job Reference: MS-ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1864851-1 MS-ASH-144 Sampled By: KB on 28-NOV-16 @ 14:10 Matrix: SOIL								
Sample Preparation								
Initial pH		12.55		0.10	pH units	03-DEC-16	03-DEC-16	R3610785
Final pH		10.96		0.10	pH units	03-DEC-16	03-DEC-16	R3610785
Physical Tests								
% Moisture		<0.10		0.10	%	01-DEC-16	01-DEC-16	R3608565
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		05-DEC-16	R3610734
Barium (Ba)		<0.50		0.50	mg/L		05-DEC-16	R3610734
Boron (B)		3.2		2.5	mg/L		05-DEC-16	R3610734
Cadmium (Cd)		<0.0050		0.0050	mg/L		05-DEC-16	R3610734
Chromium (Cr)		0.506		0.050	mg/L		05-DEC-16	R3610734
Lead (Pb)		<0.050		0.050	mg/L		05-DEC-16	R3610734
Mercury (Hg)		<0.00010		0.00010	mg/L		05-DEC-16	R3610750
Selenium (Se)		<0.025		0.025	mg/L		05-DEC-16	R3610734
Silver (Ag)		<0.0050		0.0050	mg/L		05-DEC-16	R3610734
Uranium (U)		<0.25		0.25	mg/L		05-DEC-16	R3610734
Zinc (Zn)-Total		<1.0		1.0	mg/L		05-DEC-16	R3610734
L1864851-2 MS-ASH-145 Sampled By: KB on 28-NOV-16 @ 14:00 Matrix: SOIL								
Sample Preparation								
Initial pH		12.50		0.10	pH units	03-DEC-16	03-DEC-16	R3610785
Final pH		7.18		0.10	pH units	03-DEC-16	03-DEC-16	R3610785
Physical Tests								
% Moisture		4.15		0.10	%	01-DEC-16	01-DEC-16	R3608565
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		05-DEC-16	R3610734
Barium (Ba)		<0.50		0.50	mg/L		05-DEC-16	R3610734
Boron (B)		3.0		2.5	mg/L		05-DEC-16	R3610734
Cadmium (Cd)		<0.0050		0.0050	mg/L		05-DEC-16	R3610734
Chromium (Cr)		<0.050		0.050	mg/L		05-DEC-16	R3610734
Lead (Pb)		<0.050		0.050	mg/L		05-DEC-16	R3610734
Mercury (Hg)		<0.00010		0.00010	mg/L		05-DEC-16	R3610750
Selenium (Se)		<0.025		0.025	mg/L		05-DEC-16	R3610734
Silver (Ag)		<0.0050		0.0050	mg/L		05-DEC-16	R3610734
Uranium (U)		<0.25		0.25	mg/L		05-DEC-16	R3610734
Zinc (Zn)-Total		<1.0		1.0	mg/L		05-DEC-16	R3610734

* 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: L1864851

Report Date: 05-DEC-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3608565							
WG2443821-3	DUP	L1864759-2						
% Moisture		7.12	7.13		%	0.1	20	01-DEC-16
WG2443821-2	LCS							
% Moisture			100.1		%		90-110	01-DEC-16
WG2443821-1	MB							
% Moisture			<0.10		%		0.1	01-DEC-16
HG-TCLP-WT		Waste						
Batch	R3610750							
WG2445835-3	DUP	L1864851-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	05-DEC-16
WG2445835-2	LCS							
Mercury (Hg)			95.4		%		70-130	05-DEC-16
WG2445835-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	05-DEC-16
WG2445835-4	MS	L1864851-1						
Mercury (Hg)			83.7		%		50-140	05-DEC-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3610734							
WG2445749-4	DUP	WG2445749-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	05-DEC-16
WG2445749-2	LCS							
Zinc (Zn)-Total			92.9		%		70-130	05-DEC-16
WG2445749-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	05-DEC-16
WG2445749-5	MS	WG2445749-3						
Zinc (Zn)-Total			96.3		%		70-130	05-DEC-16
MET-TCLP-WT		Waste						
Batch	R3610734							
WG2445749-4	DUP	WG2445749-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	05-DEC-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	05-DEC-16
Boron (B)		3.2	3.4		mg/L	3.4	40	05-DEC-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	05-DEC-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	05-DEC-16
Chromium (Cr)		0.506	0.519		mg/L	2.5	40	05-DEC-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	05-DEC-16



Quality Control Report

Workorder: L1864851

Report Date: 05-DEC-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3610734							
WG2445749-4	DUP	WG2445749-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	05-DEC-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	05-DEC-16
WG2445749-2	LCS							
Silver (Ag)			99.7		%		70-130	05-DEC-16
Arsenic (As)			97.5		%		70-130	05-DEC-16
Boron (B)			104.1		%		70-130	05-DEC-16
Barium (Ba)			99.8		%		70-130	05-DEC-16
Cadmium (Cd)			101.6		%		70-130	05-DEC-16
Chromium (Cr)			98.1		%		70-130	05-DEC-16
Lead (Pb)			107.7		%		70-130	05-DEC-16
Selenium (Se)			100.0		%		70-130	05-DEC-16
Uranium (U)			108.2		%		70-130	05-DEC-16
WG2445749-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	05-DEC-16
Arsenic (As)			<0.050		mg/L		0.05	05-DEC-16
Boron (B)			<2.5		mg/L		2.5	05-DEC-16
Barium (Ba)			<0.50		mg/L		0.5	05-DEC-16
Cadmium (Cd)			<0.0050		mg/L		0.005	05-DEC-16
Chromium (Cr)			<0.050		mg/L		0.05	05-DEC-16
Lead (Pb)			<0.050		mg/L		0.05	05-DEC-16
Selenium (Se)			<0.025		mg/L		0.025	05-DEC-16
Uranium (U)			<0.25		mg/L		0.25	05-DEC-16
WG2445749-5	MS	WG2445749-3						
Silver (Ag)			122.4		%		50-150	05-DEC-16
Arsenic (As)			100.7		%		50-150	05-DEC-16
Boron (B)			96.2		%		50-150	05-DEC-16
Barium (Ba)			104.1		%		50-150	05-DEC-16
Cadmium (Cd)			103.0		%		50-150	05-DEC-16
Chromium (Cr)			100.1		%		50-150	05-DEC-16
Lead (Pb)			97.1		%		50-150	05-DEC-16
Selenium (Se)			99.0		%		50-150	05-DEC-16
Uranium (U)			99.5		%		50-150	05-DEC-16

Quality Control Report

Workorder: L1864851

Report Date: 05-DEC-16

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

Page 3 of 3

Contact: Jim Millard

Legend:

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

Sample Parameter Qualifier Definitions:

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

Hold Time Exceedances:

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

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

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



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L1864851-COFC

COC Number: 14 -

Page 1 of 2

[illegible]



Baffinland Iron Mine's Corporation
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 25-MAY-16
Report Date: 08-JUN-16 11:32 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1776293
Project P.O. #: 4500017476
Job Reference: MILNE PORT - ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1776293-1 MP-ASH-COMP9 Sampled By: BB on 12-MAY-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.35		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		10.95		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		0.73		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		<0.50		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		3.1		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		0.852		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776293-2 MP-ASH-COMP10 Sampled By: BB on 13-MAY-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.69		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		9.74		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		0.58		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		0.58		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		3.3		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		4.04		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776293-3 MP-ASH-COMP11 Sampled By: BB on 13-MAY-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.88		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		12.27		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1776293-3 MP-ASH-COMP11 Sampled By: BB on 13-MAY-16 Matrix: SOIL								
Physical Tests								
% Moisture		0.30		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		0.72		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		<2.5		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		1.43		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776293-4 MP-ASH-COMP12 Sampled By: BB on 14-MAY-16 Matrix: SOIL								
Sample Preparation								
Initial pH		12.30		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		10.84		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		0.45		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		0.51		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		<2.5		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		0.158		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776293-5 MP-ASH-COMP13 Sampled By: BB on 14-MAY-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.63		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		9.12		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		<0.10		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547

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

* 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: L1776293

Report Date: 08-JUN-16

Page 1 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3471796							
WG2320428-3	DUP	L1777859-1						
% Moisture		14.2	14.1		%	0.7	20	04-JUN-16
WG2320428-2	LCS							
% Moisture			95.0		%		90-110	04-JUN-16
WG2320428-1	MB							
% Moisture			<0.10		%		0.1	04-JUN-16
HG-TCLP-WT		Waste						
Batch	R3474843							
WG2323188-3	DUP	L1776293-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	08-JUN-16
WG2323188-2	LCS							
Mercury (Hg)			106.0		%		70-130	08-JUN-16
WG2323188-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	08-JUN-16
WG2323188-4	MS	L1776293-1						
Mercury (Hg)			96.3		%		50-140	08-JUN-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	07-JUN-16
WG2322727-2	LCS							
Zinc (Zn)-Total			100.9		%		70-130	07-JUN-16
WG2322727-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	07-JUN-16
WG2322727-5	MS	WG2322727-3						
Zinc (Zn)-Total			114.2		%		70-130	07-JUN-16
MET-TCLP-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-JUN-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-JUN-16
Boron (B)		3.1	3.8		mg/L	20	40	07-JUN-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	07-JUN-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-JUN-16
Chromium (Cr)		0.852	1.11		mg/L	26	40	07-JUN-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-JUN-16



Quality Control Report

Workorder: L1776293

Report Date: 08-JUN-16

Page 2 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	07-JUN-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	07-JUN-16
WG2322727-2	LCS							
Silver (Ag)			107.5		%		70-130	07-JUN-16
Arsenic (As)			107.9		%		70-130	07-JUN-16
Boron (B)			97.4		%		70-130	07-JUN-16
Barium (Ba)			111.1		%		70-130	07-JUN-16
Cadmium (Cd)			110.7		%		70-130	07-JUN-16
Chromium (Cr)			107.1		%		70-130	07-JUN-16
Lead (Pb)			107.0		%		70-130	07-JUN-16
Selenium (Se)			108.2		%		70-130	07-JUN-16
Uranium (U)			107.5		%		70-130	07-JUN-16
WG2322727-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	07-JUN-16
Arsenic (As)			<0.050		mg/L		0.05	07-JUN-16
Boron (B)			<2.5		mg/L		2.5	07-JUN-16
Barium (Ba)			<0.50		mg/L		0.5	07-JUN-16
Cadmium (Cd)			<0.0050		mg/L		0.005	07-JUN-16
Chromium (Cr)			<0.050		mg/L		0.05	07-JUN-16
Lead (Pb)			<0.050		mg/L		0.05	07-JUN-16
Selenium (Se)			<0.025		mg/L		0.025	07-JUN-16
Uranium (U)			<0.25		mg/L		0.25	07-JUN-16
WG2322727-5	MS	WG2322727-3						
Silver (Ag)			126.5		%		50-150	07-JUN-16
Arsenic (As)			118.9		%		50-150	07-JUN-16
Boron (B)			108.7		%		50-150	07-JUN-16
Barium (Ba)			123.9		%		50-150	07-JUN-16
Cadmium (Cd)			111.3		%		50-150	07-JUN-16
Chromium (Cr)			127.6		%		50-150	07-JUN-16
Lead (Pb)			104.4		%		50-150	07-JUN-16
Selenium (Se)			116.0		%		50-150	07-JUN-16
Uranium (U)			108.8		%		50-150	07-JUN-16

Quality Control Report

Workorder: L1776293

Report Date: 08-JUN-16

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

Page 3 of 4

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: L1776293

Report Date: 08-JUN-16

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

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
% Moisture	1	12-MAY-16	04-JUN-16 11:16	14	23	days	EHT
	2	13-MAY-16	04-JUN-16 11:17	14	22	days	EHT
	3	13-MAY-16	04-JUN-16 11:18	14	22	days	EHT
	4	14-MAY-16	04-JUN-16 11:19	14	21	days	EHT
	5	14-MAY-16	04-JUN-16 11:20	14	21	days	EHT
	6	14-MAY-16	04-JUN-16 11:21	14	21	days	EHT

Legend & Qualifier Definitions:

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

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1776293 were received on 25-MAY-16 06:30.

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

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

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



Chain of Custody (COC) / Analytical Request Form

[illegible]

L 1776293-COFC

COC Number: 14 -

Page 1 of 1

[illegible]

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

24A-43A-CIThe 102 Travel Club January 20

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.



Baffinland Iron Mine's Corporation
ATTN: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 26-MAY-16
Report Date: 08-JUN-16 11:45 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1776294
Project P.O. #: 4500017476
Job Reference: MILNE PORT - ASH
C of C Numbers:
Legal Site Desc:

Austin Paterson
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 A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1776294-1 MP-ASH-COMP15 Sampled By: EA/KB on 24-MAY-16 @ 16:15 Matrix: SOIL								
Sample Preparation								
Initial pH		11.93		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		6.87		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		10.0		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		<0.50		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		5.6		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776294-2 MP-ASH-COMP16 Sampled By: EA/KB on 24-MAY-16 @ 16:35 Matrix: SOIL								
Sample Preparation								
Initial pH		11.72		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		8.10		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		6.02		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		<0.50		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		5.9		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		2.96		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776294-3 MP-ASH-COMP17 Sampled By: EA/KB on 24-MAY-16 @ 16:50 Matrix: SOIL								
Sample Preparation								
Initial pH		11.94		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		9.45		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1776294-3 MP-ASH-COMP17 Sampled By: EA/KB on 24-MAY-16 @ 16:50 Matrix: SOIL								
Physical Tests								
% Moisture		1.37		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		<0.50		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		4.4		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		0.941		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547
L1776294-4 MP-ASH-COMP18 Sampled By: EA/KB on 24-MAY-16 @ 17:00 Matrix: SOIL								
Sample Preparation								
Initial pH		11.46		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Final pH		10.95		0.10	pH units	06-JUN-16	06-JUN-16	R3474833
Physical Tests								
% Moisture		<0.10		0.10	%	03-JUN-16	04-JUN-16	R3471796
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Barium (Ba)		<0.50		0.50	mg/L		07-JUN-16	R3474547
Boron (B)		3.9		2.5	mg/L		07-JUN-16	R3474547
Cadmium (Cd)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Chromium (Cr)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Lead (Pb)		<0.050		0.050	mg/L		07-JUN-16	R3474547
Mercury (Hg)		<0.00010		0.00010	mg/L		08-JUN-16	R3474843
Selenium (Se)		<0.025		0.025	mg/L		07-JUN-16	R3474547
Silver (Ag)		<0.0050		0.0050	mg/L		07-JUN-16	R3474547
Uranium (U)		<0.25		0.25	mg/L		07-JUN-16	R3474547
Zinc (Zn)-Total		<1.0		1.0	mg/L		07-JUN-16	R3474547

* 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: L1776294

Report Date: 08-JUN-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3471796							
WG2320428-3	DUP	L1777859-1						
% Moisture		14.2	14.1		%	0.7	20	04-JUN-16
WG2320428-2	LCS							
% Moisture			95.0		%		90-110	04-JUN-16
WG2320428-1	MB							
% Moisture			<0.10		%		0.1	04-JUN-16
HG-TCLP-WT		Waste						
Batch	R3474843							
WG2323188-3	DUP	L1776293-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	08-JUN-16
WG2323188-2	LCS							
Mercury (Hg)			106.0		%		70-130	08-JUN-16
WG2323188-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	08-JUN-16
WG2323188-4	MS	L1776293-1						
Mercury (Hg)			96.3		%		50-140	08-JUN-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	07-JUN-16
WG2322727-2	LCS							
Zinc (Zn)-Total			100.9		%		70-130	07-JUN-16
WG2322727-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	07-JUN-16
WG2322727-5	MS	WG2322727-3						
Zinc (Zn)-Total			114.2		%		70-130	07-JUN-16
MET-TCLP-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-JUN-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-JUN-16
Boron (B)		3.1	3.8		mg/L	20	40	07-JUN-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	07-JUN-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	07-JUN-16
Chromium (Cr)		0.852	1.11		mg/L	26	40	07-JUN-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	07-JUN-16



Quality Control Report

Workorder: L1776294

Report Date: 08-JUN-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3474547							
WG2322727-4	DUP	WG2322727-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	07-JUN-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	07-JUN-16
WG2322727-2	LCS							
Silver (Ag)			107.5		%		70-130	07-JUN-16
Arsenic (As)			107.9		%		70-130	07-JUN-16
Boron (B)			97.4		%		70-130	07-JUN-16
Barium (Ba)			111.1		%		70-130	07-JUN-16
Cadmium (Cd)			110.7		%		70-130	07-JUN-16
Chromium (Cr)			107.1		%		70-130	07-JUN-16
Lead (Pb)			107.0		%		70-130	07-JUN-16
Selenium (Se)			108.2		%		70-130	07-JUN-16
Uranium (U)			107.5		%		70-130	07-JUN-16
WG2322727-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	07-JUN-16
Arsenic (As)			<0.050		mg/L		0.05	07-JUN-16
Boron (B)			<2.5		mg/L		2.5	07-JUN-16
Barium (Ba)			<0.50		mg/L		0.5	07-JUN-16
Cadmium (Cd)			<0.0050		mg/L		0.005	07-JUN-16
Chromium (Cr)			<0.050		mg/L		0.05	07-JUN-16
Lead (Pb)			<0.050		mg/L		0.05	07-JUN-16
Selenium (Se)			<0.025		mg/L		0.025	07-JUN-16
Uranium (U)			<0.25		mg/L		0.25	07-JUN-16
WG2322727-5	MS	WG2322727-3						
Silver (Ag)			126.5		%		50-150	07-JUN-16
Arsenic (As)			118.9		%		50-150	07-JUN-16
Boron (B)			108.7		%		50-150	07-JUN-16
Barium (Ba)			123.9		%		50-150	07-JUN-16
Cadmium (Cd)			111.3		%		50-150	07-JUN-16
Chromium (Cr)			127.6		%		50-150	07-JUN-16
Lead (Pb)			104.4		%		50-150	07-JUN-16
Selenium (Se)			116.0		%		50-150	07-JUN-16
Uranium (U)			108.8		%		50-150	07-JUN-16

Quality Control Report

Workorder: L1776294

Report Date: 08-JUN-16

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

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Legend:

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

Sample Parameter Qualifier Definitions:

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

Hold Time Exceedances:

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

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

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

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



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L1776294-COFC

COC Number: 14 -

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www.alsglobal.com

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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: Jim Millard
2275 Upper Middle Rd. E.
Suite #300
Oakville ON L6H 0C3

Date Received: 18-AUG-16
Report Date: 25-AUG-16 07:55 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1815462
Project P.O. #: 4500017476
Job Reference: MILNE PORT
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1815462-1 COMPOSITE 20 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Sample Preparation								
Initial pH		12.16		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Final pH		9.43		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Physical Tests								
% Moisture		<0.10		0.10	%	18-AUG-16	19-AUG-16	R3528887
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Barium (Ba)		<0.50		0.50	mg/L		24-AUG-16	R3532524
Boron (B)		4.1		2.5	mg/L		24-AUG-16	R3532524
Cadmium (Cd)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Chromium (Cr)		2.29		0.050	mg/L		24-AUG-16	R3532524
Lead (Pb)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Mercury (Hg)		<0.00010		0.00010	mg/L		23-AUG-16	R3531723
Selenium (Se)		<0.025		0.025	mg/L		24-AUG-16	R3532524
Silver (Ag)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Uranium (U)		<0.25		0.25	mg/L		24-AUG-16	R3532524
Zinc (Zn)-Total		<1.0		1.0	mg/L		24-AUG-16	R3532524
L1815462-2 COMPOSITE 21 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Sample Preparation								
Initial pH		12.30		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Final pH		8.41		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Physical Tests								
% Moisture		2.50		0.10	%	18-AUG-16	19-AUG-16	R3528887
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Barium (Ba)		<0.50		0.50	mg/L		24-AUG-16	R3532524
Boron (B)		4.2		2.5	mg/L		24-AUG-16	R3532524
Cadmium (Cd)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Chromium (Cr)		0.284		0.050	mg/L		24-AUG-16	R3532524
Lead (Pb)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Mercury (Hg)		<0.00010		0.00010	mg/L		23-AUG-16	R3531723
Selenium (Se)		<0.025		0.025	mg/L		24-AUG-16	R3532524
Silver (Ag)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Uranium (U)		<0.25		0.25	mg/L		24-AUG-16	R3532524
Zinc (Zn)-Total		<1.0		1.0	mg/L		24-AUG-16	R3532524
L1815462-3 COMPOSITE 22 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Sample Preparation								
Initial pH		12.47		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Final pH		9.07		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Physical Tests								

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1815462-3 COMPOSITE 22 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Physical Tests								
% Moisture		0.46		0.10	%	18-AUG-16	19-AUG-16	R3528887
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Barium (Ba)		<0.50		0.50	mg/L		24-AUG-16	R3532524
Boron (B)		3.0		2.5	mg/L		24-AUG-16	R3532524
Cadmium (Cd)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Chromium (Cr)		4.75		0.050	mg/L		24-AUG-16	R3532524
Lead (Pb)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Mercury (Hg)		<0.00010		0.00010	mg/L		23-AUG-16	R3531723
Selenium (Se)		<0.025		0.025	mg/L		24-AUG-16	R3532524
Silver (Ag)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Uranium (U)		<0.25		0.25	mg/L		24-AUG-16	R3532524
Zinc (Zn)-Total		<1.0		1.0	mg/L		24-AUG-16	R3532524
L1815462-4 COMPOSITE 23 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.52		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Final pH		7.30		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Physical Tests								
% Moisture		0.18		0.10	%	19-AUG-16	20-AUG-16	R3529323
TCLP Metals								
Arsenic (As)		0.067		0.050	mg/L		24-AUG-16	R3532524
Barium (Ba)		<0.50		0.50	mg/L		24-AUG-16	R3532524
Boron (B)		5.5		2.5	mg/L		24-AUG-16	R3532524
Cadmium (Cd)		0.0088		0.0050	mg/L		24-AUG-16	R3532524
Chromium (Cr)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Lead (Pb)		<0.050		0.050	mg/L		24-AUG-16	R3532524
Mercury (Hg)		<0.00010		0.00010	mg/L		23-AUG-16	R3531723
Selenium (Se)		<0.025		0.025	mg/L		24-AUG-16	R3532524
Silver (Ag)		<0.0050		0.0050	mg/L		24-AUG-16	R3532524
Uranium (U)		<0.25		0.25	mg/L		24-AUG-16	R3532524
Zinc (Zn)-Total		<1.0		1.0	mg/L		24-AUG-16	R3532524
L1815462-5 COMPOSITE 24 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL								
Sample Preparation								
Initial pH		11.98		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Final pH		7.67		0.10	pH units	22-AUG-16	22-AUG-16	R3532691
Physical Tests								
% Moisture		0.14		0.10	%	19-AUG-16	20-AUG-16	R3529323
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		24-AUG-16	R3532524

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1815462-5 Sampled By: EZRA ARREAK on 13-AUG-16 Matrix: SOIL TCLP Metals Barium (Ba) Boron (B) Cadmium (Cd) Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total	COMPOSITE 24							
	EZRA ARREAK on 13-AUG-16							
	SOIL							
L1815462-6 Sampled By: EZRA ARREAK on 13-AUG-16 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	COMPOSITE 25							
	EZRA ARREAK on 13-AUG-16							
	SOIL							

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

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chromium (Cr)	MS-B	L1815462-1, -2, -3, -4, -5, -6

Sample Parameter Qualifier key listed:

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

Test Method References:

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

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3528887							
WG2370611-3	DUP	L1815399-6						
% Moisture		14.5	14.6		%	0.9	20	19-AUG-16
WG2370611-2	LCS		99.8		%		90-110	19-AUG-16
% Moisture								
WG2370611-1	MB		<0.10		%		0.1	19-AUG-16
% Moisture								
Batch	R3529323							
WG2371070-3	DUP	L1815365-1						
% Moisture		7.82	7.77		%	0.5	20	20-AUG-16
WG2371070-2	LCS		105.0		%		90-110	20-AUG-16
% Moisture								
WG2371070-1	MB		<0.10		%		0.1	20-AUG-16
% Moisture								
HG-TCLP-WT		Waste						
Batch	R3531723							
WG2373512-3	DUP	L1815462-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	23-AUG-16
WG2373512-2	LCS		102.0		%		70-130	23-AUG-16
Mercury (Hg)								
WG2373512-1	MB		<0.00010		mg/L		0.0001	23-AUG-16
Mercury (Hg)								
WG2373512-4	MS	L1815462-1	87.0		%		50-140	23-AUG-16
Mercury (Hg)								
MET-TCLP-EXTRA-WT		Waste						
Batch	R3532524							
WG2373873-4	DUP	WG2373873-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	24-AUG-16
WG2373873-2	LCS		90.9		%		70-130	24-AUG-16
Zinc (Zn)-Total								
WG2373873-1	MB		<1.0		mg/L		1	24-AUG-16
Zinc (Zn)-Total								
WG2373873-5	MS	WG2373873-3	89.6		%		70-130	24-AUG-16
Zinc (Zn)-Total								
MET-TCLP-WT		Waste						



Quality Control Report

Workorder: L1815462

Report Date: 25-AUG-16

Page 2 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3532524							
WG2373873-4	DUP	WG2373873-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	24-AUG-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	24-AUG-16
Boron (B)		4.1	4.1		mg/L	0.4	40	24-AUG-16
Barium (Ba)		<0.50	<0.50	RPD-NA	mg/L	N/A	40	24-AUG-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	24-AUG-16
Chromium (Cr)		2.29	2.28		mg/L	0.4	40	24-AUG-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	24-AUG-16
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	24-AUG-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	24-AUG-16
WG2373873-2	LCS							
Silver (Ag)			99.1		%		70-130	24-AUG-16
Arsenic (As)			94.6		%		70-130	24-AUG-16
Boron (B)			94.6		%		70-130	24-AUG-16
Barium (Ba)			96.7		%		70-130	24-AUG-16
Cadmium (Cd)			94.9		%		70-130	24-AUG-16
Chromium (Cr)			93.0		%		70-130	24-AUG-16
Lead (Pb)			95.9		%		70-130	24-AUG-16
Selenium (Se)			95.2		%		70-130	24-AUG-16
Uranium (U)			99.4		%		70-130	24-AUG-16
WG2373873-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	24-AUG-16
Arsenic (As)			<0.050		mg/L		0.05	24-AUG-16
Boron (B)			<2.5		mg/L		2.5	24-AUG-16
Barium (Ba)			<0.50		mg/L		0.5	24-AUG-16
Cadmium (Cd)			<0.0050		mg/L		0.005	24-AUG-16
Chromium (Cr)			<0.050		mg/L		0.05	24-AUG-16
Lead (Pb)			<0.050		mg/L		0.05	24-AUG-16
Selenium (Se)			<0.025		mg/L		0.025	24-AUG-16
Uranium (U)			<0.25		mg/L		0.25	24-AUG-16
WG2373873-5	MS	WG2373873-3						
Silver (Ag)			109.5		%		50-150	24-AUG-16
Arsenic (As)			94.6		%		50-150	24-AUG-16
Boron (B)			90.9		%		50-150	24-AUG-16
Barium (Ba)			93.6		%		50-150	24-AUG-16



Quality Control Report

Workorder: L1815462

Report Date: 25-AUG-16

Page 3 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT	Waste							
Batch	R3532524							
WG2373873-5	MS	WG2373873-3						
Cadmium (Cd)			94.6		%		50-150	24-AUG-16
Chromium (Cr)			N/A	MS-B	%		-	24-AUG-16
Lead (Pb)			90.2		%		50-150	24-AUG-16
Selenium (Se)			93.9		%		50-150	24-AUG-16
Uranium (U)			93.2		%		50-150	24-AUG-16

Quality Control Report

Workorder: L1815462

Report Date: 25-AUG-16

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

Page 4 of 4

Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

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

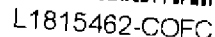
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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

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



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COC Number: 14 -

Page of

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 POP

NA-85-326a-00 ECONOMIC January 20



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

Date Received: 06-OCT-16
Report Date: 13-OCT-16 12:48 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1839605
Project P.O. #: 4500017476
Job Reference: MP-ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1839605-1 COMPOSITE 26 Sampled By: CR on 24-SEP-16 @ 16:10 Matrix: SOIL								
Sample Preparation								
Initial pH		11.91		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		7.18		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		6.28		0.10	%	06-OCT-16	07-OCT-16	R3565978
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		<0.50		0.50	mg/L		13-OCT-16	R3569831
Boron (B)		5.1		2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		0.417		0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		<0.025		0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25		0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0		1.0	mg/L		13-OCT-16	R3569831
L1839605-2 COMPOSITE 27 Sampled By: CR on 24-SEP-16 @ 16:20 Matrix: SOIL								
Sample Preparation								
Initial pH		11.78	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		7.63	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		3.10		0.10	%	06-OCT-16	07-OCT-16	R3565978
TCLP Metals								
Arsenic (As)		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		<0.50	LTIS	0.50	mg/L		13-OCT-16	R3569831
Boron (B)		5.8	LTIS	2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		0.740	LTIS	0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		<0.025	LTIS	0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25	LTIS	0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0	LTIS	1.0	mg/L		13-OCT-16	R3569831
L1839605-3 COMPOSITE 28 Sampled By: CR on 24-SEP-16 @ 16:30 Matrix: SOIL								
Sample Preparation								
Initial pH		11.73		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		10.04		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								

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

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1839605-5 COMPOSITE 30 Sampled By: CR on 24-SEP-16 @ 16:50 Matrix: SOIL TCLP Metals								
Barium (Ba)		<0.50		0.50	mg/L		13-OCT-16	R3569831
Boron (B)		3.6		2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		<0.025		0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25		0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0		1.0	mg/L		13-OCT-16	R3569831
L1839605-6 MP-ASH-181 Sampled By: CR on 24-SEP-16 @ 14:32 Matrix: SOIL Sample Preparation								
Initial pH		12.17	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		6.20	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		1.15		0.10	%	06-OCT-16	07-OCT-16	R3565978
TCLP Metals								
Arsenic (As)		0.099	LTIS	0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		<0.50	LTIS	0.50	mg/L		13-OCT-16	R3569831
Boron (B)		5.8	LTIS	2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		0.0589	LTIS	0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		0.027	LTIS	0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25	LTIS	0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0	LTIS	1.0	mg/L		13-OCT-16	R3569831
L1839605-7 MP-ASH-182 Sampled By: CR on 24-SEP-16 @ 14:30 Matrix: SOIL Sample Preparation								
Initial pH		12.26	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		7.84	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		<0.10		0.10	%	06-OCT-16	07-OCT-16	R3565978
TCLP Metals								
Arsenic (As)		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		<0.50	LTIS	0.50	mg/L		13-OCT-16	R3569831
Boron (B)		4.5	LTIS	2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1839605-7 MP-ASH-182 Sampled By: CR on 24-SEP-16 @ 14:30 Matrix: SOIL TCLP Metals Chromium (Cr) Lead (Pb) Mercury (Hg) Selenium (Se) Silver (Ag) Uranium (U) Zinc (Zn)-Total								
		0.378	LTIS	0.050	mg/L		13-OCT-16	R3569831
		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
		<0.025	LTIS	0.025	mg/L		13-OCT-16	R3569831
		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
		<0.25	LTIS	0.25	mg/L		13-OCT-16	R3569831
		<1.0	LTIS	1.0	mg/L		13-OCT-16	R3569831
L1839605-8 MP-ASH-183 Sampled By: CR on 24-SEP-16 @ 14:35 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								
		12.00	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
		9.56	LTIS	0.10	pH units	11-OCT-16	11-OCT-16	R3569178
		<0.10		0.10	%	06-OCT-16	07-OCT-16	R3565978
		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
		<0.50	LTIS	0.50	mg/L		13-OCT-16	R3569831
		4.5	LTIS	2.5	mg/L		13-OCT-16	R3569831
		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
		<0.050	LTIS	0.050	mg/L		13-OCT-16	R3569831
		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
		<0.025	LTIS	0.025	mg/L		13-OCT-16	R3569831
		<0.0050	LTIS	0.0050	mg/L		13-OCT-16	R3569831
		<0.25	LTIS	0.25	mg/L		13-OCT-16	R3569831
		<1.0	LTIS	1.0	mg/L		13-OCT-16	R3569831
L1839605-9 MP-ASH-184 Sampled By: CR on 24-SEP-16 @ 14:38 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)								
		12.30		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
		9.01		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
		<0.10		0.10	%	06-OCT-16	07-OCT-16	R3565980
		<0.050		0.050	mg/L		13-OCT-16	R3569831
		<0.50		0.50	mg/L		13-OCT-16	R3569831
		4.1		2.5	mg/L		13-OCT-16	R3569831
		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
		4.83		0.050	mg/L		13-OCT-16	R3569831
		<0.050		0.050	mg/L		13-OCT-16	R3569831
		<0.00010		0.00010	mg/L		13-OCT-16	R3570054

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1839605-9 MP-ASH-184 Sampled By: CR on 24-SEP-16 @ 14:38 Matrix: SOIL								
TCLP Metals								
Selenium (Se)		<0.025		0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25		0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0		1.0	mg/L		13-OCT-16	R3569831
L1839605-10 MP-ASH-189 Sampled By: CR on 24-SEP-16 @ 14:40 Matrix: SOIL								
Sample Preparation								
Initial pH		11.83		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		8.26		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		<0.10		0.10	%	06-OCT-16	07-OCT-16	R3565980
TCLP Metals								
Arsenic (As)		0.079		0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		0.61		0.50	mg/L		13-OCT-16	R3569831
Boron (B)		4.6		2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		1.75		0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		<0.025		0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25		0.25	mg/L		13-OCT-16	R3569831
Zinc (Zn)-Total		<1.0		1.0	mg/L		13-OCT-16	R3569831
L1839605-11 MP-ASH-190 Sampled By: CR on 24-SEP-16 @ 14:42 Matrix: SOIL								
Sample Preparation								
Initial pH		11.91		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Final pH		6.38		0.10	pH units	11-OCT-16	11-OCT-16	R3569178
Physical Tests								
% Moisture		0.42		0.10	%	06-OCT-16	07-OCT-16	R3565980
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Barium (Ba)		<0.50		0.50	mg/L		13-OCT-16	R3569831
Boron (B)		5.3		2.5	mg/L		13-OCT-16	R3569831
Cadmium (Cd)		0.0111		0.0050	mg/L		13-OCT-16	R3569831
Chromium (Cr)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Lead (Pb)		<0.050		0.050	mg/L		13-OCT-16	R3569831
Mercury (Hg)		<0.00010		0.00010	mg/L		13-OCT-16	R3570054
Selenium (Se)		<0.025		0.025	mg/L		13-OCT-16	R3569831
Silver (Ag)		<0.0050		0.0050	mg/L		13-OCT-16	R3569831
Uranium (U)		<0.25		0.25	mg/L		13-OCT-16	R3569831

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1839605-11 MP-ASH-190 Sampled By: CR on 24-SEP-16 @ 14:42 Matrix: SOIL TCLP Metals Zinc (Zn)-Total		9.1		1.0	mg/L		13-OCT-16	R3569831
L1839605-12 MP-ASH-191 Sampled By: CR on 24-SEP-16 @ 14:45 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		11.60 6.07 26.6 <0.050 <0.50 3.2 <0.0050 22.3 <0.050 <0.00010 <0.025 <0.0050 <0.25 <1.0	LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS	0.10 0.10 0.10 0.050 0.50 2.5 0.0050 0.050 0.050 0.00010 0.025 0.0050 0.25 1.0	pH units pH units % mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	11-OCT-16 11-OCT-16 06-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16	11-OCT-16 11-OCT-16 07-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16	R3569178 R3569178 R3565980 R3569831 R3569831 R3569831 R3569831 R3569831 R3569831 R3570054 R3569831 R3569831 R3569831 R3569831 R3569831 R3569831
L1839605-13 MP-ASH-192 Sampled By: CR on 24-SEP-16 @ 14:47 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		12.29 8.01 1.90 <0.050 <0.50 3.0 <0.0050 4.86 <0.050 <0.00010 <0.025 <0.0050 <0.25 <1.0	LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS LTIS	0.10 0.10 0.10 0.050 0.50 2.5 0.0050 0.050 0.050 0.00010 0.025 0.0050 0.25 1.0	pH units pH units % mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	11-OCT-16 11-OCT-16 06-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16	11-OCT-16 11-OCT-16 07-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16 13-OCT-16	R3569178 R3569178 R3565980 R3569831 R3569831 R3569831 R3569831 R3569831 R3569831 R3570054 R3569831 R3569831 R3569831 R3569831 R3569831 R3569831

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

Sample Parameter Qualifier key listed:

Qualifier	Description
LTIS	Limited sample was available for TCLP inorganics and semi-volatiles extraction (< 100 grams). Extraction fluid volume and/or other elements of the TCLP method were scaled down proportionately to permit analysis. Test results from modified TCLP procedures may be unsuitable for regulatory purposes.

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: L1839605

Report Date: 13-OCT-16

Page 2 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3569831							
WG2408843-4	DUP	WG2408843-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-OCT-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	13-OCT-16
Barium (Ba)		0.51	0.53		mg/L	2.7	40	13-OCT-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	13-OCT-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	13-OCT-16
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	13-OCT-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	13-OCT-16
WG2408843-2	LCS							
Silver (Ag)			95.1		%		70-130	13-OCT-16
Arsenic (As)			96.0		%		70-130	13-OCT-16
Boron (B)			97.7		%		70-130	13-OCT-16
Barium (Ba)			99.4		%		70-130	13-OCT-16
Cadmium (Cd)			97.1		%		70-130	13-OCT-16
Chromium (Cr)			96.0		%		70-130	13-OCT-16
Lead (Pb)			97.7		%		70-130	13-OCT-16
Selenium (Se)			93.0		%		70-130	13-OCT-16
Uranium (U)			95.7		%		70-130	13-OCT-16
WG2408843-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	13-OCT-16
Arsenic (As)			<0.050		mg/L		0.05	13-OCT-16
Boron (B)			<2.5		mg/L		2.5	13-OCT-16
Barium (Ba)			<0.50		mg/L		0.5	13-OCT-16
Cadmium (Cd)			<0.0050		mg/L		0.005	13-OCT-16
Chromium (Cr)			<0.050		mg/L		0.05	13-OCT-16
Lead (Pb)			<0.050		mg/L		0.05	13-OCT-16
Selenium (Se)			<0.025		mg/L		0.025	13-OCT-16
Uranium (U)			<0.25		mg/L		0.25	13-OCT-16
WG2408843-5	MS	WG2408843-3						
Silver (Ag)			109.2		%		50-150	13-OCT-16
Arsenic (As)			99.3		%		50-150	13-OCT-16
Boron (B)			132.3		%		50-150	13-OCT-16
Barium (Ba)			110.5		%		50-150	13-OCT-16



Quality Control Report

Workorder: L1839605

Report Date: 13-OCT-16

Page 3 of 4

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3569831							
WG2408843-5	MS	WG2408843-3						
Cadmium (Cd)			101.2		%		50-150	13-OCT-16
Chromium (Cr)			140.0		%		50-150	13-OCT-16
Lead (Pb)			92.8		%		50-150	13-OCT-16
Selenium (Se)			96.3		%		50-150	13-OCT-16
Uranium (U)			91.6		%		50-150	13-OCT-16

Quality Control Report

Workorder: L1839605

Report Date: 13-OCT-16

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

Page 4 of 4

Contact: Jim Millard

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.



L1839605-COFC

COC Number: 14 -

Page 1 of 2

Report To Company: Baffinland Iron Mines Corp. - ALS ENV Account 23642 Contact: Jim Millard Address: 2275 Upper Middle Rd. E., Suite #300 Oakville, ON, L6H 0C3 Phone: 647-253-0596 EXT 6010			Report Format / Distribution Select Report Format: ☒ PDF ☒ EXCEL ☒ EDD (DIGITAL) Quality Control (QC) Report with Report ☒ Yes ☐ No ☒ Criteria on Report - provide details below if box checked Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: bimcore@alsglobal.com Email 2: bimwww@alsglobal.com			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests) R ☒ Regular (Standard TAT if received by 3 pm - business days) P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge Specify Date Required for E2, E or P:																																																																																																																																	
Invoice To Same as Report To ☒ Yes ☐ No Copy of Invoice with Report ☐ Yes ☒ No Company: Contact:			Invoice Distribution Select Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX Email 1 or Fax: ap@baffinland.com Email 2:			Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																																																	
Project Information ALS Quote #: Q42455 Job #: MP-ASH PO / AFE: 4500017476 LSD:			Oil and Gas Required Fields (client use) Approver ID: Cost Center: GL Account: Routing Code: Activity Code: Location:			<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">BIM-TCLP-MET1-WT</td> <td style="width:5%;">TCLP</td> <td style="width:5%;">Hg</td> <td style="width:5%;">Ag</td> <td style="width:5%;">As</td> <td style="width:5%;">Ba</td> <td style="width:5%;">Cd</td> <td style="width:5%;">Cr</td> <td style="width:5%;">Pb</td> <td style="width:5%;">Se</td> <td style="width:5%;">Zn</td> <td rowspan="10" style="width:5%; text-align: center; vertical-align: middle;">Number of Containers</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>										BIM-TCLP-MET1-WT	TCLP	Hg	Ag	As	Ba	Cd	Cr	Pb	Se	Zn	Number of Containers																																																																																																												
BIM-TCLP-MET1-WT	TCLP	Hg	Ag	As	Ba											Cd	Cr	Pb	Se	Zn	Number of Containers																																																																																																																		
ALS Lab Work Order # (lab use only) U839605 GA			ALS Contact: Wayne Smith Sampler: CR																																																																																																																																				
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																																																																																			
1	Composite 26	24-Sep-16	16:10	Soil	R								1																																																																																																																										
2	Composite 27	24-Sep-16	16:20	Soil	R								1																																																																																																																										
3	Composite 28	24-Sep-16	16:30	Soil	R								1																																																																																																																										
4	Composite 29	24-Sep-16	16:40	Soil	R								1																																																																																																																										
5	Composite 30	24-Sep-16	16:50	Soil	R								1																																																																																																																										
6	MP-ASH-181	24-Sep-16	14:32	Soil	R								1																																																																																																																										
7	MP-ASH-182	24-Sep-16	14:30	Soil	R								1																																																																																																																										
8	MP-ASH-183	24-Sep-16	14:35	Soil	R								1																																																																																																																										
9	MP-ASH-184	24-Sep-16	14:38	Soil	R								1																																																																																																																										
10	MP-ASH-189	24-Sep-16	14:40	Soil	R								1																																																																																																																										
11	MP-ASH-190	24-Sep-16	14:42	Soil	R								1																																																																																																																										
12	MP-ASH-191	24-Sep-16	14:45	Soil	R								1																																																																																																																										

Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report (client use)		SAMPLE CONDITION AS RECEIVED (lab use only)			
Are samples taken from a Regulated DW System? ☐ Yes ☒ No		Site Specific Criteria - Account Manager to update as required.		Frozen ☐ SIF Observations Yes ☐ No ☐ Ice packs Yes ☐ No ☐ Custody seal intact Yes ☐ No ☐ Cooling Initiated ☒			
Are samples for human drinking water use? ☐ Yes ☒ No				INITIAL COOLER TEMPERATURES °C: 4.5 FINAL COOLER TEMPERATURES °C: 15.0			
SHIPMENT RELEASE (client use) Released by: Katie Babin Date: 16 10 02 Time: 18:00		INITIAL SHIPMENT RECEPTION (lab use only) Received by: <i>[Signature]</i> Date: 10/13/16 Time: 06:30		FINAL SHIPMENT RECEPTION (lab use only) Received by: <i>[Signature]</i> Date: 16 OCT 2016 Time: 1000			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

NA-PH-0225a v09 From 04 January 2014

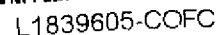
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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



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COC Number: 14 -

Page 2 of 2

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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NA-FM-0026a v09 Form 584 January 2014

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

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



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

Date Received: 20-OCT-16
Report Date: 26-OCT-16 11:35 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1845978
Project P.O. #: 4500017467
Job Reference: MILNE PORT
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services 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 A Campbell Brothers Limited Company

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

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chromium (Cr)	MS-B	L1845978-1

Sample Parameter Qualifier key listed:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	SW846 7470A
LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).			
MET-TCLP-EXTRA-WT	Waste	O. Reg 347 Extra Metals on TCLP Leachate	EPA 200.8
MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 200.8
MOISTURE-WT	Soil	% Moisture	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: L1845978

Report Date: 26-OCT-16

Page 1 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3576160							
WG2414802-4	DUP	L1845407-1						
% Moisture		16.3	16.4		%	1.0	20	21-OCT-16
WG2414802-2	LCS							
% Moisture			102.7		%		90-110	21-OCT-16
WG2414802-1	MB							
% Moisture			<0.10		%		0.1	21-OCT-16
HG-TCLP-WT		Waste						
Batch	R3578264							
WG2417216-3	DUP	L1846593-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	24-OCT-16
WG2417216-2	LCS							
Mercury (Hg)			102.0		%		70-130	24-OCT-16
WG2417216-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	24-OCT-16
WG2417216-4	MS	L1846813-1						
Mercury (Hg)			89.0		%		50-140	24-OCT-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3578290							
WG2417021-4	DUP	WG2417021-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	24-OCT-16
WG2417021-2	LCS							
Zinc (Zn)-Total			92.6		%		70-130	24-OCT-16
WG2417021-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	24-OCT-16
WG2417021-5	MS	WG2417021-3						
Zinc (Zn)-Total			99.7		%		70-130	24-OCT-16
MET-TCLP-WT		Waste						
Batch	R3578290							
WG2417021-4	DUP	WG2417021-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	24-OCT-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	24-OCT-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	24-OCT-16
Barium (Ba)		0.85	0.89		mg/L	4.0	40	24-OCT-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	24-OCT-16
Chromium (Cr)		1.40	1.50		mg/L	6.9	40	24-OCT-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	24-OCT-16



Quality Control Report

Workorder: L1845978

Report Date: 26-OCT-16

Page 2 of 3

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3578290							
WG2417021-4	DUP	WG2417021-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	24-OCT-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	24-OCT-16
WG2417021-2	LCS							
Silver (Ag)			96.2		%		70-130	24-OCT-16
Arsenic (As)			98.8		%		70-130	24-OCT-16
Boron (B)			92.3		%		70-130	24-OCT-16
Barium (Ba)			101.6		%		70-130	24-OCT-16
Cadmium (Cd)			103.7		%		70-130	24-OCT-16
Chromium (Cr)			98.0		%		70-130	24-OCT-16
Lead (Pb)			100.2		%		70-130	24-OCT-16
Selenium (Se)			96.3		%		70-130	24-OCT-16
Uranium (U)			102.3		%		70-130	24-OCT-16
WG2417021-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	24-OCT-16
Arsenic (As)			<0.050		mg/L		0.05	24-OCT-16
Boron (B)			<2.5		mg/L		2.5	24-OCT-16
Barium (Ba)			<0.50		mg/L		0.5	24-OCT-16
Cadmium (Cd)			<0.0050		mg/L		0.005	24-OCT-16
Chromium (Cr)			<0.050		mg/L		0.05	24-OCT-16
Lead (Pb)			<0.050		mg/L		0.05	24-OCT-16
Selenium (Se)			<0.025		mg/L		0.025	24-OCT-16
Uranium (U)			<0.25		mg/L		0.25	24-OCT-16
WG2417021-5	MS	WG2417021-3						
Silver (Ag)			104.0		%		50-150	24-OCT-16
Arsenic (As)			105.2		%		50-150	24-OCT-16
Boron (B)			114.5		%		50-150	24-OCT-16
Barium (Ba)			108.4		%		50-150	24-OCT-16
Cadmium (Cd)			107.4		%		50-150	24-OCT-16
Chromium (Cr)			N/A	MS-B	%		-	24-OCT-16
Lead (Pb)			91.1		%		50-150	24-OCT-16
Selenium (Se)			98.0		%		50-150	24-OCT-16
Uranium (U)			98.3		%		50-150	24-OCT-16

Quality Control Report

Workorder: L1845978

Report Date: 26-OCT-16

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

Page 3 of 3

Contact: Jim Millard

Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

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

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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.



Canada Toll Free: 1 800 668 9878

Abstract

L1845978-COFC

Page 1 of 1

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 COC form**.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-3327a-508 FrontM4 January 20



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

Date Received: 10-NOV-16
Report Date: 17-NOV-16 14:29 (MT)
Version: FINAL

Client Phone: 416-364-8820

Certificate of Analysis

Lab Work Order #: L1856192
Project P.O. #: 4500017476
Job Reference: MP-ASH
C of C Numbers:
Legal Site Desc:

Wayne Smith, C.Chem., C.E.T.
Client Services Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1856192-1 MP-ASH-194-1 Sampled By: KB/BP on 30-OCT-16 @ 11:30 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								
		12.55		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
		9.07		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
		1.25		0.10	%	10-NOV-16	11-NOV-16	R3592842
		<0.050		0.050	mg/L		17-NOV-16	R3596850
		<0.50		0.50	mg/L		17-NOV-16	R3596850
		3.5		2.5	mg/L		17-NOV-16	R3596850
		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
		0.770		0.050	mg/L		17-NOV-16	R3596850
		<0.050		0.050	mg/L		17-NOV-16	R3596850
		<0.00010		0.00010	mg/L		17-NOV-16	R3597017
		<0.025		0.025	mg/L		17-NOV-16	R3596850
		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
		<0.25		0.25	mg/L		17-NOV-16	R3596850
		<1.0		1.0	mg/L		17-NOV-16	R3596850
L1856192-2 MP-ASH-194-2 Sampled By: KB/BP on 30-OCT-16 @ 11:35 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								
		12.29		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
		8.62		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
		4.02		0.10	%	10-NOV-16	11-NOV-16	R3592842
		<0.050		0.050	mg/L		17-NOV-16	R3596850
		<0.50		0.50	mg/L		17-NOV-16	R3596850
		4.0		2.5	mg/L		17-NOV-16	R3596850
		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
		0.800		0.050	mg/L		17-NOV-16	R3596850
		<0.050		0.050	mg/L		17-NOV-16	R3596850
		<0.00010		0.00010	mg/L		17-NOV-16	R3597017
		<0.025		0.025	mg/L		17-NOV-16	R3596850
		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
		<0.25		0.25	mg/L		17-NOV-16	R3596850
		<1.0		1.0	mg/L		17-NOV-16	R3596850
L1856192-3 MP-ASH-194-3 Sampled By: KB/BP on 30-OCT-16 @ 11:40 Matrix: SOIL Sample Preparation Initial pH Final pH Physical Tests								
		12.25		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
		8.26		0.10	pH units	15-NOV-16	15-NOV-16	R3597171

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1856192-3 MP-ASH-194-3 Sampled By: KB/BP on 30-OCT-16 @ 11:40 Matrix: SOIL								
Physical Tests								
% Moisture		1.04		0.10	%	10-NOV-16	11-NOV-16	R3592842
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		17-NOV-16	R3596850
Barium (Ba)		<0.50		0.50	mg/L		17-NOV-16	R3596850
Boron (B)		4.1		2.5	mg/L		17-NOV-16	R3596850
Cadmium (Cd)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Chromium (Cr)		1.58		0.050	mg/L		17-NOV-16	R3596850
Lead (Pb)		<0.050		0.050	mg/L		17-NOV-16	R3596850
Mercury (Hg)		<0.00010		0.00010	mg/L		17-NOV-16	R3597017
Selenium (Se)		<0.025		0.025	mg/L		17-NOV-16	R3596850
Silver (Ag)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Uranium (U)		<0.25		0.25	mg/L		17-NOV-16	R3596850
Zinc (Zn)-Total		<1.0		1.0	mg/L		17-NOV-16	R3596850
L1856192-4 MP-ASH-194-4 Sampled By: KB/BP on 30-OCT-16 @ 11:45 Matrix: SOIL								
Sample Preparation								
Initial pH		12.50		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
Final pH		8.49		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
Physical Tests								
% Moisture		0.94		0.10	%	10-NOV-16	11-NOV-16	R3592842
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		17-NOV-16	R3596850
Barium (Ba)		<0.50		0.50	mg/L		17-NOV-16	R3596850
Boron (B)		3.6		2.5	mg/L		17-NOV-16	R3596850
Cadmium (Cd)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Chromium (Cr)		0.680		0.050	mg/L		17-NOV-16	R3596850
Lead (Pb)		<0.050		0.050	mg/L		17-NOV-16	R3596850
Mercury (Hg)		<0.00010		0.00010	mg/L		17-NOV-16	R3597017
Selenium (Se)		<0.025		0.025	mg/L		17-NOV-16	R3596850
Silver (Ag)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Uranium (U)		<0.25		0.25	mg/L		17-NOV-16	R3596850
Zinc (Zn)-Total		<1.0		1.0	mg/L		17-NOV-16	R3596850
L1856192-5 MP-ASH-194-5 Sampled By: KB/BP on 30-OCT-16 @ 11:50 Matrix: SOIL								
Sample Preparation								
Initial pH		12.24		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
Final pH		7.50		0.10	pH units	15-NOV-16	15-NOV-16	R3597171
Physical Tests								
% Moisture		5.67		0.10	%	10-NOV-16	11-NOV-16	R3592842
TCLP Metals								
Arsenic (As)		<0.050		0.050	mg/L		17-NOV-16	R3596850

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

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1856192-5	MP-ASH-194-5							
Sampled By:	KB/BP on 30-OCT-16 @ 11:50							
Matrix:	SOIL							
TCLP Metals								
Barium (Ba)		<0.50		0.50	mg/L		17-NOV-16	R3596850
Boron (B)		4.0		2.5	mg/L		17-NOV-16	R3596850
Cadmium (Cd)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Chromium (Cr)		0.070		0.050	mg/L		17-NOV-16	R3596850
Lead (Pb)		<0.050		0.050	mg/L		17-NOV-16	R3596850
Mercury (Hg)		<0.00010		0.00010	mg/L		17-NOV-16	R3597017
Selenium (Se)		<0.025		0.025	mg/L		17-NOV-16	R3596850
Silver (Ag)		<0.0050		0.0050	mg/L		17-NOV-16	R3596850
Uranium (U)		<0.25		0.25	mg/L		17-NOV-16	R3596850
Zinc (Zn)-Total		<1.0		1.0	mg/L		17-NOV-16	R3596850

* 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: L1856192

Report Date: 17-NOV-16

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R3592842							
WG2430503-3	DUP	L1855610-3						
% Moisture		11.7	12.0		%	2.1	20	11-NOV-16
WG2430503-2	LCS							
% Moisture			94.7		%		90-110	11-NOV-16
WG2430503-1	MB							
% Moisture			<0.10		%		0.1	11-NOV-16
HG-TCLP-WT		Waste						
Batch	R3597017							
WG2433939-3	DUP	L1857249-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	17-NOV-16
WG2433939-2	LCS							
Mercury (Hg)			100.0		%		70-130	17-NOV-16
WG2433939-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	17-NOV-16
WG2433939-4	MS	L1857414-2						
Mercury (Hg)			96.7		%		50-140	17-NOV-16
MET-TCLP-EXTRA-WT		Waste						
Batch	R3596850							
WG2434325-4	DUP	WG2434325-3						
Zinc (Zn)-Total		<1.0	<1.0	RPD-NA	mg/L	N/A	30	17-NOV-16
WG2434325-2	LCS							
Zinc (Zn)-Total			91.1		%		70-130	17-NOV-16
WG2434325-1	MB							
Zinc (Zn)-Total			<1.0		mg/L		1	17-NOV-16
WG2434325-5	MS	WG2434325-3						
Zinc (Zn)-Total			90.6		%		70-130	17-NOV-16
MET-TCLP-WT		Waste						
Batch	R3596850							
WG2434325-4	DUP	WG2434325-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	17-NOV-16
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	17-NOV-16
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	40	17-NOV-16
Barium (Ba)		0.61	0.59		mg/L	2.6	40	17-NOV-16
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	17-NOV-16
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	17-NOV-16
Lead (Pb)		<0.050	<0.050	RPD-NA	mg/L	N/A	40	17-NOV-16



Quality Control Report

Workorder: L1856192

Report Date: 17-NOV-16

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

Contact: Jim Millard

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R3596850							
WG2434325-4	DUP	WG2434325-3						
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	40	17-NOV-16
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	40	17-NOV-16
WG2434325-2	LCS							
Silver (Ag)			99.2		%		70-130	17-NOV-16
Arsenic (As)			98.5		%		70-130	17-NOV-16
Boron (B)			100.2		%		70-130	17-NOV-16
Barium (Ba)			97.5		%		70-130	17-NOV-16
Cadmium (Cd)			100.3		%		70-130	17-NOV-16
Chromium (Cr)			98.4		%		70-130	17-NOV-16
Lead (Pb)			103.8		%		70-130	17-NOV-16
Selenium (Se)			98.2		%		70-130	17-NOV-16
Uranium (U)			104.0		%		70-130	17-NOV-16
WG2434325-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	17-NOV-16
Arsenic (As)			<0.050		mg/L		0.05	17-NOV-16
Boron (B)			<2.5		mg/L		2.5	17-NOV-16
Barium (Ba)			<0.50		mg/L		0.5	17-NOV-16
Cadmium (Cd)			<0.0050		mg/L		0.005	17-NOV-16
Chromium (Cr)			<0.050		mg/L		0.05	17-NOV-16
Lead (Pb)			<0.050		mg/L		0.05	17-NOV-16
Selenium (Se)			<0.025		mg/L		0.025	17-NOV-16
Uranium (U)			<0.25		mg/L		0.25	17-NOV-16
WG2434325-5	MS	WG2434325-3						
Silver (Ag)			119.6		%		50-150	17-NOV-16
Arsenic (As)			94.6		%		50-150	17-NOV-16
Boron (B)			101.1		%		50-150	17-NOV-16
Barium (Ba)			95.2		%		50-150	17-NOV-16
Cadmium (Cd)			91.5		%		50-150	17-NOV-16
Chromium (Cr)			92.7		%		50-150	17-NOV-16
Lead (Pb)			94.4		%		50-150	17-NOV-16
Selenium (Se)			96.1		%		50-150	17-NOV-16
Uranium (U)			97.1		%		50-150	17-NOV-16

Quality Control Report

Workorder: L1856192

Report Date: 17-NOV-16

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

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Contact: Jim Millard

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.

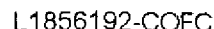
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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